



**GENERAL  
CATALOGUE**  
ed. 60



## **GENERAL CATALOGUE**

**SINCE 1958** THE BM GROUP MISSION  
HAS BEEN THE **DESIGN**, THE **MANUFACTURE**  
AND THE **DISTRIBUTION** OF ELECTRICAL CONNECTION  
ELEMENTS AND PRODUCTS FOR ELECTRICAL INSTALLATIONS.

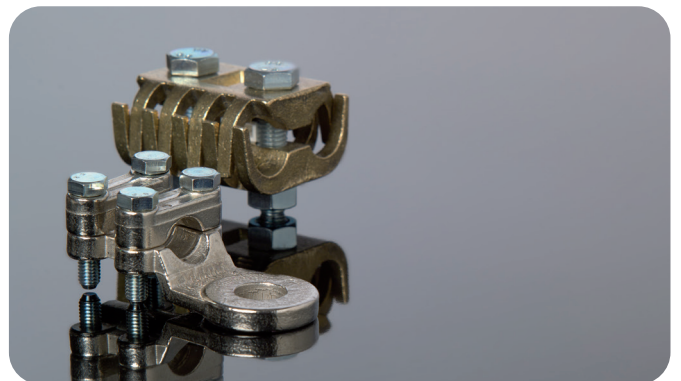
With innovation in our DNA, we strive to devise cutting-edge solutions that foresee market needs and redefine industry standards.

Over the years, thanks to its unfailing dedication, BM's offer has grown without losing sight of our core business: designing, manufacturing and marketing of terminal blocks and terminals. Through this evolution, we have become industry leaders with one of the most complete ranges of connection elements and products for electrical installation.



# QUALITY. SAFETY. RELIABILITY.

Quality, safety, reliability and the search for excellence have always been BM's values and led the company to become, step by step, the leading force in the market of electrical equipment. Essential values in every step of the process.



# SINCE 1958 A SUCCESS STORY

**1958**

BM is founded in Rozzano, Milan.  
It produced screw connections and had an internal foundry, which is still working.



**1990**

Cable ties, cable glands and heat-shrink sheaths are added to the catalogue.



**1980**

Production of terminal blocks begins.



**1970**

The production of the first bare and pre-insulated connection elements begins and crimping tools are added to the catalogue.



**1985**

BM achieves the first ENEC certification.



**1979**

BM achieves the first UL certification.



**1991**

BM obtains the ISO 9001 certification.



### 1993

BM obtains the first CSA and IMQ certifications.



### 2010

SAP implementation.



### 2014

Opening of the branch in Slovenia.



### 2018

BM becomes part of Gruppo Beta.



### 2020

Opening of the branch in Romania.



### 2000

Tools and fixing product lines are added to the catalogue.



### 2017

BM adds fittings and insulating tapes to its offer.



### 2013

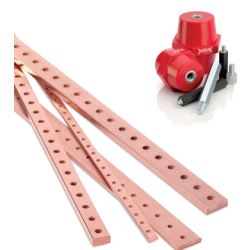
X-Pro EVO scissors are awarded the prestigious international RedDot Design Award.



reddot design award  
honourable mention 2013

### 2021

Panel boards components line has been expanded.



# BM IN THE WORLD

We are proudly local. Our roots are firmly set in the Milanese reality, but we resolutely reach out to the whole world.

Today, we are in 52 countries through partners and subsidiaries. This highlights how our ongoing commitment to creating innovative and high-quality products has made us the reliable partner of thousands of professionals all over the world.

-  Headquarter
-  Salesforce
-  Branches
-  63 Distributors



# TRADITION AND INNOVATION

BM products combine tradition and innovation. On the one hand the tradition and the experience that comes from having been in business for sixty years, on the other the ongoing search for increasingly efficient solutions. The dialogue with end users, who tell us of their needs, is what drives our research and development.

A totally automated, vertical production system enables us to make high quality products in a short time, to the benefit of end users. We have achieved these results thanks to constant and increasing investments in technology, automation, computerization of planning and production control, showing once again the drive of the entire company towards the innovation of industrial processes. Highly specialized personnel ensures efficiency in every phase, from planning to production and control. As a result, we can count on a warehouse of finished products always ready to be delivered.





# CERTIFIED QUALITY

## CERTIFICATION AND MARKINGS

BM's production units are headquartered in Rozzano, south of Milan, and include a highly automated production, packaging and distribution system for delivering products all over the world.

The continuous innovation of industrial processes has enabled us to manufacture high-quality products by means of integrated production cycles. That, in turn, has

helped us to align with market expectations: our hard work has been acknowledged by Company Quality Certification in compliance with ISO 9001:2000, issued by the CSQ in May 1991, based on strict international standards.

Many others have followed reflecting the constant commitment of the company to guarantee an ever-better quality.

### VOLUNTARY SYSTEM CERTIFICATION



The logo means that the company is certified in accordance with ISO 9001 from IMQ. The ISO 9001 standard defines the requirements of a quality management system for an organization.

### MANDATORY SAFETY MARKING



The logo means that the product complies with the safety requirements of the applicable Community directives or regulations. The CE marking is mandatory for all products for which a Community directive exists and therefore it is only applicable to certain types of products.



The Colombian government requires products used in electrical installations to be certified by a accredited body in according to RETIE (Technical Regulation for Electrical installations). The logo means that the product complies with RETIE.

## VOLUNTARY SAFETY CERTIFICATION

---



The ENEC logo, acronym for European Norms Electrical Certification, is a voluntary quality label that certifies compliance with a set of harmonized electrical safety standards (EN). Near the logo there is a number that represents the certification body that issued it. For example, 03 is the one of the Italian Institute of Quality Mark.

---



The logo means that the product obtained the voluntary safety certification from the private American organization UL (Underwriters Laboratories Inc.). If there are no letters near the logo, it means that certification is valid only in US market. If there is only “C”, it means that certification is valid only in Canada market. If there are “C” and “US”, it means that certification is valid both in the Canadian and US markets.

---



The logo means that the component obtained the voluntary safety certification from the private American organization UL (Underwriters Laboratories Inc.). It is UL that determines whether a finished item is classifiable as a finished product or as a component. If there are no letters near the logo, it means that certification is valid only in US market. If there is only “C”, it means that certification is valid only in Canada market. If there are “C” and “US”, it means that certification is valid both in the Canadian and US markets.

---



The logo means that the product obtained voluntary safety certification from the Canadian Private Organization Canadian CSA (Canadian Standards Association).

---



The logo means that the product obtained the voluntary safety certification from the Italian IMQ body.

---



The logo means that the product obtained the certificate with surveillance for products not included in categories covered by IMQ mark schemes.

---



The logo means that the product obtained the voluntary safety certification by the German VDE (Verband der Elektrotechnik).

---



The logo means that the product obtained the voluntary safety certification from the Norwegian private organization Nemko (Norges Elektriske Materiellkontroll).

---



The logo means that the product obtained the voluntary safety certification from the Danish DEMKO (Denmark's Electrical Equipment Control). DEMKO is currently part of the UL group.

---



The logo means that the product obtained the voluntary safety certification from the Swedish company Semko (Svenska Elektriska Materielkontrollanstalten).

---

# GENERAL INDEX

## TERMINALS

Insulated terminal lugs from sheet	18
Insulated connectors	26
Insulated quick-connect terminals	29
Uninsulated quick-connect terminals	35
Uninsulated terminals from sheet	40
End-sleeves terminals	43
Uninsulated tube terminals	48
DIN standard terminals	59
Junction connectors	64
Medium Voltage terminals	66
Aluminium terminals	69
Bimetallic terminals	72
C shunt and terminals for ground connection	73
Insulated tube terminals	76
Fork and pin terminals	83
Assortments	85

## SCREW CONNECTIONS

Brass clamping lugs & earth lugs	104
Brass nickel plates terminal lugs	107
Clamping lugs	109

## TERMINAL BLOCKS

One-way terminal blocks	
For free connections	112
One-way	114
Indirect clamping terminal	118
Connectors	
Polarized plug terminals	119
Crimping connectors	123
RJ plugs	125
Multiway terminal blocks	
Polypropylene	129
Nylon	130
Nylon with fiberglass	148
Steatite	159

## CABLE-GLANDS

Nylon		
	Metric thread	166
	PG thread	172
	Gas thread	181
Brass		
	Metric thread	182
	PG thread	185
	Gas thread	188
	Accessories	189

## CABLE-TIES

	Nylon	192
	Velcro	203
	Steel	204

## CABLE PROTECTION

	Thin wall 2:1	208
	Thin wall 3:1	212
	Accessories	213

## PANEL BOARDS COMPONENTS

	Modular distribution blocks	216
	Braids	219
	Threaded bars	221
	Insulators and Spacers	222
	Sheaths for cable protection	225
	Cutting and drilling DIN bars	226

## EQUIPMENT

Crimping tools	
Mechanical	230
Hand hydraulic	259
Battery powered	263
Dies	267
Cable cutters and wire rope cutters	
Mechanical	273
Hand hydraulic	275
Battery powered	277
Drillers	
Mechanical	280
Hand hydraulic	281
Punchers	282
Multihead	286
Pumps and headstocks	289

## ELECTRICAL TAPES

PVC Electrical tapes	298
Self-amalgamating	301

## CONDUIT FIXINGS

IP67 accesories	304
IP40 accesories	307
Conduit fixing	308
Accessories for spiral conduits	309

## FIXINGS

Light fixings	316
Heavy duty fixings	336
Manual nailing	346

## TOOLS

Scissors	350
Cutting tools	353
Screwdrivers	356
Voltage tester	363
High insulation pliers	364
Drilling tools	367
Wrenches	371
Hammers	375
Suction lifter	376
Measuring tools	377
Tool cases	380

## APPENDICES

Crimping Tool Guide	389
Definitions	398
Standards	399
RETIE certified codes	400
Approximate correspondence between sections of the American and European standard	401
Conductor resistance values	402
Degrees of protection provided by casings (IP Code)	403
Analytical index	404

## EXPORT

Export sales Network	412
----------------------	-----

## AGENCIES

Agencies in Italy	413
-------------------	-----





# TERMINALS

INSULATED TERMINAL LUGS FROM SHEET	pag. 18
INSULATED CONNECTORS	pag. 26
INSULATED QUICK-CONNECT TERMINALS	pag. 29
UNINSULATED QUICK-CONNECT TERMINALS	pag. 35
UNINSULATED TERMINALS FROM SHEET	pag. 40
END-SLEEVES TERMINALS	pag. 43
UNINSULATED TUBE TERMINALS	pag. 48
DIN STANDARD TERMINALS	pag. 59
JUNCTION CONNECTORS	pag. 64
MEDIUM VOLTAGE TERMINALS	pag. 66
ALUMINIUM TERMINALS	pag. 69
BIMETALLIC TERMINALS	pag. 72
C SHUNT AND TERMINALS FOR GROUND CONNECTION	pag. 73
INSULATED TUBE TERMINALS	pag. 76
FORK AND PIN TERMINALS	pag. 83
ASSORTMENTS	pag. 85



# TERMINALS

TERMINALS

## APPLICATIONS

- Residential and commercial system
- Ground connections

- Electrical cabinets
- Medium voltage
- Ups
- Automation
- Electronics

- Cable harnesses
- OEM solution
- Lighting

- Renewal energy and photovoltaic system



## WIDE RANGE OF TERMINALS

For cable sections from 0.25 to 630 mm<sup>2</sup>

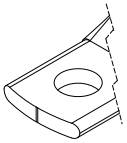
For European and American cables

Many conductive materials (copper, aluminum, bimetallic, brass)

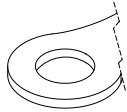
Many types of barrels, palms and quick connectors

**Complete crimping system** (terminal + crimping tool) for state-of-the-art installations

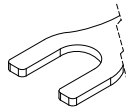
### TERMINAL LUG PALMS



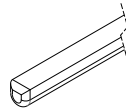
WITH THROUGH HOLE



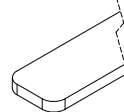
RING



FORK

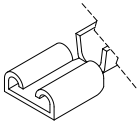


BLADE PIN

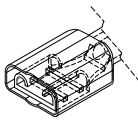


ROUND PIN

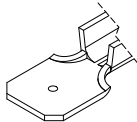
### QUICK CONNECTORS



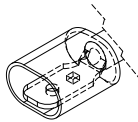
UNINSULATED AND INSULATED  
FLAT FEMALE



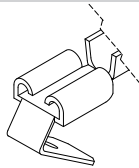
UNINSULATED AND INSULATED  
FLAT MALE



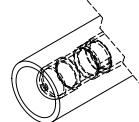
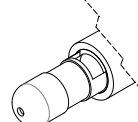
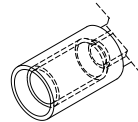
FLAT MALE AND  
FEMALE



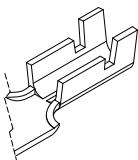
SOCKET



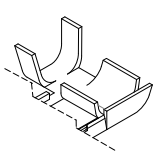
UNINSULATED AND INSULATED PLUG



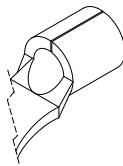
### UNINSULATED BARRELS



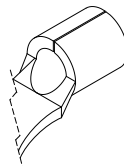
OPEN BARREL



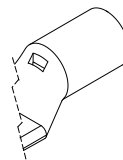
OPEN BARREL BENT  
AT 90°



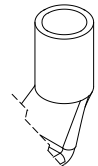
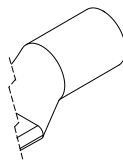
BARREL CLOSED BY  
SHEET



BARREL CLOSED BY  
SHEET WITH BRAZED  
FLAPS

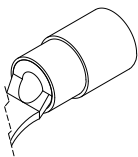


BARREL CLOSED BY TUBE  
WITH OR WITHOUT INSPECTION HOLE

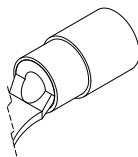


BARREL CLOSED  
BY TUBE BENT  
AT 90° OR 45°

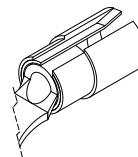
### INSULATED BARRELS



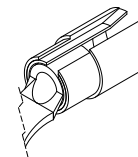
INSULATED BARREL



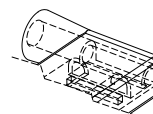
INSULATED BARREL  
 EASYENTRY



INSULATED BARREL  
WITH END-SLEEVE



INSULATED BARREL  
WITH END-SLEEVE  
 EASYENTRY

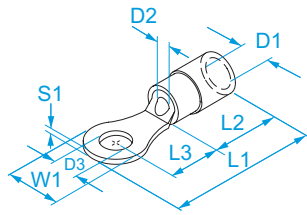


INSULATED BARREL  
BENT AT 90°



**EasyEntry** terminals make easier cable insertion by directing the conductors into the metal part of the barrel preventing the strands from bending. This is also in the terminals with anti-vibrating end-sleeve designed to improve mechanical resistance to vibrations.

## TERMINAL LUGS FOR COPPER CONDUCTORS - PVC INSULATED FROM SHEET - RING



**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300 V max  
**OPERATING TEMPERATURE:** 75 °C max  
**ACCORDING TO STD.:** UL 486 A-B

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	S1 (mm)	
00101	Red	0.25 ÷ 1.5	(22 - 16)	2.5	#3	8	23	10,4	8,6	4,2	1,95	2,6	0,8	100/1000
00107	Red			3	#4	8	23	10,4	8,6	4,2	1,95	3,15	0,8	100/1000
00109	Red			3	#4	5,5	17,6	10,4	4,4	4,2	1,95	3,2	0,8	100/1000
00113	Red			3.5	#6	8	22,2	10,4	7,8	4,2	1,95	3,6	0,8	100/1000
00119	Red			4	#8	7,4	20,6	10,4	6,5	4,2	1,95	4,3	0,8	100/1000
00125	Red			5	#10	8	21,8	10,4	7,4	4,2	1,95	5,2	0,8	100/1000
00131	Red			6	#12	10	23,7	10,4	8,3	4,2	1,95	6,2	0,8	100/1000
00137	Red			8	5/16"	14	30	10,4	12,6	4,2	1,95	8,3	0,8	100/1000
00143	Red			10	3/8"	14	30,2	10,4	12,8	4,2	1,95	10,4	0,8	100/1000
00201	Blue			1.5 ÷ 2.5	(16 - 14)	2.5	#3	8	23	11	8	4,8	2,45	2,6
00207	Blue	3	#4			8	23,4	11	8,4	4,8	2,45	3,2	0,8	100/1000
00209	Blue	3	#4			6,4	18,5	11	4,3	4,8	2,45	3,2	0,8	100/1000
00213	Blue	3.5	#6			8	23	11	8	4,8	2,45	3,7	0,8	100/1000
00219	Blue	4	#8			8	21,5	11	6,5	4,8	2,45	4,3	0,8	100/1000
00225	Blue	5	#10			9	22,4	11	7,5	4,8	2,45	5,2	0,8	100/1000
00231	Blue	6	#12			10,5	26	11	9,8	4,8	2,45	6,2	0,8	100/1000
00237	Blue	8	5/16"			13	29,8	11	12,3	4,8	2,45	8,2	0,8	100/1000
00243	Blue	10	3/8"			15	33	11	14,5	4,8	2,45	10,5	0,8	50/500
00313	Yellow	4 ÷ 6	(12 - 10)			3.5	#6	8	26,4	14	8,4	6,6	3,5	3,7
00319	Yellow			4	#8	8	26,4	14	8,4	6,6	3,5	4,2	1	50/500
00325	Yellow			5	#10	9,6	27	14	8,2	6,6	3,5	5,2	1	50/500
00331	Yellow			6	#12	11	29,1	14	9,6	6,6	3,5	6,2	1	50/500
00337	Yellow			8	5/16"	14	34,5	14	13,5	6,6	3,5	8,2	1	50/500
00343	Yellow			10	3/8"	19	40	14	16,5	6,6	3,5	10,5	1	100/500



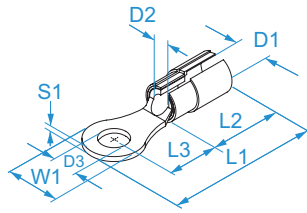
E-B170 (0,5-1,5 mm<sup>2</sup>)  
E-B171 (1,5-2,5 mm<sup>2</sup>)  
E-B172 (4-6 mm<sup>2</sup>)



file n° E 137735

• No UL



**TERMINAL LUGS FOR COPPER CONDUCTORS - PVC INSULATED AND ANTI-VIBRATING FROM SHEET - RING**

**TERMINAL MATERIAL:** tinned copper

**END-SLEEVE MATERIAL:** copper

**INSULATION MATERIAL:** polyvinylchloride (PVC)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**RATED VOLTAGE:** 300 V max

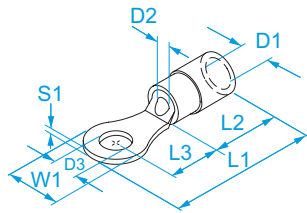
**OPERATING TEMPERATURE:** 75 °C max

**ACCORDING TO STD.:** UL 486 A-B

**ASSEMBLING:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	S1 (mm)	
90107	Red	0.25 ÷ 1.5	(22 - 16)	3	#4	5,5	17,5	10	4,75	4,4	1,7	3,2	0,8	100/1000
90113	Red			3.5	#6	5,5	17,5	10	4,75	4,4	1,7	3,7	0,8	100/1000
90119	Red			4	#8	8	21	10	7	4,4	1,7	4,3	0,8	100/1000
90125	Red			5	#10	8	21	10	7	4,4	1,7	5,3	0,8	100/1000
90131	Red			6	#12	11,6	25,5	10	9,7	4,4	1,7	6,4	0,8	100/1000
90137	Red			8	5/16"	11,6	25,5	10	9,7	4,4	1,7	8,4	0,8	100/1000
90143	Red			10	3/8"	13,6	27,3	10	10,5	4,4	1,7	10,5	0,8	100/1000
90207	Blue	1.5 ÷ 2.5	(16 - 14)	3	#4	8,5	22	10	7,75	5	2,3	3,2	0,8	100/1000
90213	Blue			3.5	#6	8,5	22	10	7,75	5	2,3	3,7	0,8	100/1000
90219	Blue			4	#8	8,5	22	10	7,75	5	2,3	4,3	0,8	100/1000
90225	Blue			5	#10	9,5	22	10	7,25	5	2,3	5,3	0,8	100/1000
90231	Blue			6	#12	12	27	10	11	5	2,3	6,4	0,8	100/1000
90237	Blue			8	5/16"	12	27	10	11	5	2,3	8,4	0,8	100/1000
90243	Blue			10	3/8"	13,6	29,3	10	12,5	5	2,3	10,5	0,8	100/1000
90319	Yellow	4 ÷ 6	(12 - 10)	4	#8	9,5	27	14	8,25	6,7	3,6	4,3	1	50/500
90325	Yellow			5	#10	9,5	27	14	8,25	6,7	3,6	5,3	1	50/500
90331	Yellow			6	#12	12	30,5	14	10,5	6,7	3,6	6,4	1	50/500
90337	Yellow			8	5/16"	15	35	14	13,5	6,7	3,6	8,4	1	50/500
90343	Yellow			10	3/8"	15	35	14	13,5	6,7	3,6	10,5	1	50/500

## TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED FROM SHEET - RING



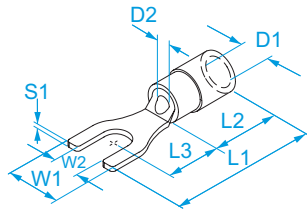
**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300 V max  
**OPERATING TEMPERATURE:** 105 °C max

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	S1 (mm)	
80107	Red	0,25 ÷ 1,5	(22 - 16)	3	#4	8	22,2	10,4	8,6	4,2	1,95	3,2	0,8	100/1000
80113	Red			3,5	#6	8	22,2	10,4	7,8	4,2	1,95	3,7	0,8	100/1000
80119	Red			4	#8	7,4	20,8	10,4	6,5	4,2	1,95	4,3	0,8	100/1000
80125	Red			5	#10	8	22,4	10,4	8	4,2	1,95	5,2	0,8	100/1000
80131	Red			6	#12	10	23,7	10,4	8,6	4,2	1,95	6,2	0,8	100/1000
80137	Red			8	5/16"	14	30	10,4	12,6	4,2	1,95	8,3	0,8	100/1000
80143	Red			10	3/8"	14	30	10,4	12,8	4,2	1,95	10,4	0,8	100/1000
80207	Blue	1,5 ÷ 2,5	(16 - 14)	3	#4	8	23	11	8	4,8	2,45	3,2	0,8	100/1000
80213	Blue			3,5	#6	8	23	11	8	4,8	2,45	3,7	0,8	100/1000
80219	Blue			4	#8	8	21,5	11	6,5	4,8	2,45	4,3	0,8	100/1000
80225	Blue			5	#10	9	23,6	11	7,5	4,8	2,45	5,2	0,8	100/1000
80231	Blue			6	#12	10,5	26	11	9,8	4,8	2,45	6,2	0,8	100/1000
80237	Blue			8	5/16"	13	30	11	12,7	4,8	2,45	8,2	0,8	100/1000
80243	Blue			10	3/8"	15	33	11	14,5	4,8	2,45	10,5	0,8	100/1000
80319	Yellow	4 ÷ 6	(12 - 10)	4	#8	8	26,5	14	8,4	6,6	3,5	4,2	1	100/1000
80325	Yellow			5	#10	10	27,5	14	8,5	6,6	3,5	5,2	1	100/1000
80331	Yellow			6	#12	11	30,6	14	11	6,6	3,5	6,2	1	100/1000
80337	Yellow			8	5/16"	15	37	14	15,3	6,6	3,5	8,2	1	100/1000
80343	Yellow			10	3/8"	19	40	14	16,5	6,6	3,5	10,5	1	100/1000

HALOGEN FREE

105 °C

EASYENTRY

**TERMINAL LUGS FOR COPPER CONDUCTORS - PVC INSULATED FROM SHEET - FORK**


**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300 V max  
**OPERATING TEMPERATURE:** 75 °C max  
**ACCORDING TO STD.:** UL 486 A-B

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
00102	Red	0,25 ÷ 1,5	(22 - 16)	2,5	#3	5,6	2,6	20	10,4	6,7	4,2	1,95	0,8	100/1000
00108	Red			3	#4	5,6	3,2	20	10,4	6,7	4,2	1,95	0,8	100/1000
00114	Red			3,5	#6	6,5	3,7	19,4	10,4	6,5	4,2	1,95	0,8	100/1000
00120	Red			4	#8	6,4	4,2	20,9	10,4	6,3	4,2	1,95	0,8	100/1000
00126	Red			5	#10	8	5,2	21,2	10,4	8	4,2	1,95	0,8	100/1000
00132	Red			6	#12	9,2	6,2	22,4	10,4	8,3	4,2	1,95	0,8	100/1000
00202	Blue	1,5 ÷ 2,5	(16 - 14)	2,5	#3	5,6	2,6	23	11	8,4	4,8	2,45	0,8	100/1000
00208	Blue			3	#4	5,6	3,2	23	11	8,4	4,8	2,45	0,8	100/1000
00214*	Blue			3,5	#6	6,6	3,7	20,3	11	5,3	4,8	2,45	0,8	100/1000
00220	Blue			4	#8	6,6	4,2	20,3	11	5,3	4,8	2,45	0,8	100/1000
00226	Blue			5	#10	9,1	5,2	25	11	9,5	4,8	2,45	0,8	100/1000
00232	Blue			6	#12	10	6,3	27	11	11,2	4,8	2,45	0,8	100/1000
00314	Yellow	4 ÷ 6	(12 - 10)	3,5	#6	8,1	3,7	26	14	7,2	6,6	3,5	1	50/500
00320	Yellow			4	#8	8,1	4,2	26	14	7,2	6,6	3,5	1	50/500
00326	Yellow			5	#10	9	5,2	28,5	14	10,5	6,6	3,5	1	50/500
00332	Yellow			6	#12	11	6,3	29,5	14	11	6,6	3,5	1	50/500
00338	Yellow			8	5/16"	15,2	8,2	35,2	14	15	6,6	3,5	1	50/500
00344	Yellow			10	3/8"	19	10,5	38	14	16,6	6,6	3,5	1	100/500



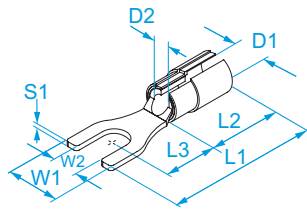
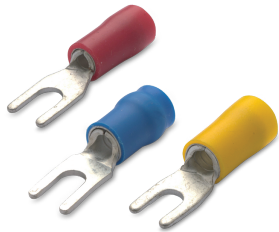
E-B170 (0,5-1,5 mm<sup>2</sup>)  
 E-B171 (1,5-2,5 mm<sup>2</sup>)  
 E-B172 (4-6 mm<sup>2</sup>)



file n° E 137735

• No UL



**TERMINAL LUGS FOR COPPER CONDUCTORS · PVC INSULATED AND ANTI-VIBRATING FROM SHEET · FORK**

**TERMINAL MATERIAL:** tinned copper

**END-SLEEVE MATERIAL:** copper

**INSULATION MATERIAL:** polyvinylchloride (PVC)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**RATED VOLTAGE:** 300 V max

**OPERATING TEMPERATURE:** 75 °C max

**ACCORDING TO STD.:** UL 486 A-B

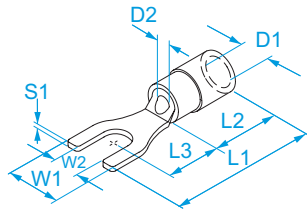
**ASSEMBLING:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
90108	Red	0.25 ÷ 1.5	(22 - 16)	3	#4	5,7	3,2	21,2	10	6,5	4,4	1,7	0,8	100/1000
90114	Red			3.5	#6	6,4	3,7	21,2	10	6,5	4,4	1,7	0,8	100/1000
90120	Red			4	#8	6,4	4,3	21,2	10	6,5	4,4	1,7	0,8	100/1000
90126	Red			5	#10	8,1	5,3	21,2	10	6,5	4,4	1,7	0,8	100/1000
90132	Red			6	#12	11	6,4	25,5	10	8,6	4,4	1,7	0,8	100/1000
90208	Blue	1.5 ÷ 2.5	(16 - 14)	3	#4	5,7	3,2	21,2	10	6,5	5	2,3	0,8	100/1000
90220	Blue			4	#8	6,4	4,3	21,2	10	6,5	5	2,3	0,8	100/1000
90226	Blue			5	#10	8,1	5,3	21,2	10	6,5	5	2,3	0,8	100/1000
90232	Blue			6	#12	11	6,4	25,5	10	8,6	5	2,3	0,8	100/1000
90314	Yellow	4 ÷ 6	(12 - 10)	3.5	#6	7,2	3,7	25,7	14	7,2	6,7	3,6	1	50/500
90320	Yellow			4	#8	9	4,3	25,7	14	7,2	6,7	3,6	1	50/500
90326	Yellow			5	#10	9	5,3	25,7	14	7,2	6,7	3,6	1	50/500
90332	Yellow			6	#12	12	6,4	31,5	14	10,5	6,7	3,6	1	50/500



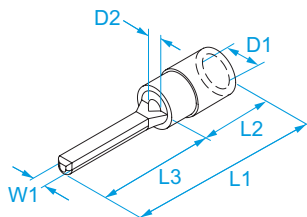
file n° E 137735

**V0**

**TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED FROM SHEET - FORK**


**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300 V max  
**OPERATING TEMPERATURE:** 105 °C max

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
80108	Red	0.25 ÷ 1.5	(22 - 16)	3	#4	5,6	3,2	20	10,4	6,7	4,2	1,95	0,8	100/1000
80114	Red			3.5	#6	6,5	3,7	19,4	10,4	6,5	4,2	1,95	0,8	100/1000
80120	Red			4	#8	6,4	4,2	20,9	10,4	6,3	4,2	1,95	0,8	100/1000
80126	Red			5	#10	8	5,2	21,2	10,4	8	4,2	1,95	0,8	100/1000
80132	Red			6	#12	9,2	6,2	22,4	10,4	8,3	4,2	1,95	0,8	100/1000
80208	Blue	1.5 ÷ 2.5	(16 - 14)	3	#4	5,6	3,2	23	11	8,4	4,8	2,45	0,8	100/1000
80214	Blue			3.5	#6	6,6	3,7	20,3	11	5,3	4,8	2,45	0,8	100/1000
80220	Blue			4	#8	6,6	4,2	20,3	11	5,3	4,8	2,45	0,8	100/1000
80226	Blue			5	#10	9,1	5,2	25	11	9,5	4,8	2,45	0,8	100/1000
80232	Blue			6	#12	10	6,3	27	11	11,2	4,8	2,45	0,8	100/1000
80314	Yellow	4 ÷ 6	(12 - 10)	3.5	#6	8,1	3,7	26	14	7,2	6,6	3,5	1	50/500
80320	Yellow			4	#8	8,1	4,2	26	14	7,2	6,6	3,5	1	100/1000
80326	Yellow			5	#10	9	5,2	28,5	14	10,5	6,6	3,5	1	100/1000
80332	Yellow			6	#12	11	6,3	29,5	14	11	6,6	3,5	1	100/1000
80338	Yellow			8	5/16"	15,2	8,2	35,2	14	15	6,6	3,5	1	50/500
80344	Yellow	10	3/8"	19	10,5	38	14	16,6	6,6	3,5	1	100/1000		


**TERMINAL LUGS FOR COPPER CONDUCTORS - PVC INSULATED FROM SHEET - ROUND PIN**


**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300 V max  
**OPERATING TEMPERATURE:** 75 °C max  
**ACCORDING TO STD.:** UL 486 A-B

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
00150	Red	0.25 ÷ 1.5	(22 - 16)	1,8	22,4	10,4	12	4,2	1,95	100/1000
00151	Red			1,8	20	10,4	9	4,2	1,95	100/1000
00250	Blue	1.5 ÷ 2.5	(16 - 14)	1,8	23	11	12	4,8	2,45	100/1000
00251	Blue			1,8	20	11	9	4,8	2,45	100/1000
00350	Yellow	4 ÷ 6	(12 - 10)	2,6	28	14	14	6,6	3,5	50/500

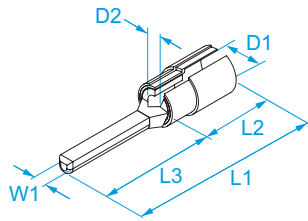
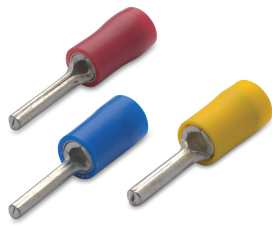


E-B170 (0,5-1,5 mm<sup>2</sup>)  
 E-B171 (1,5-2,5 mm<sup>2</sup>)  
 E-B172 (4-6 mm<sup>2</sup>)

file n° E 137735





**TERMINAL LUGS FOR COPPER CONDUCTORS · PVC INSULATED AND ANTI-VIBRATING FROM SHEET · ROUND PIN**

**TERMINAL MATERIAL:** tinned copper

**END-SLEEVE MATERIAL:** copper

**INSULATION MATERIAL:** polyvinylchloride (PVC)

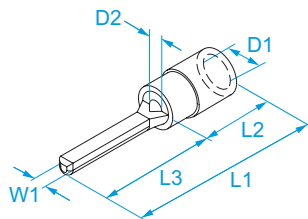
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**RATED VOLTAGE:** 300 V max

**OPERATING TEMPERATURE:** 75 °C max

**ASSEMBLING:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
90150	Red	0.25 ÷ 1.5	(22 - 16)	1,9	22	10	12	4,4	1,7	100/1000
90151	Red	0.25 ÷ 1.5	(22 - 16)	1,9	19	10	9	4,4	1,7	100/1000
90250	Blue	1.5 ÷ 2.5	(16 - 14)	1,9	22	10	9	5	2,4	100/1000
90251	Blue	1.5 ÷ 2.5	(16 - 14)	1,9	19	10	9	5	2,4	100/1000
90350	Yellow	4 ÷ 6	(12 - 10)	2,7	28	14	14	6,7	3,6	50/500

**V0**
**TERMINAL LUGS FOR COPPER CONDUCTORS · NYLON INSULATED FROM SHEET · ROUND PIN**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2

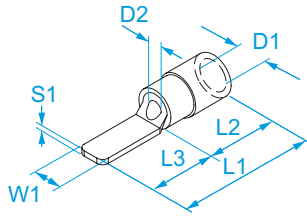
**RATED VOLTAGE:** 300 V max

**OPERATING TEMPERATURE:** 105 °C max

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
80150	Red	0.25 ÷ 1.5	(22 - 16)	1,8	22	10,4	12	4,2	1,95	100/1000
80250	Blue	1.5 ÷ 2.5	(16 - 14)	1,8	23	11	12	4,8	2,45	100/1000
80350	Yellow	4 ÷ 6	(12 - 10)	2,6	28	14	14	6,6	3,6	100/1000

**HALOGEN FREE**

105 °C

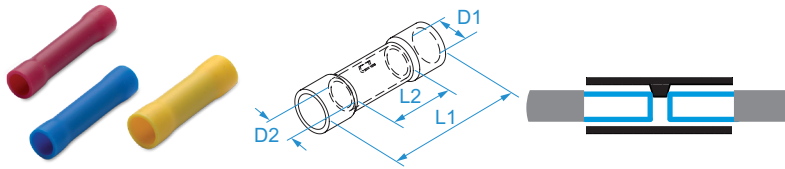
**TERMINAL LUGS FOR COPPER CONDUCTORS - PVC INSULATED FROM SHEET - BLADE PIN**


**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300 V max  
**OPERATING TEMPERATURE:** 75 °C max

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
00152	Red	0,25 ÷ 1,5	(22 - 16)	2,8	18,5	9,5	9	4	1,95	0,8	100/1000
00153	Red			3	24	9,5	14,5	4	1,95	0,8	100/1000
00252	Blue	1,5 ÷ 2,5	(16 - 14)	2,8	18,5	9,5	9	4,5	2,45	0,8	100/1000
00253	Blue			2,8	25,5	9,5	16	4,5	2,45	0,8	100/1000
00352	Yellow	4 ÷ 6	(12 - 10)	2,8	24	14	10,4	6,6	3,5	1	50/500
00353	Yellow			4,5	32	14	18	6,6	3,5	1	50/500

**V0**

## BUTT CONNECTORS - PVC INSULATED



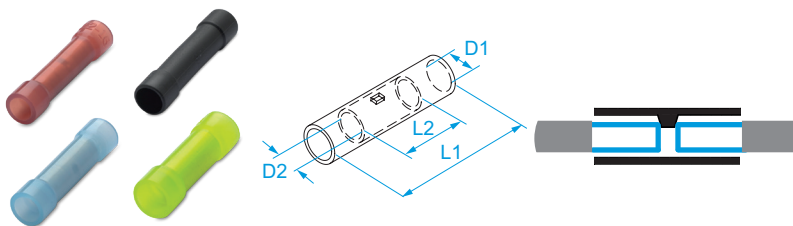
**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**OPERATING TEMPERATURE:** 75 °C max  
**MAX RATED VOLTAGE:** 300V  
**TYPE:** with central flush for a right insertion of the conductor.

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Current (A)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	
00160	Red	0.25 ÷ 1.5	(22 - 16)	17	25	15	4,2	1,8	100/1000
00260	Blue	1.5 ÷ 2.5	(16 - 14)	30	26,5	15	4,8	2,5	100/1000
00360	Yellow	4 ÷ 6	(12 - 10)	50	27	15	6,5	3,7	50/500



file n° E 137735

## BUTT CONNECTORS - NYLON INSULATED



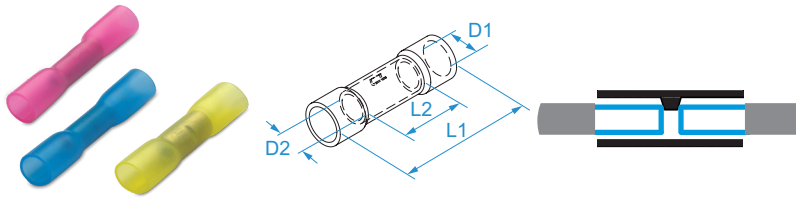
**TERMINAL MATERIAL:** tinned copper  
**INSULATION MATERIAL:** polyamide (PA6.6)  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**OPERATING TEMPERATURE:** 105 °C max  
**MAX RATED VOLTAGE:** 300V  
**TYPE:** with central flush for a right insertion of the conductor.

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	
80160*	Red	0.25 ÷ 1.5	(22 - 16)	26	15	3,4	1,7	100/100
80260*	Blue	1.5 ÷ 2.5	(16 - 14)	27	15	4,1	2,4	100/100
80360*	Yellow	4 ÷ 6	(12 - 10)	28	15	5,6	3,6	50/500
80460	Black	10	(8)	43	26	8,2	4,8	100/100
80560	Black	16	(6)	46	29	9	6	100/100
80660	Black	25	(4)	46	29	11,5	7	100/100



\* file n° E 137735



**BUTT CONNECTORS - WITH HEAT SHRINKING INSULATION**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** PE thermo-shrinkable with sealing adhesive

**OPERATING TEMPERATURE:** from -55 °C to +105 °C

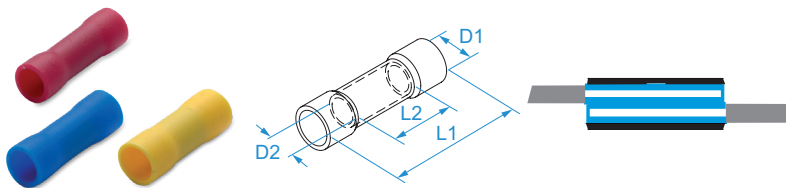
**SHRINKING TEMP:** 150°C

**MAX RATED VOLTAGE:** 600V

**TYPE:** with central flush for a right insertion of the conductor.

**HOW TO ASSEMBLE:** use heat air gun 1108

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	
90160	Red	0.5 ÷ 1.5	(20 - 16)	35	15	4,5	1,8	100/1000
90260	Blue	1.5 ÷ 2.5	(16 - 14)	37	15	5,5	2,5	100/1000
90360	Yellow	4 ÷ 6	(12 - 10)	41	15	6,5	3,7	50/500

**HALOGEN FREE**
**PARALLEL BUTT CONNECTORS - PVC INSULATED**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyvinylchloride (PVC)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2

**OPERATING TEMPERATURE:** 75 °C max

**MAX RATED VOLTAGE:** 300V

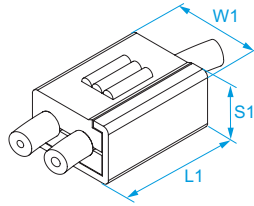
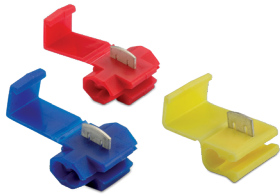
**HOW TO ASSEMBLE:** overlap the two conductors

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Current (A)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	
00162	Red	0.25 ÷ 1.5	(22 - 16)	17	18	8	4,2	1,8	100/1000
00262	Blue	1.5 ÷ 2.5	(16 - 14)	30	18	8	4,8	2,5	100/1000
00362	Yellow	4 ÷ 6	(12 - 10)	50	21,5	8,5	6,5	3,7	50/500



file n° E 137735

## QUICK CONNECTOR WITH INSULATION-PIERCING

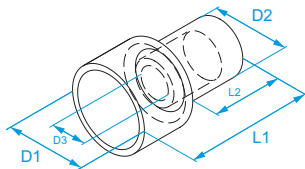


**CONDUCTIVE BODY IN:** copper  
**INSULATING HOUSING IN:** polypropylene (PP)  
**RATED VOLTAGE:** 300 V

Code	Section (mm <sup>2</sup> )	Section (AWG)	Operating temperature	Shells Color	W1 (mm)	L1 (mm)	S1 (mm)	Current (A)	
00110	0.25÷1	(22-18)	90 °C max	Red	20	15,3	10	17	500/500
00210	1.25÷2.5	(18-14)	90 °C max	Blue	20	15,9	10	30	500/500
00310	4÷6	(12-10)	90 °C max	Yellow	21	17,5	13	50	250/250



## ONE-WAY TERMINAL BLOCKS · END CONNECTORS · FOR CRIMPING



**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** tinned copper

**MAX OPERATING TEMPERATURE:** 105 °C

**MAX RATED VOLTAGE:** 600 V

**ACCORDING TO STD.:** UL486C

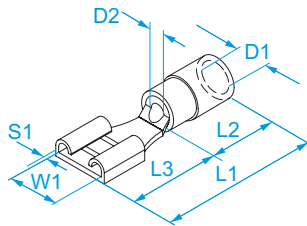
**ASSEMBLY:** the actual connection capacity changes according to the number and section of the conductors as shown in the application note (website)

**CRIMPING TOOL:** 528

Code	Conductor section (mm <sup>2</sup> )	Conductor section (AWG)	Connection capability	ID tool	D1 (mm)	D2 (mm)	D3 (mm)	L1 (mm)	L2 (mm)	
00170	0,25 ÷ 1,5	(22-16)	2÷5	2	6,2	5,6	2,6	15,2	6,8	100/1000
00270	1,5 ÷ 2,5	(16-14)	2÷7	2	6,5	5,9	3,2	15,2	7	100/1000
00370	2.5 ÷ 6	(12-10)	2÷5	5	9,4	7,3	4	17,8	8,5	50/500
00470*	6 ÷ 10	(20-10)	2÷4		12	9,3	4,6	22,2	9,3	100/1000



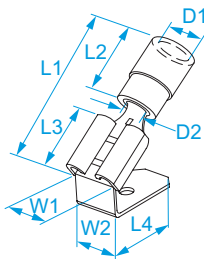
\* file n° E 137735

**QUICK-CONNECT TERMINALS - PVC INSULATED AND ANTI-VIBRATING - FEMALE**


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**OPERATING TEMPERATURE:** 75 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
00190*	Red	0.25 ÷ 1.5	(22 - 16)	6.3 x 0.8	0.250x0.032	6,6	20,7	10	7,8	3,8	1,9	0,8	100/1000
00105	Red			5.2 x 0.8	0.205x0.032	5,5	18,7	10	6,4	3,8	1,9	0,8	100/1000
00145*	Red			4.8 x 0.5	0.187x0.020	5	19,1	10	6	3,8	1,9	0,8	100/1000
00148*	Red			4.8 x 0.8	0.187x0.032	5	19,1	10	6	3,8	1,9	0,8	100/1000
00395*	Red			2.8 x 0.5	0.110x0.020	3,2	18,5	10	6,4	3,8	1,9	0,8	100/1000
00390*	Red	1.5 ÷ 2.5	(16 - 14)	2.8 x 0.8	0.110x0.032	3,2	18,5	10	6,4	3,8	1,9	0,8	100/1000
00290*	Blue			6.3 x 0.8	0.250x0.032	6,6	20,7	10	7,8	4,3	2,4	0,8	100/1000
00205	Blue			5.2 x 0.8	0.205x0.032	5,5	18,7	10	6,4	4,3	2,4	0,8	100/1000
00245*	Blue			4.8 x 0.5	0.187x0.020	5	18,7	10	6	4,3	2,4	0,5	100/1000
00248*	Blue			4.8 x 0.8	0.187x0.032	5	18,7	10	6	4,3	2,4	0,8	100/1000
00391*	Yellow	4 ÷ 6	(12 - 10)	6.3 x 0.8	0.250x0.032	6,6	24,5	14	7,8	6,8	3,5	0,8	50/500
00393	Yellow			9.8 x 1.1	0.375x0.043	10	29	14	12	6,8	3,5	1,1	50/500

\* file n° E 143070

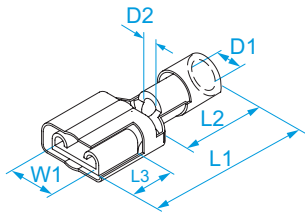
**QUICK-CONNECT TERMINALS - PVC INSULATED AND ANTI-VIBRATING - PIGGY-BACKS**


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**OPERATING TEMPERATURE:** 75 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	
00198	Red	0.25 ÷ 1.5	(22 - 16)	6.3 x 0.8	0.250x0.032	6,6	6,3	22,8	10,5	7,8	8	3,8	1,9	100/1000
00298	Blue	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	6,6	6,3	22,8	10,5	7,8	8	4,3	2,5	50/500

file n° E 143070

**QUICK-CONNECT TERMINALS - PVC INSULATED AND ANTI-VIBRATING - FEMALE TOTALLY INSULATED**



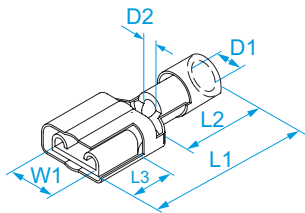
**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**OPERATING TEMPERATURE:** 75 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
00191*	Red	0.25 ÷ 1.5	(22 - 16)	6.3 x 0.8	0.250x0.032	6,6	22	11	7,8	3,8	1,9	100/1000
00192*	Red			4.8 x 0.8	0.187x0.032	5	20	11	6	3,8	1,9	100/1000
00193	Red			4.8 x 0.5	0.187x0.020	5	20	11	6	3,8	1,9	100/1000
00291*	Blue	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	6,6	22	11	7,8	4,5	2,4	50/250
00292*	Blue			4.8 x 0.8	0.187x0.032	5	20	11	6	4,5	2,4	100/1000
00293	Blue			4.8 x 0.5	0.187x0.020	5	20	11	6	4,5	2,4	100/1000
00392*	Yellow	4 ÷ 6	(12 - 10)	6.3 x 0.8	0.250x0.032	6,6	25	11	7,8	6	3,5	50/500

\* file n° E 143070

**V0**

**QUICK-CONNECT TERMINALS - NYLON INSULATED AND ANTI-VIBRATING - TOTALLY INSULATED FEMALE**

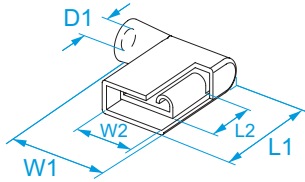
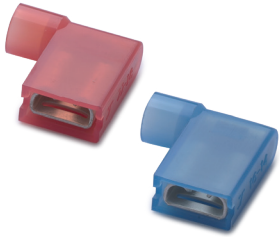


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**OPERATING TEMPERATURE:** 105 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
80191	Red	0.25 ÷ 1.5	(22 - 16)	6.3 x 0.8	0.250x0.032	6,6	22	11	7,8	3,8	1,9	100/1000
80192	Red			4.8 x 0.8	0.187x0.032	5	20,5	10,5	6,4	3,8	1,9	100/1000
80193	Red			4.8 x 0.5	0.187x0.020	5	20,5	10,5	6,4	3,8	1,9	100/1000
80390	Red			2.8 x 0.8	0.110x0.032	3,2	19,5	8,5	6	3,8	1,9	100/1000
80395	Red	1.5 ÷ 2.5	(16 - 14)	2.8 x 0.5	0.110x0.020	3,2	19,5	8,5	6	3,8	1,9	100/1000
80291	Blue			6.3 x 0.8	0.250x0.032	6,6	22	11	7,8	4,5	2,4	50/500
80292	Blue			4.8 x 0.8	0.187x0.032	5	20,5	10,5	6,4	4,5	2,4	100/1000
80293	Blue	4.8 x 0.5	0.187x0.020	5	20,5	10,5	6,4	4,5	2,4	100/1000		
80392	Yellow	4 ÷ 6	(12 - 10)	6.3 x 0.8	0.250x0.032	6,6	24	13	7,8	6	3,5	50/500

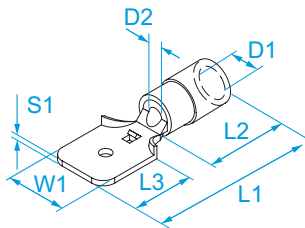
105 °C

**HALOGEN FREE**

**QUICK-CONNECT TERMINALS - NYLON INSULATED - TOTALLY INSULATED FEMALE - FLAG TYPE**


**TERMINAL MATERIAL:** tinned brass  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**OPERATING TEMPERATURE:** 105 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	
80195	Red	0.5 ÷ 1.5	(20 - 16)	6.3 x 0.8	0.250x0.032	15	6,6	16	7,9	4	100/1000
80295	Blue	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	15	6,6	16	7,9	4,5	100/500


**QUICK-CONNECT TERMINALS - PVC INSULATED AND ANTI-VIBRATING - MALE**


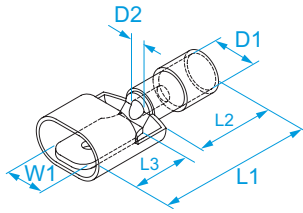
**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**OPERATING TEMPERATURE:** 75 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Male (mm)	Male (")	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
00180	Red	0.25 ÷ 1.5	(22 - 16)	6.3 x 0.8	0.250x0.032	6,3	21	10	8	3,8	1,9	0,8	100/1000
00280	Blue	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	6,3	21	10	8	4,3	2,4	0,8	100/1000
00380	Yellow	4 ÷ 6	(12 - 10)	6.3 x 0.8	0.250x0.032	6,3	24,5	13,5	8	6	3,5	0,8	50/500





### QUICK-CONNECT TERMINALS - NYLON INSULATED AND ANTI-VIBRATING - TOTALLY INSULATED MALE

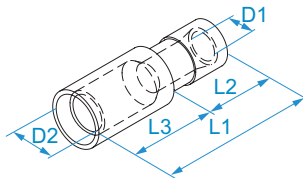


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**OPERATING TEMPERATURE:** 105 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Male (mm)	Male (")	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
80180	Red	0.25 ÷ 1.5	(22 - 16)	6.3 x 0.8	0.250x0.032	6,3	23	11	8	3,8	1,9	100/1000
80280	Blue	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	6,3	23	11	8	3,8	1,9	50/500
80380	Yellow	4 ÷ 6	(12 - 10)	6.3 x 0.8	0.250x0.032	6,3	26	13	8	6	3,5	50/500



### CYLINDER PLUG - PVC INSULATED AND ANTI-VIBRATING - FEMALE

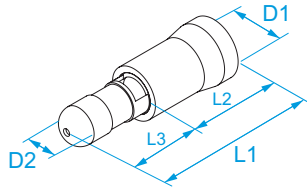


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**OPERATING TEMPERATURE:** 75 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
00140*	Red	0.25 ÷ 1.5	(22 - 16)	23,5	9,5	8,4	3,8	4	100/1000
00240*	Blue	1.5 ÷ 2.5	(16 - 14)	23,5	9,5	8,7	4,3	5	50/500
00244*	Blue			23,5	9,5	8,7	4,3	4	50/500
00340	Yellow	4 ÷ 6	(12 - 10)	25	12	8,2	6,2	5	50/500

\* file n° E 137735

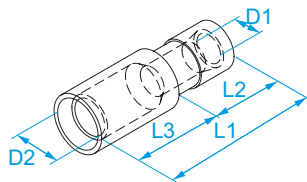
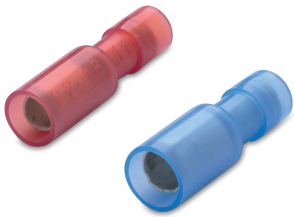


**CYLINDER PLUG - PVC INSULATED AND ANTI-VIBRATING - MALE**


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyvinylchloride (PVC)  
**OPERATING TEMPERATURE:** 75 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
00130*	Red	0.25 ÷ 1.5	(22 - 16)	21	10	8,7	5,5	4	100/1000
00230*	Blue	1.5 ÷ 2.5	(16 - 14)	21	10	8,7	6	5	100/1000
00234*	Blue			20,7	10	8,7	6	4	100/1000
00330	Yellow	4 ÷ 6	(12 - 10)	24,7	14	8,6	6,7	5	50/500

US \* file n° E 137735

**V0**
**CYLINDER PLUG - NYLON INSULATED AND ANTI-VIBRATING - FEMALE**


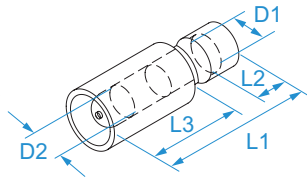
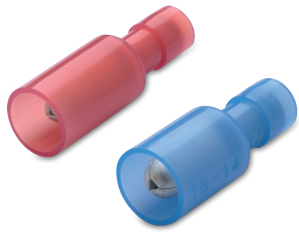
**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**OPERATING TEMPERATURE:** 105 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
80140	Red	0.25 ÷ 1.5	(22 - 16)	23	11	9	4,2	4	50/500
80240	Blue	1.5 ÷ 2.5	(16 - 14)	23	11	9	4,8	5	50/500

105 °C

**HALOGEN FREE**

**CYLINDER PLUG - NYLON INSULATED AND ANTI-VIBRATING - MALE**

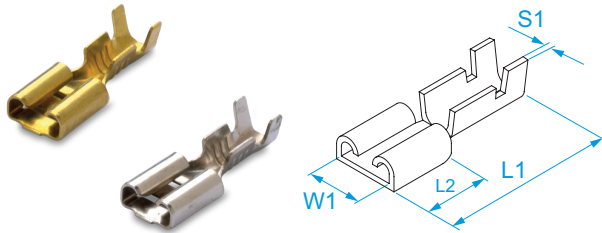


**TERMINAL MATERIAL:** tinned brass  
**END-SLEEVE MATERIAL:** copper  
**INSULATION MATERIAL:** polyamide (PA 6.6)  
**OPERATING TEMPERATURE:** 105 °C max  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2  
**RATED VOLTAGE:** 300V max  
**HOW TO ASSEMBLE:** double crimping

TERMINALS

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
80130	Red	0.25 ÷ 1.5	(22 - 16)	24	11	9	4,2	4	50/500
80230	Blue	1.5 ÷ 2.5	(16 - 14)	24	11	9	4,8	5	50/500



**QUICK-CONNECT TERMINALS - UNINSULATED - FEMALE**

**TERMINAL MATERIAL:** tinned/passivated brass

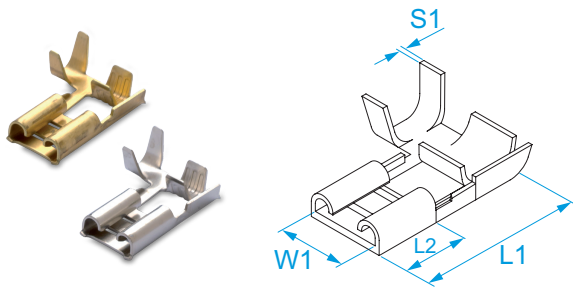
**ACCORDING TO STD.:** EN 61210: 2010-11

**OPERATING TEMPERATURE:** da -40 °C a +110 °C

Code	Material	Execution	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	L1 (mm)	L2 (mm)	S1 (mm)	
01190	passivated brass	loose	0.5 ÷ 1	(20 - 18)	6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	200/1000
01191	tinned brass	loose			6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	200/1000
02190	passivated brass	reel	0.5 ÷ 1	(20 - 18)	6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	7000/7000
02191	tinned brass	reel			6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	7000/7000
01148	passivated brass	loose	0.5 ÷ 1	(20 - 18)	4.8 x 0.8	0.187x0.032	5,8	15,6	6,4	0,35	200/1000
01149	tinned brass	loose			4.8 x 0.8	0.187x0.032	5,8	15,6	6,4	0,35	200/1000
02148	passivated brass	reel	0.5 ÷ 1	(20 - 18)	4.8 x 0.8	0.187x0.032	5,8	15,6	6,4	0,35	10000/10000
02149	tinned brass	reel			4.8 x 0.8	0.187x0.032	5,8	15,6	6,4	0,35	8000/8000
01145	passivated brass	loose	0.5 ÷ 1	(20 - 18)	4.8 x 0.5	0.187x0.020	5,8	15,6	6,4	0,35	200/1000
01146	tinned brass	loose			4.8 x 0.5	0.187x0.020	5,8	15,6	6,4	0,35	200/1000
02145	passivated brass	reel	0.5 ÷ 1	(20 - 18)	4.8 x 0.5	0.187x0.020	5,8	15,6	6,4	0,35	8000/8000
02146	tinned brass	reel			4.8 x 0.5	0.187x0.020	5,8	15,6	6,4	0,35	8000/8000
01390	passivated brass	loose	0.5 ÷ 1	(20 - 18)	2.8 x 0.8	0.110x0.032	3,7	14	6,5	0,3	200/1000
01391	tinned brass	loose			2.8 x 0.8	0.110x0.032	3,7	14	6,5	0,3	200/1000
02390	passivated brass	reel	0.5 ÷ 1	(20 - 18)	2.8 x 0.8	0.110x0.032	3,7	14	6,5	0,3	15000/15000
02391	tinned brass	reel			2.8 x 0.8	0.110x0.032	3,7	14	6,5	0,3	15000/15000
01395	passivated brass	loose	0.5 ÷ 1	(20 - 18)	2.8 x 0.5	0.110x0.020	3,7	14	6,5	0,3	200/1000
01396	tinned brass	loose			2.8 x 0.5	0.110x0.020	3,7	14	6,5	0,3	200/1000
02395	passivated brass	reel	0.5 ÷ 1	(20 - 18)	2.8 x 0.5	0.110x0.020	3,7	14	6,5	0,3	15000/15000
02396	tinned brass	reel			2.8 x 0.5	0.110x0.020	3,7	14	6,5	0,3	15000/15000
01290	passivated brass	loose	1 ÷ 2.5	(18 - 14)	6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	100/1000
01291	tinned brass	loose			6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	100/1000
02290	passivated brass	reel	1 ÷ 2.5	(18 - 14)	6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	6500/6500
02291	tinned brass	reel			6.3 x 0.8	0.250x0.032	7,6	19,2	7,6	0,4	6500/6500



**QUICK-CONNECT TERMINALS - UNINSULATED - FEMALE - FLAG TYPE**

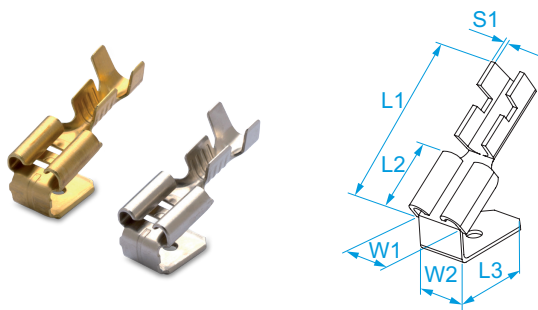


**TERMINAL MATERIAL:** tinned/passivated brass  
**ACCORDING TO STD.:** EN 61210: 2010-11  
**OPERATING TEMPERATURE:** da -40 °C a +110 °C

Code	Material	Execution	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For male (mm)	For male (")	W1 (mm)	L1 (mm)	L2 (mm)	S1 (mm)	
01195	passivated brass	loose	0.5 ÷ 1	(20 - 18)	6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	200/1000
01196	tinned brass	loose			6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	200/1000
02195	passivated brass	reel	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	5500/5500
02196	tinned brass	reel			6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	5500/5500
01295	passivated brass	loose	0.5 ÷ 1	(20 - 18)	6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	100/1000
01296	tinned brass	loose			6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	100/1000
02295	passivated brass	reel	1.5 ÷ 2.5	(16 - 14)	6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	5500/5500
02296	tinned brass	reel			6.3 x 0.8	0.250x0.032	6,6	15	7,6	0,8	5500/5500



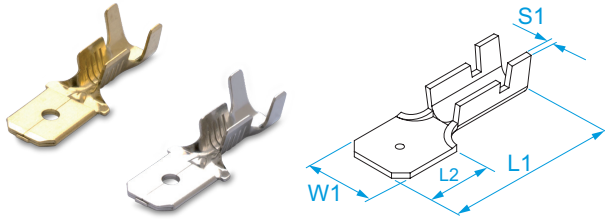
**QUICK-CONNECT TERMINALS - UNINSULATED - PIGGY-BACKS**



**TERMINAL MATERIAL:** tinned/passivated brass  
**ACCORDING TO STD.:** EN 61210: 2010-11  
**OPERATING TEMPERATURE:** da -40 °C a +110 °C

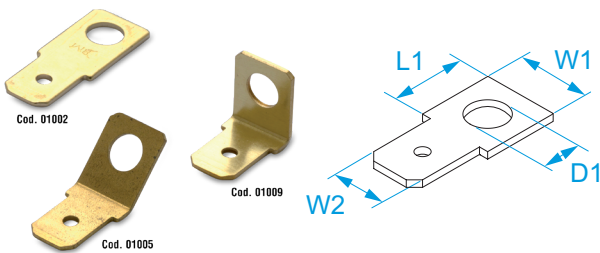
Code	Material	Execution	Section (mm <sup>2</sup> )	Section (AWG/MCM)	flat female, flat male (mm)	flat female, flat male (")	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	S1 (mm)	
01198	passivated brass	loose	0.5 ÷ 1	(20 - 18)	6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	100/500
01199	tinned brass	loose			6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	100/500
02198	passivated brass	reel	1 ÷ 2.5	(18 - 14)	6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	1000/1000
02199	tinned brass	reel			6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	1000/1000
01298	passivated brass	loose	0.5 ÷ 1	(20 - 18)	6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	100/1000
01299	tinned brass	loose			6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	100/1000
02298	passivated brass	reel	1 ÷ 2.5	(18 - 14)	6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	1000/1000
02299	tinned brass	reel			6.3 x 0.8	0.250x0.032	6,6	6,3	19,6	7,6	8	0,8	1000/1000



**QUICK-CONNECT TERMINALS - UNINSULATED - MALE**


**TERMINAL MATERIAL:** tinned/passivated brass  
**ACCORDING TO STD.:** EN 61210: 2010-11  
**OPERATING TEMPERATURE:** da -40 °C a +110 °C

Code	Material	Execution	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Male (mm)	Male (")	W1 (mm)	L1 (mm)	L2 (mm)	S1 (mm)	
01180	passivated brass	loose	0,5 ÷ 1	(20 - 18)	6,3 x 0,8	0,250x0,032	6,3	20,6	8	0,8	200/1000
01181	tinned brass	loose			6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	200/1000
02180	passivated brass	reel	1 ÷ 2,5	(18 - 14)	6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	6000/6000
02181	tinned brass	reel			6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	6000/6000
01280	passivated brass	loose	1 ÷ 2,5	(18 - 14)	6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	200/1000
01281	tinned brass	loose			6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	200/1000
02280	passivated brass	reel	1 ÷ 2,5	(18 - 14)	6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	6000/6000
02281	tinned brass	reel			6,3 x 0,8	0,250x0,032	6,3	20,6	8,2	0,8	6000/6000

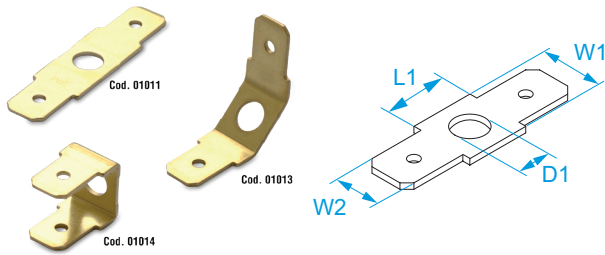

**QUICK-CONNECT TERMINALS - UNINSULATED - MALE-PANEL**


**TERMINAL MATERIAL:** tinned/passivated brass  
**ACCORDING TO STD.:** EN 61210: 2010-11  
**OPERATING TEMPERATURE:** da -40 °C a +110 °C

Code	Material	Male (mm)	Male (")	W1 (mm)	W2 (mm)	L1 (mm)	D1 (mm)	
01002	passivated brass	6,3 x 0,8	0,250x0,032	8	6,3	6,3	4,3	100/1000
02002	tinned brass	6,3 x 0,8	0,250x0,032	8	6,3	6,3	4,3	100/1000
01005	passivated brass	6,3 x 0,8	0,250x0,032	8	6,3	6,3	4,3	100/1000
02005	tinned brass	6,3 x 0,8	0,250x0,032	8	6,3	6,3	4,3	100/1000
01009	passivated brass	6,3 x 0,8	0,250x0,032	8	6,3	6,3	4,3	100/1000
02009	tinned brass	6,3 x 0,8	0,250x0,032	8	6,3	6,3	4,3	100/1000



**QUICK-CONNECT TERMINALS - UNINSULATED - MALE-PANEL-MALE**

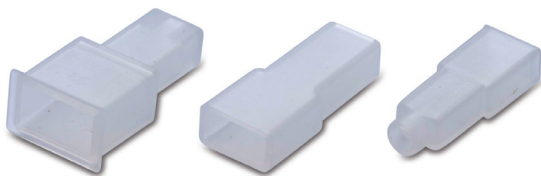


**TERMINAL MATERIAL:** tinned/passivated brass  
**ACCORDING TO STD.:** EN 61210: 2010-11  
**OPERATING TEMPERATURE:** da -40 °C a +110 °C

Code	Material	Male (mm)	Male (")	W1 (mm)	W2 (mm)	L1 (mm)	D1 (mm)	
01011	passivated brass	6.3 x 0.8	0.250x0.032	8	6,3	6,3	4,3	100/1000
02011	tinned brass	6.3 x 0.8	0.250x0.032	8	6,3	6,3	4,3	100/1000
01013	passivated brass	6.3 x 0.8	0.250x0.032	8	6,3	6,3	4,3	100/1000
02013	tinned brass	6.3 x 0.8	0.250x0.032	8	6,3	6,3	4,3	100/1000
01014	passivated brass	6.3 x 0.8	0.250x0.032	8	6,3	6,3	4,3	100/1000
02014	tinned brass	6.3 x 0.8	0.250x0.032	8	6,3	6,3	4,3	100/1000



**ACCESSORIES FOR QUICK CONECT TERMINALS: POLYETHYLENE SLEEVES**



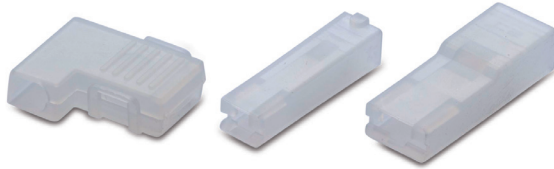
Cod. 01016

Cod. 01017

Cod. 01020  
Cod. 01021

**MATERIAL:** polyethylene  
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 HB  
**MAX OPERATING TEMPERATURE:**60°C  
**COLOR:** natural  
**RATED VOLTAGE:**50V

Code	Connector type	For terminal (mm)	For terminal (")	
01020	female	2.8	0.11	1000/1000
01021	female	4.8	0.187	1000/1000
01017	female	6.3	0.25	1000/1000
01016	male	6.3	0.25	500/500

**ACCESSORIES FOR QUICK CONECT TERMINALS: NYLON SLEEVES**

**Cod. 01018**
**Cod. 01019**
**Cod. 01022  
Cod. 01023**
**MATERIAL:** PA6.6

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2, IEC 695-2-1 at 850°C and IEC 695-2-2

**MAX OPERATING TEMPERATURE:**105°C

**COLOR:** natural

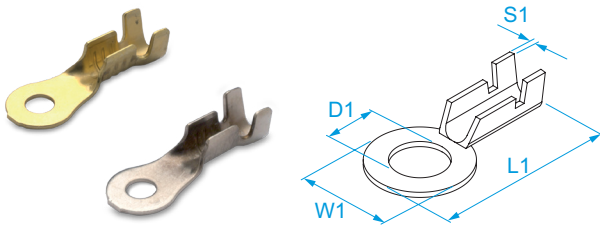
**RATED VOLTAGE:**450V

Code	Connector type	For terminal (mm)	For terminal (")	
<b>01019</b>	female	2.8	0.11	1000/1000
<b>01023</b>	female	4.8	0.187	1000/1000
<b>01022</b>	female	6.3	0.25	500/500
<b>01018</b>	female flag	6.3	0.25	500/500



**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED FROM SHEET - OPEN BRASS**

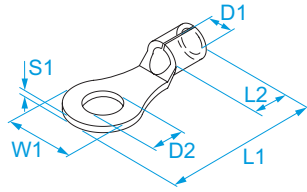
**TERMINAL MATERIAL:** tinned/passivated brass  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C



TERMINALS

Code	Material	Execution	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	D1 (mm)	S1 (mm)	
91103	passivated brass	loose	0.75 ÷ 1	(18)	3	#4	8	21	3,2	0,6	200/2000
91113	tinned brass	loose			3	#4	8	21	3,2	0,6	200/2000
92103	passivated brass	reel	0.75 ÷ 1	(18)	3	#4	7	17,7	3,2	0,5	8000/8000
92113	tinned brass	reel			3	#4	7	17,7	3,2	0,5	8000/8000
91104	passivated brass	loose	0.75 ÷ 1	(18)	4	#8	8,7	20	4,3	0,6	200/2000
91114	tinned brass	loose			4	#8	8,7	20	4,3	0,6	200/2000
92104	passivated brass	reel			4	#8	7	17,7	4,2	0,5	8000/8000
92114	tinned brass	reel			4	#8	7	17,7	4,2	0,5	8000/8000
91105	passivated brass	loose	0.75 ÷ 1	(18)	5	#10	8,7	20	5,2	0,6	200/2000
91115	tinned brass	loose			5	#10	8,7	20	5,2	0,6	200/2000
92105	passivated brass	reel			5	#10	7	17,7	5,2	0,5	8000/8000
92115	tinned brass	reel			5	#10	7	17,7	5,2	0,5	8000/8000
91203	passivated brass	loose	1 ÷ 2.5	(18 - 14)	3	#4	8	21	3,2	0,5	200/2000
91213	tinned brass	loose			3	#4	8	21	3,2	0,5	200/2000
92203	passivated brass	reel			3	#4	7	17,7	3,2	0,5	5000/5000
92213	tinned brass	reel			3	#4	7	17,7	3,2	0,5	5000/5000
91204	passivated brass	loose	1 ÷ 2.5	(18 - 14)	4	#8	8,7	20	4,3	0,6	200/2000
91214	tinned brass	loose			4	#8	8,7	20	4,3	0,6	200/2000
92204	passivated brass	reel			4	#8	7	17,7	4,2	0,5	5000/5000
92214	tinned brass	reel			4	#8	7	17,7	4,2	0,5	5000/5000
91205	passivated brass	loose	1 ÷ 2.5	(18 - 14)	5	#10	8,7	20	5,2	0,6	200/2000
91215	tinned brass	loose			5	#10	8,7	20	5,2	0,6	200/2000
92205	passivated brass	reel			5	#10	7	17,7	5,2	0,5	5000/5000
92215	tinned brass	reel			5	#10	7	17,7	5,2	0,5	5000/5000

**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED FROM SHEET - RING**
**TERMINAL MATERIAL:** tinned copper

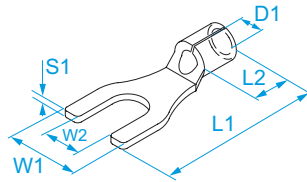
**OPERATING TEMPERATURE:** from -50 °C to +150 °C


Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
01101	0.5 ÷ 1.5	(20 - 16)	2.5	#3	8	17,2	5,2	1,9	2,6	0,8	200/1000
01107			3	#4	8	17,2	5,2	1,9	3,2	0,8	200/1000
01113			3.5	#6	8	17,2	5,2	1,9	3,7	0,8	200/1000
01119			4	#8	7,4	15,4	5,2	1,9	4,3	0,8	200/1000
01125			5	#10	8,5	17,4	5,2	1,9	5,2	0,8	200/1000
01131			6	#12	10	18,5	5,2	1,9	6,2	0,8	200/1000
01137			8	5/16"	14	25	5,2	1,9	8,2	0,8	200/1000
01143			10	3/8"	14	25	5,2	1,9	10,5	0,8	200/1000
01201			1.5 ÷ 2.5	(16 - 14)	2.5	#3	8	17,2	5,2	2,4	2,6
01207	3	#4			8	17,2	5,2	2,4	3,2	0,8	200/1000
01213	3.5	#6			8	17,2	5,2	2,4	3,7	0,8	200/1000
01219	4	#8			8	15,7	5,2	2,4	4,3	0,8	200/1000
01225	5	#10			9	17,2	5,2	2,4	5,2	0,8	200/1000
01231	6	#12			10,5	20,3	5,2	2,4	6,2	0,8	200/1000
01237	8	5/16"			13	24,4	5,2	2,4	8,2	0,8	200/1000
01243	10	3/8"			15	26,8	5,2	2,4	10,5	0,8	200/1000
01313	4 ÷ 6	(12 - 10)			3.5	#6	8	18,7	6,5	3,5	3,7
01319			4	#8	8	18,7	6,5	3,5	4,2	1	100/1000
01325			5	#10	10	20	6,5	3,5	5,2	1	100/1000
01331			6	#12	11	23	6,5	3,5	6,2	1	100/1000
01337			8	5/16"	15	29,3	6,5	3,5	8,2	1	100/1000
01343			10	3/8"	19	32	6,5	3,5	10,5	1	100/1000

### TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED FROM SHEET - FORK

TERMINAL MATERIAL: tinned copper

OPERATING TEMPERATURE: from -50 °C to +150 °C

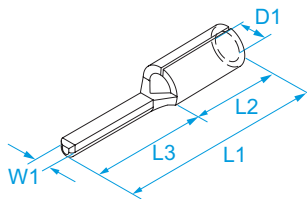


Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	S1 (mm)	
01102	0.25 ÷ 1.5	(22 - 16)	2.5	#3	5,6	2,6	14,6	5,2	1,9	0,8	200/1000
01108			3	#4	5,6	3,2	14,6	5,2	1,9	0,8	200/1000
01114			3.5	#6	6,5	3,7	14,9	5,2	1,9	0,8	200/1000
01120			4	#8	6,5	4,2	15,7	5,2	1,9	0,8	200/1000
01126			5	#10	8	5,2	16,2	5,2	1,9	0,8	200/1000
01132			6	#12	9,2	6,2	17,5	5,2	1,9	0,8	200/1000
01202	1.5 ÷ 2.5	(16 - 14)	2.5	#3	5,6	2,6	17,2	5,2	2,4	0,8	200/1000
01208			3	#4	5,6	3,2	17,2	5,2	2,4	0,8	200/1000
01214			3.5	#6	6,5	3,7	14,3	5,2	2,4	0,8	200/1000
01220			4	#8	6,5	4,2	15,7	5,2	2,4	0,8	200/1000
01226			5	#10	9,1	5,2	19,2	5,2	2,4	0,8	200/1000
01232			6	#12	10	6,2	21	5,2	2,4	0,8	200/1000
01314	4 ÷ 6	(12 - 10)	3.5	#6	8	3,7	19,6	6,5	3,5	1	100/1000
01320			4	#8	8	4,2	18,6	6,5	3,5	1	100/1000
01326			5	#10	9	5,2	21,1	6,5	3,5	1	100/1000
01332			6	#12	11	6,2	22,3	6,5	3,5	1	100/1000
01338			8	5/16"	15,2	8,2	27,5	6,5	3,5	1	100/200
01344			10	3/8"	19	10,2	30,2	6,5	3,5	1	100/1000

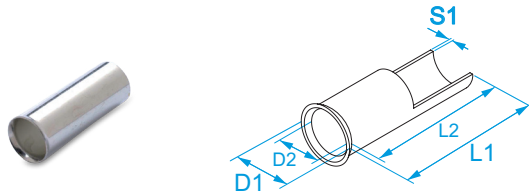
### TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED FROM SHEET - ROUND PIN

TERMINAL MATERIAL: tinned copper

OPERATING TEMPERATURE: from -50 °C to +150 °C



Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	
01150	0.25 ÷ 1.5	(22 - 16)	1,8	17,3	5,2	12	1,8	200/1000
01151			1,8	14,2	5,2	9	1,8	200/1000
01250	1.5 ÷ 2.5	(16 - 14)	1,8	17,3	5,2	12	2,4	200/1000
01251			1,8	14,2	5,2	9	2,4	200/1000
01350	4 ÷ 6	(12 - 10)	2,6	20,5	6,5	12,5	3,6	100/1000

**END-SLEEVES FOR COPPER CONDUCTORS - UNINSULATED - SINGLE CABLE**

**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to 150 °C

**ACCORDING TO STD.:** DIN 46228-1 (tubular ferrules without plastic sleeve up to 50mm<sup>2</sup>), UL486F (bare and covered ferrules)

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Section not foreseen by DIN	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
01501•	0,5	(20)		6	5,3	2,1	1	0,15	1000/10000
01502	0,75	(18)		6	5,3	2,3	1,2	0,15	1000/10000
01503	1	(18)		10	9,3	2,5	1,4	0,15	1000/10000
01504	1,5	(16)		7	6	2,8	1,7	0,15	1000/10000
01505	1,5	(16)		10	9	2,8	1,7	0,15	1000/10000
01506	2,5	(14)		7	6	3,4	2,2	0,15	1000/10000
01507	2,5	(14)		12	11	3,4	2,2	0,15	1000/10000
01508	4	(12)		9	8	4	2,8	0,2	500/5000
01509	4	(12)		12	11	4	2,8	0,2	500/5000
01510	6	(10)		12	11	4,7	3,5	0,2	250/2500
01511	6	(10)		15	14	4,7	3,5	0,2	250/2500
01512	10	(8)		15	13,8	5,8	4,5	0,2	250/2500
01513	10	(8)		18	16,8	5,8	4,5	0,2	200/2000
01514	16	(6)		15	13,5	7,5	5,8	0,2	100/1000
01515	16	(6)		18	16,5	7,5	5,8	0,2	100/1000
01516	25	(4)		18	16	9,5	7,3	0,2	100/500
01517	35	(2)		18	16	11	8,3	0,2	100/500
01518	50	(1/0)		25	22	13	10,3	0,3	100/300
01519•*	70	(2/0)	√	30	28	13,5	12,5	0,5	100/300
01520•*	95	(3/0)	√	30	28	17,5	14,5	0,5	100/100
01521•*	120	(4/0)	√	30	28	19,5	17	0,5	100/100

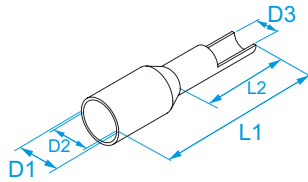


file n° E 506333

• No UL

\* No CSA

## END-SLEEVES FOR COPPER CONDUCTORS - INSULATED - SINGLE CABLE



**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polypropylene (PP) without flame retardant

**OPERATING TEMPERATURE:** 105 °C max

**ACCORDING TO STD.:** DIN 46228-4 (tubular ferrules with plastic sleeve), UL486F (bare and covered ferrules), CSA C22.2 No.291-14 (bare and covered ferrules)

TERMINALS

Code	Color	Standard color 1	Standard color 2	Color DIN 46228/4	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
005003	Grey	√	-	-	0,14	(26)	10	6	2,1	1,6	0,7	500/5000
00701	Brown	-	√	-			10	6	2,1	1,6	0,7	500/5000
005001	Grey	√	-	-	0,25	(24)	12	8	2,5	1,6	0,7	500/5000
005004	Light blue	√	-	-			10	6	2,3	1,8	0,75	500/5000
007034	Yellow	-	√	-	0,34	(22)	10	6	2,3	1,8	0,75	500/5000
00500	Light blue	√	-	-			12	8	2,5	1,8	0,75	500/5000
005005	Turquoise	√	-	-	0,5	(20)	10	6	2,5	2	0,8	500/5000
007036	Green	-	√	-			12	8	2,5	2	0,8	500/5000
005002	Turquoise	√	-	-	0,75	(18)	12	6	3,1	2,6	1	500/5000
005012	Orange	√	-	-			12	6	3,1	2,6	1	500/5000
006011	White	-	√	√	1	(18)	14	8	3,1	2,6	1	500/5000
00501	Orange	√	-	-			14	8	3,1	2,6	1	500/5000
00601	White	-	√	√	1,5	(16)	14	8	3,1	2,6	1	500/5000
005011	Orange	√	-	-			16	10	3,1	2,6	1	500/5000
006012	White	-	√	√	2,5	(14)	16	10	3,1	2,6	1	500/5000
005021	White	√	-	-			12	6	3,3	2,8	1,2	500/5000
007021	Light blue	-	√	-	1	(18)	12	6	3,3	2,8	1,2	500/5000
006021	Grey	-	-	√			12	6	3,3	2,8	1,2	500/5000
00502	White	√	-	-	1,5	(16)	14	8	3,3	2,8	1,2	500/5000
00702	Light blue	-	√	-			14	8	3,3	2,8	1,2	500/5000
00602	Grey	-	-	√	2,5	(14)	14	8	3,3	2,8	1,2	500/5000
005022	White	√	-	-			16	10	3,3	2,8	1,2	500/5000
007022	Light blue	-	√	-	1	(18)	16	10	3,3	2,8	1,2	500/5000
006022	Grey	-	-	√			16	10	3,3	2,8	1,2	500/5000
005023	White	√	-	-	1,5	(16)	18	12	3,3	2,8	1,2	500/5000
007023	Light blue	-	√	-			18	12	3,3	2,8	1,2	500/5000
006023	Grey	-	-	√	2,5	(14)	18	12	3,3	2,8	1,2	500/5000
005031	Yellow	√	-	-			12	6	3,5	3	1,4	500/5000
006031	Red	-	√	√	1	(18)	12	6	3,5	3	1,4	500/5000
00503	Yellow	√	-	-			14	8	3,5	3	1,4	500/5000
00603	Red	-	√	√	1,5	(16)	14	8	3,5	3	1,4	500/5000
005032	Yellow	√	-	-			16	10	3,5	3	1,4	500/5000
006032	Red	-	√	√	2,5	(14)	16	10	3,5	3	1,4	500/5000
005033	Yellow	√	-	-			18	12	3,5	3	1,4	500/5000
006033	Red	-	√	√	1	(18)	18	12	3,5	3	1,4	500/5000
005042	Red	√	-	-			12	6	4	3,5	1,7	500/5000
006042	Black	-	√	√	1,5	(16)	12	6	4	3,5	1,7	500/5000
00504	Red	√	-	-			14	8	4	3,5	1,7	500/5000
00604	Black	-	√	√	2,5	(14)	14	8	4	3,5	1,7	500/5000
005041	Red	√	-	-			16	10	4	3,5	1,7	500/5000
006041	Black	-	√	√	1	(18)	16	10	4	3,5	1,7	500/5000
005043	Red	√	-	-			18	12	4	3,5	1,7	500/5000
006043	Black	-	√	√	2,5	(14)	18	12	4	3,5	1,7	500/5000
00505	Red	√	-	-			24	18	4	3,5	1,7	250/2500
00605	Black	-	√	√	1,5	(16)	24	18	4	3,5	1,7	250/2500
00506	Blue	√	-	√			14	8	4,7	4,2	2,2	250/2500
00706	Grey	-	√	-	2,5	(14)	14	8	4,7	4,2	2,2	250/2500
005062	Blue	√	-	√			16	10	4,7	4,2	2,2	250/2500
007071	Grey	-	√	-	16	10	4,7	4,2	2,2	250/2500		

Code	Color	Standard color 1	Standard color 2	Color DIN 46228/4	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
005061	Blue	✓	-	✓	2,5	(14)	18	12	4,7	4,2	2,2	250/2500
007061	Grey	-	✓	-			18	12	4,7	4,2	2,2	250/2500
00507	Blue	✓	-	✓			24	18	4,7	4,2	2,2	200/2000
00707	Grey	-	✓	-			24	18	4,7	4,2	2,2	200/2000
00508	Grey	✓	-	✓	4	(12)	17	10	5,4	4,8	2,8	200/2000
00708	Orange	-	✓	-			17	10	5,4	4,8	2,8	200/2000
005081	Grey	✓	-	✓			20	12	5,4	4,8	2,8	200/1000
007081	Orange	-	✓	-			20	12	5,4	4,8	2,8	200/1000
00509	Grey	✓	-	✓	6	(10)	26	18	5,4	4,8	2,8	100/1000
00709	Orange	-	✓	-			26	18	5,4	4,8	2,8	100/1000
00510	Black	✓	-	-			20	12	6,9	6,3	3,5	100/1000
00710	Green	-	✓	-			20	12	6,9	6,3	3,5	100/1000
00610	Yellow	-	-	✓	10	(8)	20	12	6,9	6,3	3,5	100/1000
00511	Black	✓	-	-			26	18	6,9	6,3	3,5	100/1000
00711	Green	-	✓	-			26	18	6,9	6,3	3,5	100/1000
00611	Yellow	-	-	✓			26	18	6,9	6,3	3,5	100/1000
00512	Ivory	✓	-	-	16	(6)	22	12	8,4	7,6	4,5	50/500
00712	Brown	-	✓	-			22	12	8,4	7,6	4,5	50/500
00612•	Red	-	-	✓			22	12	8,4	7,6	4,5	50/500
00513	Ivory	✓	-	-			28	18	8,4	7,6	4,5	50/500
00713	Brown	-	✓	-	25	(4)	28	18	8,4	7,6	4,5	50/500
00613	Red	-	-	✓			28	18	8,4	7,6	4,5	50/500
00514•	Green	✓	-	-			24	12	9,6	8,8	5,8	50/500
00714	Ivory	-	✓	-			24	12	9,6	8,8	5,8	50/500
00614	Blue	-	-	✓	35	(2)	24	12	9,6	8,8	5,8	50/500
00515•	Green	✓	-	-			28	18	9,6	8,8	5,8	50/500
00715	Ivory	-	✓	-			28	18	9,6	8,8	5,8	50/500
00615	Blue	-	-	✓			28	18	9,6	8,8	5,8	50/500
006163•	Yellow	✓	-	✓	50	(1/0)	26	12	12	11,2	7,3	100/500
00516	Brown	✓	-	-			30	16	12	11,2	7,3	100/500
00716	Black	-	✓	-			30	16	12	11,2	7,3	100/500
00616	Yellow	-	-	✓			30	16	12	11,2	7,3	100/500
005161	Brown	✓	-	-	70	(2/0)	30	18	12	11,2	7,3	100/500
007161	Black	-	✓	-			30	18	12	11,2	7,3	100/500
006161	Yellow	-	-	✓			30	18	12	11,2	7,3	100/500
005162	Brown	✓	-	-			36	22	12	11,2	7,3	100/500
007162	Black	-	✓	✓	95	(3/0)	36	22	12	11,2	7,3	100/500
006162	Yellow	-	-	✓			36	22	12	11,2	7,3	100/500
006173•	Red	-	✓	✓			26	12	13,5	12,7	8,3	100/500
00517	Beige	✓	-	-			30	16	13,5	12,7	8,3	100/500
00617	Red	-	✓	✓	120	(4/0)	30	16	13,5	12,7	8,3	100/500
005171	Beige	✓	-	-			30	18	13,5	12,7	8,3	100/500
006171	Red	-	✓	✓			30	18	13,5	12,7	8,3	100/500
005172•	Beige	✓	-	-			39	25	13,5	12,7	8,3	100/500
006172	Red	-	✓	✓	150	(300)	39	25	13,5	12,7	8,3	100/500
00518	Olive	✓	-	-			36	20	16	15	10,3	50/250
00618	Blue	-	✓	✓			36	20	16	15	10,3	50/250
005181	Olive	✓	-	-			40	25	16	15	10,3	50/250
006181	Blue	-	✓	✓	70	(2/0)	40	25	16	15	10,3	50/250
00519•	Yellow	✓	-	-			37	21	17,2	16	13,5	50/50
00520•	Red	✓	-	-			44	25	19,2	18	14,7	50/50
00521•	Blue	✓	-	-			48	27	21,4	20	16,7	50/50
00522•	Yellow	✓	-	-	150	(300)	58	32	25	23	19,5	25/50

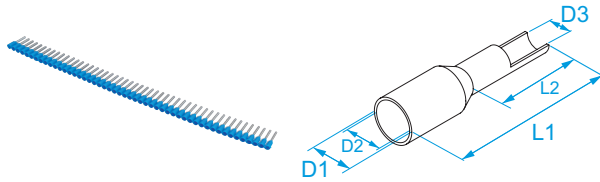


file n° E 506333

• No UL

 HALOGEN  
FREE

### END-SLEEVES FOR COPPER CONDUCTORS · INSULATED · SINGLE CABLE · IN A STRAP



**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polypropylene (PP) without flame retardant

**OPERATING TEMPERATURE:** 105 °C max

**ACCORDING TO STD.:** DIN 46228-4 (tubular ferrules with plastic sleeve), UL486F (bare and covered ferrules)

**EQUIPMENT:** use tool BM 5375

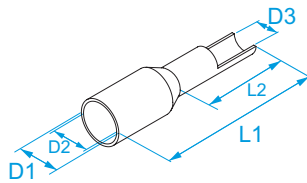
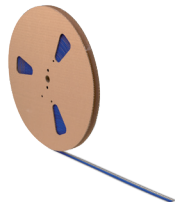
Code	Color	Standard color 1	Standard color 2	Color DIN 46228/4	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
90501	Orange	√	-	-	0,5	(20)	14	8	3,1	2,6	1	500/2500
90601*	White	-	√	√	0,5	(20)	14	8	3,1	2,6	1	500/2500
90502	White	√	-	-	0,75	(18)	14	8	3,3	2,8	1,2	500/2500
90702	Light blue	-	√	-	0,75	(18)	14	8	3,3	2,8	1,2	500/2500
90602*	Grey	-	-	√	0,75	(18)	14	8	3,3	2,8	1,2	500/2500
90503	Yellow	√	-	-	1	(18)	14	8	3,5	3	1,4	500/2500
90603*	Red	-	√	√	1	(18)	14	8	3,5	3	1,4	500/2500
90504	Red	√	-	-	1,5	(16)	14	8	4	3,5	1,7	500/2500
90604*	Black	-	√	√	1,5	(16)	14	8	4	3,5	1,7	500/2500
90506*	Blue	√	-	√	2,5	(14)	14	8	4,7	4,2	2,2	500/2500
90706	Grey	-	√	-	2,5	(14)	14	8	4,7	4,2	2,2	500/2500



\* file n° E 506333

**HALOGEN FREE**

### END-SLEEVES FOR COPPER CONDUCTORS · INSULATED · SINGLE CABLE · IN A REEL



**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polypropylene (PP) without flame retardant

**OPERATING TEMPERATURE:** 105 °C max

**ACCORDING TO STD.:** DIN 46228-4 (tubular ferrules with plastic sleeve), UL486F (bare and covered ferrules)

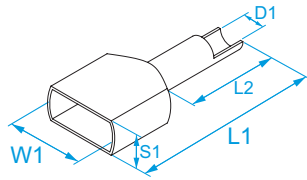
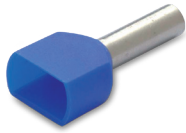
**REEL:** Outer diameter: 45 cm  
Inner diameter: 2,3 cm  
Thickness: 3 cm

Code	Color	Standard color 1	Standard color 2	Color DIN 46228/4	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
91501	Orange	√	-	-	0,5	(20)	14	8	3,1	2,6	1	10000/10000
91601*	White	-	√	√	0,5	(20)	14	8	3,1	2,6	1	10000/10000
91502	White	√	-	-	0,75	(18)	14	8	3,3	2,8	1,2	10000/10000
91702	Blue	-	√	-	0,75	(18)	14	8	3,3	2,8	1,2	10000/10000
91602*	Grey	-	-	√	0,75	(18)	14	8	3,3	2,8	1,2	10000/10000
91503	Yellow	√	-	-	1	(18)	14	8	3,5	3	1,4	7500/7500
91603*	Red	-	√	√	1	(18)	14	8	3,5	3	1,4	7500/7500
91504	Red	√	-	-	1,5	(16)	14	8	4	3,5	1,7	7500/7500
91604*	Black	-	√	√	1,5	(16)	14	8	4	3,5	1,7	7500/7500
91506*	Blue	√	-	√	2,5	(14)	14	8	4,7	4,2	2,2	5000/5000
91706	Grey	-	√	-	2,5	(14)	14	8	4,7	4,2	2,2	5000/5000



\* file n° E 506333

**HALOGEN FREE**

**END-SLEEVES FOR COPPER CONDUCTORS - INSULATED - DOUBLE CABLE**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polypropylene (PP) without flame retardant

**OPERATING TEMPERATURE:** 105 °C max

**ACCORDING TO STD.:** DIN 46228-1 (tubular ferrules without plastic sleeve up to 50mm<sup>2</sup>), UL486F (bare and covered ferrules), CSA C22.2 No.291-14 (bare and covered ferrules)

Code	Color	Standard color 1	Standard color 2	Color DIN 46228/4	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	S1 (mm)	
00551	Orange	√	-	-	2 X 0,5	(20)	4,7	15	8	1,4	2,5	200/2000
00651	White	-	√	√			4,7	15	8	1,4	2,5	200/2000
00552	White	√	-	-			5	15	8	1,7	2,8	200/2000
00753	Blue	-	√	-			5	15	8	1,7	2,8	200/2000
00652	Grey	-	-	√	2 X 0,75	(18)	5	15	8	1,7	2,8	200/2000
00553	White	√	-	-			5	17	10	1,7	2,8	200/2000
00653	Grey	-	-	√			5	17	10	1,7	2,8	200/2000
006531	Grey	√	-	-			5	21	14	1,7	2,8	200/2000
007533•	Light blue	-	√	-	2 X 1	(18)	5	21	14	1,7	2,8	200/2000
005531•	White	-	-	√			5	21	14	1,7	2,8	200/2000
00554	Yellow	√	-	-			5,4	15	8	1,95	3,4	200/2000
00654	Red	-	√	√			5,4	15	8	1,95	3,4	200/2000
00555	Yellow	√	-	-	2 X 1,5	(16)	5,4	17	10	1,95	3,4	200/2000
00655	Red	-	√	√			5,4	17	10	1,95	3,4	200/2000
005551	Yellow	√	-	-			5,4	19	12	1,95	3,4	200/2000
006551	Red	-	√	√			5,4	19	12	1,95	3,4	200/2000
005552	Yellow	√	-	-	2 X 2,5	(14)	5,4	25	18	1,95	3,4	200/2000
006552	Red	-	√	√			5,4	25	18	1,95	3,4	200/2000
00556	Red	√	-	-			6,6	16	8	2,2	3,6	200/2000
00656	Black	-	√	√			6,6	16	8	2,2	3,6	200/2000
00557	Red	√	-	-	2 X 4	(12)	6,6	20	12	2,2	3,6	200/2000
00657	Black	-	√	√			6,6	20	12	2,2	3,6	200/2000
005571	Red	√	-	-			6,6	26	18	2,2	3,6	200/2000
006571	Black	-	√	√			6,6	26	18	2,2	3,6	200/2000
00558	Blue	√	-	√	2 X 6	(10)	7,8	18,5	10	2,8	4,2	100/1000
00758	Grey	-	√	-			7,8	18,5	10	2,8	4,2	100/1000
00559	Blue	√	-	√			7,8	21,5	13	2,8	4,2	100/1000
00560	Grey	√	-	√			8,8	23	12	3,7	4,9	100/1000
00760	Orange	-	√	-	2 X 10	(8)	8,8	23	12	3,7	4,9	100/1000
00561•	Black	√	-	-			10	26	14	4,8	6,9	50/500
00761	Green	-	√	-			10	26	14	4,8	6,9	50/500
00661	Yellow	-	-	√			10	26	14	4,8	6,9	50/500
00562	Ivory	√	-	-	2 X 16	(6)	13	26	14	6,4	7,2	100/1000
00762	Brown	-	√	-			13	26	14	6,4	7,2	100/1000
00662	Red	-	-	√			13	26	14	6,4	7,2	100/1000
00563	Green	√	-	-			18,4	30	14	8,2	9,6	50/500
00763	Ivory	-	√	-	2 X 16	(6)	18,4	30	14	8,2	9,6	50/500
00663	Blue	-	-	√			18,4	30	14	8,2	9,6	50/500



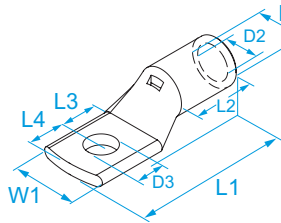
file n° E 506333

• No UL

**HALOGEN FREE**



### TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED



TERMINAL MATERIAL: tinned copper

OPERATING TEMPERATURE: from -50 °C to +150 °C

CONDUCTOR CLASS: Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

ACCORDING TO STD.: UL 486 A-B

INSPECTION HOLE: yes

TERMINALS

Code	Rigid conductor section (mm²)	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm²)	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
011071•					3	#4	-	8	16	5	5	4	3,5	1,9	3,2	100/100
011191•	1.5	(16)	1.5	(16)	4	#8	-	8	16	5	5	4	3,5	1,9	4,2	100/100
011251•					5	#10	-	8	16	5	5	4	3,5	1,9	5,2	100/1000
011311•					6	#12	-	10	18	5	6	5	3,5	1,9	6,3	100/100
012191•	2.5	(14)	2.5	(14)	4	#8	-	8	18	7	5	4	4	2,4	4,2	100/100
012251•					5	#10	-	10	20	7	6	5	4	2,4	5,2	100/100
012311•					6	#12	-	10	20	7	6	5	4	2,4	6,3	100/100
013190•	4	(12)	4	(12)	4	#8	-	10	20	7	6	5	5,1	3,1	4,2	100/100
013250•					5	#10	-	10	20	7	6	5	5,1	3,1	5,2	100/100
013310•					6	#12	-	10	20	7	6	5	5,1	3,1	6,3	100/100
013370•	6	(10)	6	(10)	8	5/16"	-	11	24	7	8,5	6,5	5,1	3,1	8,2	100/100
013191•					4	#8	-	10	23	9	6	5	5,5	3,5	4,2	100/100
013251•					5	#10	-	10	23	9	6	5	5,5	3,5	5,2	100/100
013311•	10	(8)	10	(8)	6	#12	-	10	23	9	6	5	5,5	3,5	6,3	100/100
013371•					8	5/16"	-	12	27	9	9	6	5,5	3,5	8,2	100/1000
013431•					10	3/8"	-	15	32	9	11	9	5,5	3,5	10,2	100/100
01419*	16	(6)	16	(6)	5	#10	7	10	26,5	9,5	6,3	5	7	5	5,2	100/500
01431*					6	#12	7	11	28	9,5	6,5	5,5	7	5	6,3	100/500
01437*					8	5/16"	7	13,6	31,5	9,5	8,8	6,2	7	5	8,5	100/500
01443*	25	(4)	25	(4)	10	3/8"	7	17,2	34	9,5	9,6	9,5	7	5	10,5	100/500
01449*					12	1/2"	7	17	34,1	9,5	9,3	9,3	7	5	12,2	100/500
01525					5	#10	7,5	11,5	30,5	11	8,7	6,3	8	6	5,3	100/500
01531	35	(2)	35	(2)	6	#12	7,5	11,5	31	11	8,5	6	8	6	6,5	100/500
01537					8	5/16"	7,5	15	36	12	9	8	8	6	8,5	100/500
01543					10	3/8"	7,5	17,5	38,5	12	10,5	10	8	6	10,5	100/500
01549	50	(1/0)	50	(1/0)	12	1/2"	7,5	17,5	39	12	10,5	10	8	6	13	100/500
01625					5	#10	9	14	35,5	13,5	10	7	9,5	7	5,2	100/500
01631					6	#12	9	14	35,5	13,5	10	7	9,5	7	6,3	100/300
01637	70	(2/0)	70	(2/0)	8	5/16"	9	14	35,5	13,5	10	8	9,5	7	8,4	100/300
01643					10	3/8"	9	17	39,5	14	10,5	9,5	9,5	7	10,5	100/300
01649					12	1/2"	9	18,5	39,5	14	11	9,5	9,5	7	13	100/300
01731	50	(1/0)	50	(1/0)	6	#12	11	17	37	15	9,5	6	11,5	8,5	6,4	100/300
01737					8	5/16"	11	17	41,5	15	10,5	10	11,5	8,5	8,5	100/300
01749					12	1/2"	11	20	46	15	14	11,5	11,5	8,5	13	100/300
01743	70	(2/0)	70	(2/0)	10	3/8"	11	17	45	15	12	9,5	11,5	8,5	10,5	100/300
01831					6	#12	12	18,7	45,5	18	9	9	13	10	6,4	100/100
01837					8	5/16"	12	18,7	47,5	18	10	10	13	10	8,4	100/100
01843	70	(2/0)	70	(2/0)	10	3/8"	12	18,7	49,5	18	11	11	13	10	10,5	100/100
01849					12	1/2"	12	21	53	18	15,3	12	13	10	12,5	100/100
01855					14	9/16"	12	22	53	17	15,3	12	13	10	14,5	100/100
01931•	70	(2/0)	70	(2/0)	6	#12	14	21,8	51	20,5	11	10	15	12	6,5	100/100
01937•					8	5/16"	14	21,8	51	20,5	11	10	15	12	8,5	100/100
01943•					10	3/8"	14	21,8	57	20,5	14,5	11,2	15	12	10,5	100/100
01949•	70	(2/0)	70	(2/0)	12	1/2"	14	22	57	20,5	13	13	15	12	12,5	100/100
01955•					14	9/16"	14	22	57	20,5	14	11,3	15	12	14,5	100/100
01961•					16	5/8"	14	22	57	20,5	14	11,3	15	12	16,5	100/100

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
03137•					8	5/16"	16	25	54,5	23,5	9	8	17,5	13,8	8,5	50/50
03143•					10	3/8"	16	25	60	23	12,5	12,5	17,5	13,8	10,5	50/50
03149•	95	(3/0)	95	(3/0)	12	1/2"	16	25	62	23	14	13	17,5	13,8	12,5	50/50
03155•					14	9/16"	16	25	65	23	17	13	17,5	13,8	14,5	50/50
03161•					16	5/8"	16	25	65	23	17	13,5	17,5	13,8	16,5	50/50
03237					8	5/16"	18	28	64	25	14	14	19,5	15,5	8,5	50/50
03243					10	3/8"	18	28	64	25	14	14	19,5	15,5	10,5	50/50
03249	120	(4/0)	120	(4/0)	12	1/2"	18	28	64	25	14	14	19,5	15,5	12,5	50/50
03255					14	9/16"	18	28	67	25	15	16	19,5	15,5	14,5	50/50
03261					16	5/8"	18	28	70	25	15	16	19,5	15,5	16,5	50/50
03337					8	5/16"	20	31	64	28	13	11	21	17	8,4	50/50
03343					10	3/8"	20	31	64	28	13	11	21	17	10,4	50/50
03349	150	(300)	150	(300)	12	1/2"	20	31	70	28	14	13	21	17	12,5	50/50
03355					14	9/16"	20	31	70,5	28	15,5	15	21	17	14,5	50/50
03361					16	5/8"	20	31	73	30	15	16	21	17	16,5	50/50
03367					20	3/4"	20	31	73	30	22	16	21	17	21	50/50
03443					10	3/8"	22	35	75	30	16	14	24	19	10,5	50/50
03449					12	1/2"	22	35	75	30	16	14	24	19	13	50/50
03455	185	(400)	185	(400)	14	9/16"	22	35	79	30	18	16	24	19	15	50/50
03461					16	5/8"	22	35	81	30	19	17	24	19	17	50/50
03467					20	3/4"	22	35	87	30	22	20	24	19	21	50/50
03543•					10	3/8"	25	39,5	81	35	16	14	27	21,5	10,5	50/50
03549					12	1/2"	25	39,5	81	35	16	14	27	21,5	13	50/50
03555	240	(500)	240	(500)	14	9/16"	25	39,5	85	35	18	16	27	21,5	15	50/50
03561					16	5/8"	25	39,5	87	35	19	17	27	21,5	17	50/50
03567					20	3/4"	25	39,5	93	35	22	20	27	21,5	21	50/50
03649					12	1/2"	28	44	101	38	22	20	30	24	13	25/25
03655					14	9/16"	28	44	101	38	22	20	30	24	15	25/25
03661	300	(600)	300	(600)	16	5/8"	28	44	101	38	22	20	30	24	17	25/25
03667					20	3/4"	28	44	101	38	22	20	30	24	21	25/25
03669•					24	15/16"	28	44	101	38	22	20	30	24	25	25/25
03749•					12	1/2"	35	50	108	40	22	20	35	27	13	10/10
03755•					14	9/16"	35	50	108	40	22	20	35	27	15	10/10
03761•	400	(800)	300	(600)	16	5/8"	35	50	108	40	22	20	35	27	17	10/10
03767•					20	3/4"	35	50	108	40	22	20	35	27	21	10/10
03769•					24	15/16"	35	50	108	40	22	20	35	27	25	10/10
03861•	500	(1000)	400	(800)	16	5/8"	38	55	124	51	25	23	38	30	17	5/5
03867•					20	3/4"	38	55	124	51	25	23	38	30	21	1/1
03961•	630	(1250)	500	(1000)	16	5/8"	42	61	131	58	25	23	42	33,6	17	5/5
03967•					20	3/4"	42	61	131	58	25	23	42	33,6	21	5/10



file n° E 137735



\* file n° E 137735

• No UL

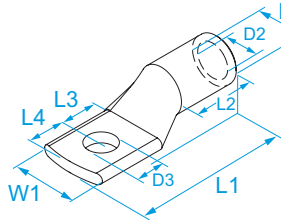
## TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - WITHOUT INSPECTION HOLE

TERMINAL MATERIAL: tinned copper

OPERATING TEMPERATURE: from -50 °C to +150 °C

CONDUCTOR CLASS: Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

INSPECTION HOLE: no

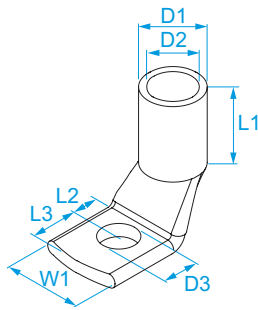


TERMINALS

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
014191					5	#10	7	10	26,5	9,5	6,3	5	7	5	5,2	100/500
014311					6	#12	7	11	28	9,5	6,5	5,5	7	5	6,3	100/500
014371	10	(8)	10	(8)	8	5/16"	7	13,6	31,5	9,5	8,8	6,2	7	5	8,5	100/500
014431					10	3/8"	7	17,2	34	9,5	9,6	9,5	7	5	10,5	100/500
014491					12	1/2"	7	17	34,1	9,5	9,3	9,3	7	5	12,2	100/500
015251					5	#10	7,5	11,5	30,5	11	8,7	6,3	8	6	5,3	100/500
015311					6	#12	7,5	11,5	31	11	8,5	6	8	6	6,5	100/500
015371	16	(6)	16	(6)	8	5/16"	7,5	15	36	12	9	8	8	6	8,5	100/500
015431					10	3/8"	7,5	17,5	38,5	12	10,5	10	8	6	10,5	100/500
015491					12	1/2"	7,5	17,5	39	12	10,5	10	8	6	13	100/500
016251					5	#10	9	14	35,5	13,5	10	7	9,5	7	5,2	100/500
016311					6	#12	9	14	35,5	13,5	10	7	9,5	7	6,3	100/300
016371	25	(4)	25	(4)	8	5/16"	9	14	35,5	13,5	10	8	9,5	7	8,4	100/300
016431					10	3/8"	9	17	39,5	14	10,5	9,5	9,5	7	10,5	100/300
016491					12	1/2"	9	18,5	39,5	14	11	9,5	9,5	7	13	100/300
017311					6	#12	11	17	37	15	9,5	6	11,5	8,5	6,4	100/300
017371					8	5/16"	11	17	41,5	15	10,5	10	11,5	8,5	8,5	100/300
017431	35	(2)	35	(2)	10	3/8"	11	17	45	15	12	9,5	11,5	8,5	10,5	100/300
017491					12	1/2"	11	20	46	15	14	11,5	11,5	8,5	13	100/300
018311					6	#12	12	18,7	45,5	18	9	9	13	10	6,4	100/100
018371					8	5/16"	12	18,7	47,5	18	10	10	13	10	8,4	100/100
018431	50	(1/0)	50	(1/0)	10	3/8"	12	18,7	49,5	18	11	11	13	10	10,5	100/100
018491					12	1/2"	12	21	53	18	15,3	12	13	10	12,5	100/100
018551					14	9/16"	12	22	53	17	15,3	12	13	10	14,5	100/100
019311					6	#12	14	21,8	51	20,5	11	10	15	12	6,5	100/100
019371					8	5/16"	14	21,8	51	20,5	11	10	15	12	8,5	100/100
019431					10	3/8"	14	21,8	57	20,5	14,5	11,2	15	12	10,5	100/100
019491	70	(2/0)	70	(2/0)	12	1/2"	14	22	57	20,5	13	13	15	12	12,5	100/100
019551					14	9/16"	14	22	57	20,5	14	11,3	15	12	14,5	100/100
019611					16	5/8"	14	22	57	20,5	14	11,3	15	12	16,5	100/100
031371					8	5/16"	16	25	54,5	23,5	9	8	17,5	13,8	8,5	100/100
031431					10	3/8"	16	25	60	23	12,5	12,5	17,5	13,8	10,5	100/100
031491	95	(3/0)	95	(3/0)	12	1/2"	16	25	62	23	14	13	17,5	13,8	12,5	100/100
031551					14	9/16"	16	25	65	23	17	13	17,5	13,8	14,5	100/100
031611					16	5/8"	16	25	65	23	17	13,5	17,5	13,8	16,5	100/100
032371					8	5/16"	18	28	64	25	14	14	15,5	8,5	8,5	50/50
032431					12	1/2"	18	28	64	25	14	14	15,5	12,5	10,5	50/50
032491	120	(4/0)	120	(4/0)	10	3/8"	18	28	64	25	14	14	15,5	10,5	12,5	50/50
032551					14	9/16"	18	28	67	25	15	16	15,5	14,5	14,5	50/50
032611					16	5/8"	18	28	70	25	15	16	15,5	16,5	16,5	50/50
033371					8	5/16"	20	31	64	28	13	11	21	17	8,4	50/50
033431					10	3/8"	20	31	64	28	13	11	21	17	10,4	50/50
033491					12	1/2"	20	31	70	28	14	13	21	17	12,5	50/50
033551	150	(300)	150	(300)	14	9/16"	20	31	70,5	28	15,5	15	21	17	14,5	50/50
033611					16	5/8"	20	31	73	30	15	16	21	17	16,5	50/50
033671					20	3/4"	20	13	73	30	22	16	21	17	21	50/50
034431					10	3/8"	22	35	75	30	16	14	24	19	10,5	50/50
034491	185	(400)	185	(400)	12	1/2"	22	35	75	30	16	14	24	19	13	50/50
034551					14	9/16"	22	35	79	30	18	16	24	19	15	50/50

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
<b>034611</b>	185	(400)	185	(400)	16	5/8"	22	35	81	30	19	17	24	19	17	50/50
<b>034671</b>					20	3/4"	22	35	87	30	20	20	24	19	21	50/50
<b>035431</b>	240	(500)	240	(500)	10	3/8"	25	39,5	81	35	16	14	27	21,5	10,3	50/50
<b>035491</b>					12	1/2"	25	39,5	81	35	16	14	27	21,5	13	50/50
<b>035551</b>					14	9/16"	25	39,5	85	35	18	16	27	21,5	15	50/50
<b>035611</b>					16	5/8"	25	39,5	87	35	19	17	27	21,5	17	50/50
<b>035671</b>					20	3/4"	25	39,5	93	35	22	20	27	21,5	21	50/50
<b>036491</b>					12	1/2"	28	44	101	38	22	20	30	24	13	25/25
<b>036551</b>	300	(600)	240	(500)	14	9/16"	28	44	101	38	22	20	30	24	15	25/25
<b>036611</b>					16	5/8"	28	44	101	38	22	20	30	24	17	25/25
<b>036671</b>					20	3/4"	28	44	101	38	22	20	30	24	21	25/25
<b>036691</b>					24	15/16"	28	44	101	38	22	20	30	24	25	25/25
<b>037491</b>	400	(800)	300	(600)	12	1/2"	35	50	108	40	22	20	35	27	13	10/10
<b>037551</b>					14	9/16"	35	50	108	40	22	20	35	27	15	10/10
<b>037611</b>					16	5/8"	35	50	108	40	22	20	35	27	17	10/10
<b>037671</b>					20	3/4"	35	50	108	40	22	20	35	27	21	10/10
<b>037691</b>					24	15/16"	35	50	108	40	22	20	35	27	25	10/10
<b>038611</b>	500	(1000)	400	(800)	16	5/8"	38	55	124	51	25	23	38	30	17	5/5
<b>038671</b>					20	3/4"	38	55	124	51	25	23	38	30	21	1/1
<b>039611</b>	630	(1250)	500	(1000)	16	5/8"	42	61	131	58	25	23	42	33,6	17	5/5
<b>039671</b>					20	3/4"	42	61	131	58	25	23	42	33,6	21	5/10

**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - BENT 90°**



**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C


**CONDUCTOR CLASS:** Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

**INSPECTION HOLE:** no

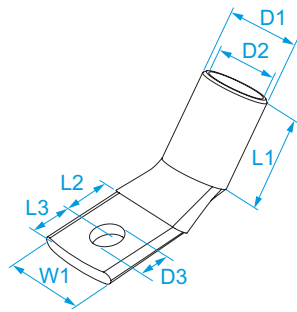
**BENT:** 90 °

TERMINALS

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
014199	10	(8)	5	#10	7	10	9,5	6	5	7	5	5,2	100/100
014319			6	#12	7	11	9,5	6	5,5	7	5	6,3	100/100
014379			8	5/16"	7	13,6	9,5	8	6,2	7	5	8,5	100/100
014439			10	3/8"	7	17,2	9,5	9	9,5	7	5	10,5	100/100
014499			12	1/2"	7	17	9,5	9	9,3	7	5	12,2	100/100
015259	16	(6)	5	#10	7,5	11,5	11	8	6,3	8	6	5,3	100/100
015319			6	#12	7,5	11,5	11	8	6	8	6	6,5	100/100
015379			8	5/16"	7,5	15	12	8	8	8	6	8,5	100/100
015439			10	3/8"	7,5	17,5	12	9,5	10	8	6	10,5	100/100
015499			12	1/2"	7,5	17,5	12	9,5	10	8	6	13	100/100
016259	25	(4)	5	#10	9	14	13,5	9	7	9,5	7	5,3	100/100
016319			6	#12	9	14	13,5	9	7	9,5	7	6,3	100/100
016379			8	5/16"	9	14	13,5	9	8	9,5	7	8,4	100/100
016439			10	3/8"	9	17	14	9,5	9,5	9,5	7	10,5	100/100
016499			12	1/2"	9	18,5	14	10	9,5	9,5	7	13	100/100
017319	35	(2)	6	#12	11	17	15	7	6	11,5	8,5	6,4	100/100
017379			8	5/16"	11	17	15	8	10	11,5	8,5	8,5	100/100
017439			10	3/8"	11	17	15	12	9,5	11,5	8,5	10,5	100/100
017499			12	1/2"	11	20	15	13	11,5	11,5	8,5	13	100/100
018319	50	(1/0)	6	#12	12	18,7	18	8	9	13	10	6,4	100/100
018379			8	5/16"	12	18,7	18	9	10	13	10	8,4	100/100
018439			10	3/8"	12	18,7	18	10	11	13	10	10,5	100/100
018499			12	1/2"	12	21	18	14	12	13	10	12,5	50/100
018559			14	9/16"	12	22	17	14	12	13	10	14,5	100/100
019319	70	(2/0)	6	#12	14	21,8	20,5	9	10	15	12	6,5	100/100
019379			8	5/16"	14	21,8	20,5	9	10	15	12	8,5	100/100
019439			10	3/8"	14	21,8	20,5	11,5	11,2	15	12	10,5	100/100
019499			12	1/2"	14	22	20,5	11,5	13	15	12	12,5	100/100
019559			14	9/16"	14	22	20,5	12,5	11,3	15	12	14,5	100/100
019619			16	5/8"	14	22	20,5	12,5	11,3	15	12	16,5	100/100
031379	95	(3/0)	8	5/16"	16	25	23	10	12,5	17,5	13,8	8,5	50/50
031439			10	3/8"	16	25	23	10	12,5	17,5	13,8	10,5	50/50
031499			12	1/2"	16	25	23	11,5	13	17,5	13,8	12,5	50/50
031559			14	9/16"	16	25	23	15	13	17,5	13,8	14,5	50/50
031619			16	5/8"	16	25	23	15	13,5	17,5	13,8	16,5	50/50
032379	120	(4/0)	8	5/16"	18	28	25	11,5	14	19,5	15,5	8,5	50/50
032439			10	3/8"	18	28	25	11,5	14	19,5	15,5	10,5	50/50
032499			12	1/2"	18	28	25	11,5	14	19,5	15,5	12,5	50/50
032559			14	9/16"	18	28	25	12,5	16	19,5	15,5	14,5	50/50
032619			16	5/8"	18	28	25	12,5	16	19,5	15,5	16,5	50/50
033379	150	(300)	8	5/16"	20	31	28	10	11	21	17	8,4	50/50
033439			10	3/8"	20	31	28	10	11	21	17	10,4	50/50
033499			12	1/2"	20	31	28	11	13	21	17	12,5	50/50
033559			14	9/16"	20	31	28	12,5	15	21	17	14,5	50/50
033619			16	5/8"	20	31	30	12	16	21	17	16,5	50/50
033679			20	3/4"	20	31	30	20	16	21	17	21	50/50
034439	185	(400)	10	3/8"	22	35	30	12,5	14	24	19	10,5	25/50
034499			12	1/2"	22	35	30	12,5	14	24	19	13	50/50
034559			14	9/16"	22	35	30	15	16	24	19	15	50/50

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
<a href="#">034619</a>	185	(400)	16	5/8"	22	35	30	16	17	24	19	17	50/50
<a href="#">034679</a>			20	3/4"	22	35	30	19	20	24	19	21	50/50
<a href="#">035499</a>	240	(500)	12	1/2"	25	39,5	35	13	14	27	21,5	13	25/50
<a href="#">035559</a>			14	9/16"	25	39,5	35	15,5	16	27	21,5	15	25/50
<a href="#">035619</a>			16	5/8"	25	39,5	35	16,5	17	27	21,5	17	50/50
<a href="#">035679</a>			20	3/4"	25	39,5	35	20,5	20	27	21,5	21	50/50

### TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - BENT 45°



**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C


**CONDUCTOR CLASS:** Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

**INSPECTION HOLE:** no

**BENT:** 45 °

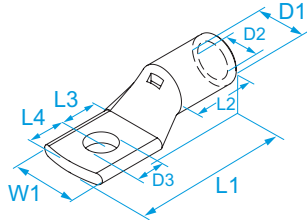
TERMINALS

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
0141945	10	(8)	5	#10	7	10	9,5	6	5	7	5	5,2	100/100
0143145			6	#12	7	11	9,5	6	5,5	7	5	6,3	100/100
0143745			8	5/16"	7	13,6	9,5	8	6,2	7	5	8,5	100/100
0144345			10	3/8"	7	17,2	9,5	9	9,5	7	5	10,5	100/100
0144945			12	1/2"	7	17	9,5	9	9,3	7	5	12,2	100/100
0152545	16	(6)	5	#10	7,5	11,5	11	8	6,3	8	6	5,3	100/100
0153145			6	#12	7,5	11,5	11	8	6	8	6	6,5	100/100
0153745			8	5/16"	7,5	15	12	8	8	8	6	8,5	100/100
0154345			10	3/8"	7,5	17,5	12	9,5	10	8	6	10,5	100/100
0154945			12	1/2"	7,5	17,5	12	9,5	10	8	6	13	100/100
0162545	25	(4)	5	#10	9	14	13,5	9	7	9,5	7	5,3	100/100
0163145			6	#12	9	14	13,5	9	7	9,5	7	6,3	100/100
0163745			8	5/16"	9	14	13,5	9	8	9,5	7	8,4	100/100
0164345			10	3/8"	9	17	14	9,5	9,5	9,5	7	10,5	100/100
0164945			12	1/2"	9	18,5	14	10	9,5	9,5	7	13	100/100
0173145	35	(2)	6	#12	11	17	15	7	6	11,5	8,5	6,4	100/100
0173745			8	5/16"	11	17	15	8	10	11,5	8,5	8,5	100/100
0174345			10	3/8"	11	17	15	12	9,5	11,5	8,5	10,5	100/100
0174945			12	1/2"	11	20	15	13	11,5	11,5	8,5	13	100/100
0183145	50	(1/0)	6	#12	12	18,7	18	8	9	13	10	6,4	100/100
0183745			8	5/16"	12	18,7	18	9	10	13	10	8,4	100/100
0184345			10	3/8"	12	18,7	18	10	11	13	10	10,5	100/100
0184945			12	1/2"	12	21	18	14	12	13	10	12,5	50/100
0185545			14	9/16"	12	22	17	14	12	13	10	14,5	100/100
0193145	70	(2/0)	6	#12	14	21,8	20,5	9	10	15	12	6,5	100/100
0193745			8	5/16"	14	21,8	20,5	9	10	15	12	8,5	100/100
0194345			10	3/8"	14	21,8	20,5	11,5	11,2	15	12	10,5	100/100
0194945			12	1/2"	14	22	20,5	11,5	13	15	12	12,5	100/100
0195545			14	9/16"	14	22	20,5	12,5	11,3	15	12	14,5	100/100
0196145			16	5/8"	14	22	20,5	12,5	11,3	15	12	16,5	100/100
0313745	95	(3/0)	8	5/16"	16	25	23	10	12,5	17,5	13,8	8,5	50/50
0314345			10	3/8"	16	25	23	10	12,5	17,5	13,8	10,5	50/50
0314945			12	1/2"	16	25	23	11,5	13	17,5	13,8	12,5	50/50
0315545			14	9/16"	16	25	23	15	13	17,5	13,8	14,5	50/50
0316145			16	5/8"	16	25	23	15	13,5	17,5	13,8	16,5	50/50
0323745	120	(4/0)	8	5/16"	18	28	25	11,5	14	19,5	15,5	8,5	50/50
0324345			10	3/8"	18	28	25	11,5	14	19,5	15,5	10,5	50/50
0324945			12	1/2"	18	28	25	11,5	14	19,5	15,5	12,5	50/50
0325545			14	9/16"	18	28	25	12,5	16	19,5	15,5	14,5	50/50
0326145			16	5/8"	18	28	25	12,5	16	19,5	15,5	16,5	50/50
0333745	150	(300)	8	5/16"	20	31	28	10	11	21	17	8,4	50/50
0334345			10	3/8"	20	31	28	10	11	21	17	10,4	50/50
0334945			12	1/2"	20	31	28	11	13	21	17	12,5	50/50
0335545			14	9/16"	20	31	28	12,5	15	21	17	14,5	50/50
0336145			16	5/8"	20	31	30	12	16	21	17	16,5	50/50
0336745			20	3/4"	20	31	30	20	16	21	17	21	50/50
0344345	185	(400)	10	3/8"	22	35	30	12,5	14	24	19	10,5	25/50
0344945			12	1/2"	22	35	30	12,5	14	24	19	13	50/50
0345545			14	9/16"	22	35	30	15	16	24	19	15	50/50

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
<a href="#">0346145</a>	185	(400)	16	5/8"	22	35	30	16	17	24	19	17	50/50
<a href="#">0346745</a>			20	3/4"	22	35	30	19	20	24	19	21	50/50
<a href="#">0354945</a>	240	(500)	12	1/2"	25	39,5	35	13	14	27	21,5	13	25/50
<a href="#">0355545</a>			14	9/16"	25	39,5	35	15,5	16	27	21,5	15	25/50
<a href="#">0356145</a>			16	5/8"	25	39,5	35	16,5	17	27	21,5	17	50/50
<a href="#">0356745</a>			20	3/4"	25	39,5	35	20,5	20	27	21,5	21	50/50



### TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - CLASS 6



**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**CONDUCTOR CLASS:** Class 6 according to EN 60228

**APPLICATIONS:** crimping of very flexible conductors designed to withstand repeated twists and bendings (eg robotic systems, welding machines, etc).

**ACCORDING TO STD.:** UL 486 A-B

**INSPECTION HOLE:** yes

**ASSEMBLING:** double crimping for sections greater than and equal to 70 mmq (AWG 2/0)

TERMINALS

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
01419*					5	#10	7	10	26,5	9,5	6,3	5	7	5	5,2	100/500
01431*					6	#12	7	11	28	9,5	6,5	5,5	7	5	6,3	100/500
01437*	10	(8)	10	(8)	8	5/16"	7	13,6	31,5	9,5	8,8	6,2	7	5	8,5	100/500
01443*					10	3/8"	7	17,2	34	9,5	9,6	9,5	7	5	10,5	100/500
01449*					12	1/2"	7	17	34,1	9,5	9,3	9,3	7	5	12,2	100/500
01525					5	#10	7,5	11,5	30,5	11	8,7	6,3	8	6	5,3	100/500
01531					6	#12	7,5	11,5	31	11	8,5	6	8	6	6,5	100/500
01537	16	(6)	16	(6)	8	5/16"	7,5	15	36	12	9	8	8	6	8,5	100/500
01543					10	3/8"	7,5	17,5	38,5	12	10,5	10	8	6	10,5	100/500
01549					12	1/2"	7,5	17,5	39	12	10,5	10	8	6	13	100/500
01625					5	#10	9	14	35,5	13,5	10	7	9,5	7	5,2	100/500
01631					6	#12	9	14	35,5	13,5	10	7	9,5	7	6,3	100/300
01637	25	(4)	25	(4)	8	5/16"	9	14	35,5	13,5	10	8	9,5	7	8,4	100/300
01643					10	3/8"	9	17	39,5	14	10,5	9,5	9,5	7	10,5	100/300
01649					12	1/2"	9	18,5	39,5	14	11	9,5	9,5	7	13	100/300
017314					6	#12	11	17	37	15	9,5	6	11,7	9,3	6,4	25/25
017374					8	5/16"	11	17	41,5	15	10,5	10	11,7	9,3	8,5	25/25
017434	35	(2)	35	(2)	10	3/8"	11	17	45	15	12	9,5	11,7	9,3	10,5	25/25
017494					12	1/2"	11	20	46	15	14	11,5	11,7	9,3	13	25/25
018314					6	#12	13	20,3	47,5	18	11	10	14	11	6,5	25/25
018374					8	5/16"	13	20,3	47,5	18	11	10	14	11	8,5	25/25
018434	50	(1/0)	50	(1/0)	10	3/8"	13	20,5	50	18	14,5	9,3	14	11	10,5	25/25
018494					12	1/2"	13	24	50	18	15	12	14	11	12,5	25/25
019314					6	#12	14	23,5	51	20,5	11	10	16	13	6,5	25/25
019374					8	5/16"	14	23,5	51	20,5	11	10	16	13	8,5	25/25
019434					10	3/8"	14	23,5	57,5	20,5	14,5	11,2	16	13	10,5	25/25
019494	70	(2/0)	70	(2/0)	12	1/2"	14	23,5	57	20,5	13	13	16	13	12,5	25/25
019554					14	9/16"	14	23,5	57	20,5	14	11,3	16	13	14,5	25/25
019614					16	5/8"	14	23,5	57	20,5	14	11,3	16	13	16,5	25/100
031374					8	5/16"	18	27,5	60	23	12,5	12,5	18,8	15	8,5	25/50
031434					10	3/8"	18	27,5	60	23	12,5	12,5	18,8	15	10,5	25/25
031494	95	(3/0)	95	(3/0)	12	1/2"	18	27,5	62	23	14	13	18,8	15	12,5	25/25
031554					14	9/16"	18	25	65	23	17	13	18,8	15	14,5	25/25
031614					16	5/8"	18	25	65	23	17	13,5	18,8	15	16,5	25/25
032374•					8	5/16"	20	31	64	28	13	11	21	17	8,4	25/25
032434•					10	3/8"	20	31	64	28	13	11	21	17	10,4	25/25
032494•	120	(4/0)	120	(4/0)	12	1/2"	20	31	70	28	14	13	21	17	12,5	25/50
032554•					14	9/16"	20	31	70,5	28	15,5	15	21	17	14,5	25/50
032614•					16	5/8"	20	31	73	30	15	16	21	17	16,5	25/50
033374•					8	5/16"	22	35	75	30	15	13	24	19	8,5	25/25
033434•					10	3/8"	22	35	79	30	18	16	24	19	10,5	25/25
033494•					12	1/2"	22	36	84	30	14	17	24	19	12,5	25/25
033554•	150	(300)	150	(300)	14	9/16"	22	36	84	30	16	16	24	19	14,5	25/25
033614•					16	5/8"	22	36	84	30	15	17	24	19	17	25/25
033674•					20	3/4"	22	36	84	30	22	17	24	19	21	25/25

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
034494•	185	(400)	185	(400)	12	1/2"	25	39	81	35	16	14	27	21,5	13	25/25
034554•					14	9/16"	25	39	85	35	18	16	27	21,5	15	25/25
034614•					16	5/8"	25	39	87	35	19	17	27	21,5	17	25/25
034674•					20	3/4"	25	39	90	35	22	20	27	21,5	21	25/25



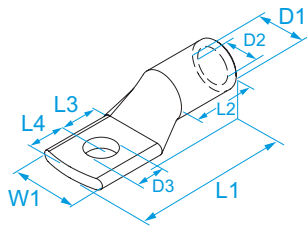
file n° E 137735



\* file n° E 137735 • No UL

**SUPERFLEX**

## TERMINAL LUGS FOR COPPER CONDUCTORS · UNINSULATED · SMALL PLATE


**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**APPLICATIONS:** the reduced width of the palm allows connection to equipment with lugs of dimensions not suitable for standard terminals.

**ACCORDING TO STD.:** UL 486 A-B

**INSPECTION HOLE:** no

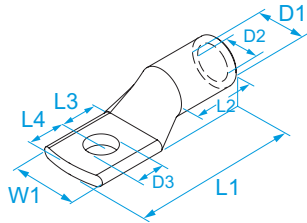
Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
017313	35	(2)	6	#12	11	15	39	16	8	7	11,5	8,5	6,5	25/25
018313	50	(1/0)	6	#12	12	15	41	18	8	7	13	10	6,5	25/25
018373•			8	5/16"	12	18,5	51	18	13,5	9,5	13	10	10,5	25/25
018433	70	(2/0)	10	3/8"	12	18,5	51	18	13,5	9,5	13	10	10,5	25/25
019313•			6	#12	14	17	46	20	9,5	6,5	15	12	6,5	25/25
019433•	95	(3/0)	10	3/8"	14	19	52	21	13	10	15	12	10,5	25/25
031373•			8	5/16"	16	19	54	24	12	8	17	13,8	8,5	25/25
031433•	120	(4/0)	10	3/8"	16	19	58	22	13	10	17	13,8	10,5	25/25
032373			8	5/16"	18	19	61	22	12	9	19,5	15,5	8,5	25/25
032433	150	(300)	10	3/8"	18	19	61	22	12	9	19,5	15,5	10,5	25/25
033373			8	5/16"	20	19	70	30	17	9	21	17	8,4	25/25
033433	185	(400)	10	3/8"	20	19	70	30	17	9	21	17	10,5	25/25
034493			12	1/2"	22	31	82	32	17	14	24	19	13	25/25
035493	240	(500)	12	1/2"	25	31,5	90	39	17	14	27	21,5	13	25/25



file n° E 137735

• No UL

## TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - LONG BARREL



**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**CONDUCTOR CLASS:** Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

**APPLICATIONS:** Suitable for outdoors installations (the absence of the inspection hole prevents the humidity and atmospheric agents infiltration). Suitable for heavy applications (the greater length of the barrel allows more crimping increasing the tensile strength). Suitable for the grounding of structures and equipment both indoors and outdoors.

**ACCORDING TO STD.:** UL 486 A-B

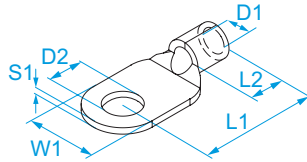
**INSPECTION HOLE:** no

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
71537	16	(6)	16	(6)	8	5/16"	7,5	11,5	41	22	8,7	6,3	8	6	8,4	100/100
71637	25	(4)	25	(4)	8	5/16"	9	13,5	49	27	10	8	9,5	7	8,4	100/100
71643					10	3/8"	9	17,2	50	27	11,5	9	9,5	7	10,5	100/100
71737	35	(2)	35	(2)	8	5/16"	11	17	57	28	11	8,6	11,5	8,5	8,4	100/100
71743					10	3/8"	11	17	57	28	11	10	11,5	8,5	10,5	100/100
71837•	50	(1/0)	50	(1/0)	8	5/16"	12	19	67	35	12,7	10,5	13	10	8,4	100/100
71843					10	3/8"	12	19	67	35	13,7	9,5	13	10	10,3	50/100
71849					12	1/2"	12	21	67	35	15,3	12	13	10	12,5	50/100
71943•	70	(2/0)	70	(2/0)	10	3/8"	14	22	75	41	14,2	11,3	15	12	10,3	50/50
71949•					12	1/2"	14	22	75	41	14,2	11,3	15	12	12,5	50/50
71955•					14	9/16"	14	22	75	41	14,2	11,3	15	12	14,5	50/50
71961•					16	5/8"	14	22	75	41	14,2	11,3	15	12	16,5	50/50
73143•	95	(3/0)	95	(3/0)	10	3/8"	16	25	89	44	17,5	12,5	17	13,8	10,3	25/25
73149•					12	1/2"	16	25	89	44	17,5	12,5	17	13,8	12,5	25/25
73155•					14	9/16"	16	25	89	44	17,5	13	17	13,8	14,5	25/25
73161•					16	5/8"	16	25	89	44	17,5	13	17	13,8	16,5	25/25
73243	120	(4/0)	120	(4/0)	10	3/8"	18	28	101	50	22,5	14	19,5	15,5	10,4	25/25
73249					12	1/2"	18	28	101	50	22,5	14	19,5	15,5	12,5	25/25
73255					14	9/16"	18	28	101	50	22,5	14	19,5	15,5	14,5	25/25
73261					16	5/8"	18	28	101	50	22,5	14	19,5	15,5	16,5	25/25
73349	150	(300)	150	(300)	12	1/2"	20	31	104	51	22	16	21	17	12,5	25/25
73355					14	9/16"	20	31	104	51	22	16	21	17	14,5	25/25
73361					16	5/8"	20	31	104	51	22	16,5	21	17	16,5	25/25
73367					20	3/4"	20	31	104	51	23	16,5	21	17	21	25/25
73455	185	(400)	185	(400)	14	9/16"	22	35	104	55	18	16	24	19	14,5	10/10
73461					16	5/8"	22	35	104	55	19	17	24	19	16,5	10/10
73467					20	3/4"	22	35	104	55	22	20	24	19	21	10/10
73555					14	9/16"	25	39	108	58	18	16	27	21,5	14,5	10/10
73561	240	(500)	240	(500)	16	5/8"	25	39	110	58	19	17	27	21,5	17	10/10
73567					20	3/4"	25	39	116	58	22	20	27	21,5	21	10/10
73661	300	(600)	240	(500)	16	5/8"	28	44	122	60	22	20	30	24	17	10/10
73761•	400	(800)	300	(600)	16	5/8"	35	50	127	62	22	20	35	27	17	10/10



file n° E 137735

• No UL


**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - RING - SILVER ALLOY BRAZED DIN 46234**

**TERMINAL MATERIAL:** tinned copper

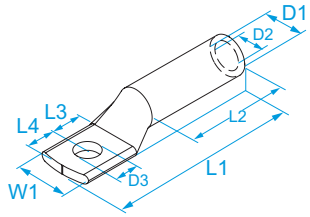
**SEAM:** brazed silver alloy

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**ACCORDING TO STD.:** DIN 46234

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
02425	10	(8)	5	#10	6	10	16	8	4,5	5,3	1,1	100/500
02431			6	#12	6	11	17	8	4,5	6,4	1,1	100/500
02437			8	5/16"	6	14	20	8	4,5	8,4	1,1	100/500
02443			10	3/8"	6	18	21	8	4,5	10,5	1,1	100/500
02449			12	1/2"	6	22	23	8	4,5	13	1,1	100/500
02525	16	(6)	5	#10	8	11	20	10	5,8	5,3	1,2	100/500
02531			6	#12	8	11	20	10	5,8	6,4	1,2	100/500
02537			8	5/16"	8	14	22	10	5,8	8,4	1,2	100/500
02543			10	3/8"	8	18	24	10	5,8	10,5	1,2	100/500
02549			12	1/2"	8	22	26	10	5,8	13	1,2	100/500
02561			16	5/8"	8	32	36	10	5,8	17	1,2	100/500
02631	25	(4)	6	#12	10	12	25	11	7,5	6,4	1,5	100/200
02637			8	5/16"	10	16	25	11	7,5	8,4	1,5	100/200
02643			10	3/8"	10	18	26	11	7,5	10,5	1,5	100/200
02649			12	1/2"	10	22	31	11	7,5	13	1,5	100/200
02655			14	9/16"	10	30	37	11	7,5	15	1,5	100/200
02661	16	5/8"	10	28	35	11	7,5	17	1,5	100/200		
02731	35	(2)	6	#12	12	15	26	12	9	6,5	1,6	100/200
02737			8	5/16"	12	16	26	12	9	8,4	1,7	100/200
02743			10	3/8"	12	18	27	12	9	10,5	1,7	100/200
02749			12	1/2"	12	22	31	12	9	13	1,7	100/200
02755			14	9/16"	12	28	36	12	9	15	1,7	100/200
02761	16	5/8"	12	28	36	12	9	17	1,7	100/200		
02837	50	(1/0)	8	5/16"	14	18	34	16	11	8,4	1,8	100/100
02843			10	3/8"	14	18	34	16	11	10,5	1,8	100/100
02849			12	1/2"	14	22	36	16	11	13	1,8	100/100
02855			14	9/16"	14	28	40	16	11	15	1,8	100/100
02861			16	5/8"	14	28	40	16	11	17	1,8	100/100
02937	70	(2/0)	8	5/16"	16	22	38	18	13	8,4	2	50/50
02943			10	3/8"	16	22	38	18	13	10,5	2	50/50
02949			12	1/2"	16	22	38	18	13	13	2	50/50
02955			14	9/16"	16	28	42	18	13	15	2	50/50
04137	95	(3/0)	8	5/16"	18	24	42	20	15	8,4	2,5	50/50
04143			10	3/8"	18	24	42	20	15	10,5	2,5	50/50
04149			12	1/2"	18	24	42	20	15	13	2,5	50/50
04155			14	9/16"	18	28	44	20	15	15	2,5	50/50
04161			16	5/8"	18	28	44	20	15	17	2,5	50/50
04243	120	(4/0)	10	3/8"	20	24	44	22	16,5	10,5	3	25/25
04249			12	1/2"	20	24	44	22	16,5	13	3	25/25
04255			14	9/16"	20	28	48	22	16,5	15	3	25/25
04261			16	5/8"	20	28	48	22	16,5	17	3	25/25
04267			20	3/4"	20	32	53	22	16,5	21	3	25/25

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
<a href="#">04343</a>	150	(300)	10	3/8"	22	30	50	24	19	10,5	3,2	25/25
<a href="#">04349</a>			12	1/2"	22	30	50	24	19	13	3,2	25/25
<a href="#">04355</a>			14	9/16"	22	30	50	24	19	15	3,2	10/10
<a href="#">04361</a>			16	5/8"	22	30	50	24	19	17	3,2	25/25
<a href="#">04367</a>			20	3/4"	22	36	63	24	19	21	3,2	10/10

**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - DIN 46235**

**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

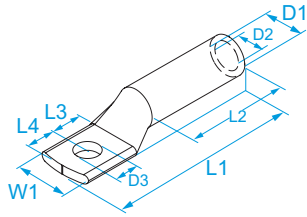
**DIMENSIONS:** compliant to DIN 46235

**ACCORDING TO STD.:** DIN 46235

**INSPECTION HOLE:** no

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
80425	10	(8)	5	#10	6	9	36	10	6	9	6	4,5	5,3	100/100
80431			6	#12	6	9	36	10	8	10,5	6	4,5	6,4	100/100
80531	16	(6)	6	#12	8	13	49	20	8	10,5	8,5	5,5	6,4	100/100
80537			8	5/16"	8	13	49	20	10	13	8,5	5,5	8,4	100/100
80543			10	3/8"	8	17	53	20	12	15	8,5	5,5	10,5	100/100
80631	25	(4)	6	#12	10	14	48,5	20	8	10,5	10	7	6,4	100/100
80637			8	5/16"	10	16	51	20	10	13	10	7	8,4	100/100
80643			10	3/8"	10	17	53	20	12	15	10	7	10,5	100/100
80649			12	1/2"	10	19	54	20	13	16	10	7	13	100/100
80737	35	(2)	8	5/16"	12	17	55	20	10	13	12,5	8,5	8,4	100/100
80743			10	3/8"	12	19	57	20	12	15	12,5	8,5	10,5	100/100
80749			12	1/2"	12	21	58	20	13	16	12,5	8,5	13	100/100
80837	50	(1/0)	8	5/16"	14	20	65	28	10	13	14	10	8,4	50/50
80843			10	3/8"	14	22	67	28	12	15	14	10	10,5	50/50
80849			12	1/2"	14	24	68	28	13	16	14	10	13	50/50
80861			16	5/8"	14	28	71	28	16	19	14	10	17	50/50
80937	70	(2/0)	8	5/16"	16	24	68	28	10	13	16	11,5	8,4	50/50
80943			10	3/8"	16	24	70	28	12	15	16	11,5	10,5	50/50
80949			12	1/2"	16	24	71	28	13	16	16	11,5	13	50/50
80961			16	5/8"	16	30	74	28	16	19	16	11,5	17	50/50
83143	95	(3/0)	10	3/8"	18	28	80	35	12	15	19	13,8	10,5	25/25
83149			12	1/2"	18	28	81	35	13	16	19	13,8	13	25/25
83161			16	5/8"	18	32	84	35	16	19	19	13,8	17	25/25
83243	120	(4/0)	10	3/8"	20	32	85	35	12	15	21	15,5	10,5	25/25
83249			12	1/2"	20	32	86	35	13	16	21	15,5	13	25/25
83261			16	5/8"	20	32	89	35	16	19	21	15,5	17	25/25
83267			20	3/4"	20	38	92	35	20	22	21	15,5	21	25/25
83343	150	(300)	10	3/8"	22	34	93	35	12	15	23,5	17	10,5	25/25
83349			12	1/2"	22	34	94	35	13	16	23,5	17	13	25/25
83361			16	5/8"	22	34	97	35	16	19	23,5	17	17	25/25
83367			20	3/4"	22	40	100	35	20	22	23,5	17	21	25/25
83443	185	(400)	10	3/8"	25	37	97	40	12	15	25,5	19	10,5	10/10
83449			12	1/2"	25	37	98	40	13	16	25,5	19	13	10/10
83461			16	5/8"	25	37	101	40	16	19	25,5	19	17	10/10
83467			20	3/4"	25	40	104	40	20	22	25,5	19	21	10/10
83549	240	(500)	12	1/2"	28	42	107	40	13	16	29	21,5	13	10/10
83561			16	5/8"	28	42	108	40	16	19	29	21,5	17	10/10
83567			20	3/4"	28	45	111	40	20	22	29	21,5	21	10/10

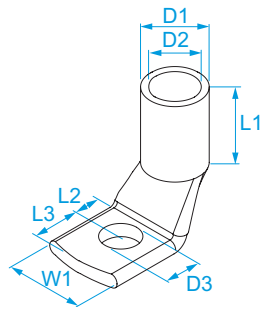
**TERMINAL LUGS FOR COPPER CONDUCTORS · UNINSULATED · DIN 46235 · NOT TINNED**



**TERMINAL MATERIAL:** copper  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C  
**DIMENSIONS:** compliant to DIN 46235  
**ACCORDING TO STD.:** DIN 46235  
**INSPECTION HOLE:** no

TERMINALS

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
804251	10	(8)	5	#10	6	9	36	10	6	9	6	4,5	5,3	100/100
804311			6	#12	6	9	36	10	8	10,5	6	4,5	6,4	100/100
805311	16	(6)	6	#12	8	13	49	20	8	10,5	8,5	5,5	6,4	100/100
805371			8	5/16"	8	13	49	20	10	13	8,5	5,5	8,4	100/100
805431			10	3/8"	8	17	53	20	12	15	8,5	5,5	10,5	100/100
806311	25	(4)	6	#12	10	14	48,5	20	8	10,5	10	7	6,4	100/100
806371			8	5/16"	10	16	51	20	10	13	10	7	8,4	100/100
806431			10	3/8"	10	17	53	20	12	15	10	7	10,5	100/100
806491			12	1/2"	10	19	54	20	13	16	10	7	13	100/100
807371	35	(2)	8	5/16"	12	17	55	20	10	13	12,5	8,5	8,4	100/100
807431			10	3/8"	12	19	57	20	12	15	12,5	8,5	10,5	100/100
807491			12	1/2"	12	21	58	20	13	16	12,5	8,5	13	100/100
808371	50	(1/0)	8	5/16"	14	20	65	28	10	13	14	10	8,4	50/50
808431			10	3/8"	14	22	67	28	12	15	14	10	10,5	50/50
808491			12	1/2"	14	24	68	28	13	16	14	10	13	50/50
808611			16	5/8"	14	28	71	28	16	19	14	10	17	50/50
809371	70	(2/0)	8	5/16"	16	24	68	28	10	13	16	11,5	8,4	50/50
809431			10	3/8"	16	24	70	28	12	15	16	11,5	10,5	50/50
809491			12	1/2"	16	24	71	28	13	16	16	11,5	13	50/50
809611			16	5/8"	16	30	74	28	16	19	16	11,5	17	50/50
831431	95	(3/0)	10	3/8"	18	28	80	35	12	15	19	13,8	10,5	25/25
831491			12	1/2"	18	28	81	35	13	16	19	13,8	13	25/25
831611			16	5/8"	18	32	84	35	16	19	19	13,8	17	25/25
832431	120	(4/0)	10	3/8"	20	32	85	35	12	15	21	15,5	10,5	25/25
832491			12	1/2"	20	32	86	35	13	16	21	15,5	13	25/25
832611			16	5/8"	20	32	89	35	16	19	21	15,5	17	25/25
832671			20	3/4"	20	38	92	35	20	22	21	15,5	21	25/25
833431	150	(300)	10	3/8"	22	34	93	35	12	15	23,5	17	10,5	25/25
833491			12	1/2"	22	34	94	35	13	16	23,5	17	13	25/25
833611			16	5/8"	22	34	97	35	16	19	23,5	17	17	25/25
833671			20	3/4"	22	40	100	35	20	22	23,5	17	21	25/25
834431	185	(400)	10	3/8"	25	37	97	40	12	15	25,5	19	10,5	10/10
834491			12	1/2"	25	37	98	40	13	16	25,5	19	13	10/10
834611			16	5/8"	25	37	101	40	16	19	25,5	19	17	10/10
834671			20	3/4"	25	40	104	40	20	22	25,5	19	21	10/10
835491	240	(500)	12	1/2"	28	42	107	40	13	16	29	21,5	13	10/10
835611			16	5/8"	28	42	108	40	16	19	29	21,5	17	10/10
835671			20	3/4"	28	45	111	40	20	22	29	21,5	21	10/10

**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - BENT 90° - FROM DIN 46235 TERMINAL LUGS**

**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

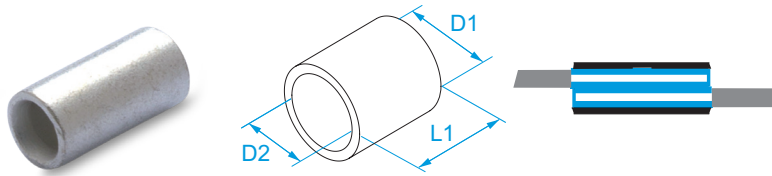
**DIMENSIONS:** dimensions before bending are compliant to DIN 46235 standard

**INSPECTION HOLE:** no

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
<a href="#">805379</a>	16	(6)	8	5/16"	8	13	20	10	13	8,5	5,5	8,4	100/100
<a href="#">805439</a>			10	3/8"	8	17	20	12	15	8,5	5,5	10,5	100/100
<a href="#">806499</a>	25	(4)	12	1/2"	10	19	20	13	16	10	7	13	100/100
<a href="#">807499</a>	35	(2)	12	1/2"	12	21	20	13	16	12,5	8,5	13	100/100
<a href="#">808499</a>	50	(1/0)	12	1/2"	14	24	28	13	16	14	10	13	50/50
<a href="#">809499</a>	70	(2/0)	12	1/2"	16	24	28	13	16	16	11,5	13	50/50
<a href="#">831499</a>	95	(3/0)	12	1/2"	18	28	35	13	16	19	13,8	13	25/25
<a href="#">831619</a>			16	5/8"	18	32	35	16	19	19	13,8	17	25/25
<a href="#">832619</a>	120	(4/0)	16	5/8"	20	32	35	16	19	21	15,5	17	25/25



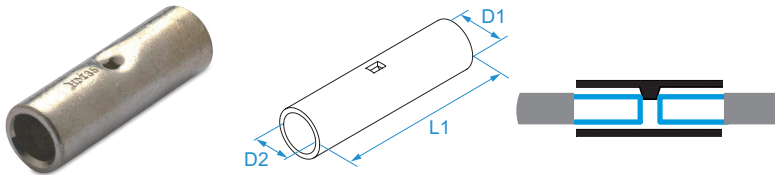
### PARALLEL CONNECTORS - UNINSULATED



**TERMINAL MATERIAL:** tinned copper  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C  
**HOW TO ASSEMBLE:** overlap the two conductors

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	D1 (mm)	D2 (mm)	
01162	0.25 ÷ 1.5	(22 - 16)	8	3,3	1,8	200/1000
01262	1.5 ÷ 2.5	(16 - 14)	8	4,1	2,5	200/1000
01362	4 ÷ 6	(12 - 10)	8,5	5,5	3,7	100/1000

### BUTT CONNECTORS - UNINSULATED



**TERMINAL MATERIAL:** tinned copper  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C  
**TYPE:** with central inspection hole and flush for a right insertion of the conductor.

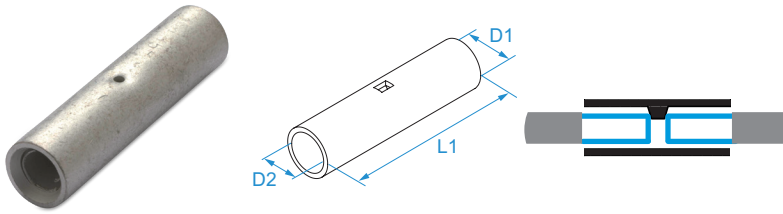
Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Indent	L1 (mm)	D1 (mm)	D2 (mm)	
01160**	0.25 ÷ 1.5	(22 - 16)	-	15	3,3	1,8	200/1000
01260**	1.5 ÷ 2.5	(16 - 14)	-	15	4,1	2,5	200/1000
01360**	4 ÷ 6	(12 - 10)	-	15	5,5	3,7	100/1000
01460**	10	(8)	7	25	7	5	100/500
01560*	16	(6)	7,5	28	8	6	100/500
01660*	25	(4)	9	28	9,5	7	100/300
01760*	35	(2)	11	36	11,5	8,5	100/300
01860*	50	(1/0)	12	36	13	10	50/50
01960	70	(2/0)	14	45	15	12	50/50
03160	95	(3/0)	16	46	17	13,8	50/50
03260*	120	(4/0)	18	50	19	15,5	50/50
03360*	150	(300)	20	60	21	17	25/25
03460*	185	(400)	22	64	25	19	25/25
03560*	240	(500)	25	73	27	21,5	25/25
03660*	300	(600)	28	75	30	24	25/25
03760	400	(800)	35	85	35	27	10/10
03860	500	(1000)	38	97	38	30	10/10
03960	600/630	(1250)	42	104	42	33,6	10/10



\* file n° E 137735



\*\* file n° E 137735

**BUTT CONNECTORS - UNINSULATED - DIN 46267/1**


**TERMINAL MATERIAL:** tinned copper

**ACCORDING TO STANDARD:** DIN 46267/1

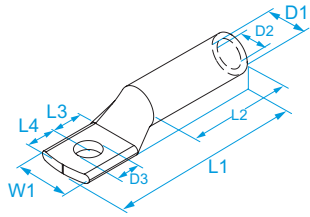
**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**TYPE:** with central inspection hole and flush for a right insertion of the conductor.

**DIMENSIONS:** compliant to DIN 46267/1 standard

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Indent	L1 (mm)	D1 (mm)	D2 (mm)	
81460	10	(8)	6	30	6	4,5	100/100
81560	16	(6)	8	50	8,5	5,5	100/100
81660	25	(4)	10	50	10	7	100/100
81760	35	(2)	12	50	12,5	8,5	100/100
81860	50	(1/0)	14	56	14	10	50/50
81960	70	(2/0)	16	56	16	12	50/50
83160	95	(3/0)	18	70	19	13,8	25/25
83260	120	(4/0)	20	70	21	15,5	25/25
83360	150	(300)	22	80	23,5	17	25/25
83460	185	(400)	25	85	25,5	19	25/25
83560	240	(500)	28	90	29	21,5	25/25

### TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - MEDIUM VOLTAGE



**TERMINAL MATERIAL:** tinned copper

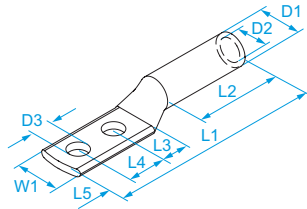
**RATED VOLTAGE:** from 1 kV to 35 kV AC

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**CONDUCTOR CLASS:** Class 2 (stranded non compacted circular, compacted circular and shaped conductors) according to EN 60228

**INSPECTION HOLE:** no

Code	Conductor section no compacted circular or shaped (mm <sup>2</sup> )	Conductor compacted circular section (mm <sup>2</sup> )	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
73025	25	35	8	5/16"	10	16,5	72	37	11	13	10	7	8,4	25/25
73125	25	35			10	20	76	37	13	16	10	7	13	25/25
73035	35	-			12	23	76	36	13	16	13	8,4	13	25/25
73050	50	-			12	20	77	35	17,5	13,5	13	9,5	13	25/25
73070	70	-	12	1/2"	16	27	82	37,5	16	14	18	11,5	13	25/25
73095	95	-			20	28	86,5	43	16	14	20	13,5	13	25/25
73120	120	150			22	32	93,5	49,5	16	14	23	15,3	13	25/25
73150	150	160			22	34	100	49	16	13	23,5	17	13	10/10
73200	185	240			28	41,5	103	54	18	16	30	20	15	10/10
73240	240	300-315			28	43	103	53	18	16	30	21,8	15	10/10
73300	300	-	14	9/16"	28	43	120	58	23	19	30	24	15	10/10
73400	400	-			35	50	131	66	23	19	35	27	15	10/10
73500	500	-	16	5/8"	38	54,5	147	68	22	19	38	30	17	5/5
73630	630	-			42	61	163	83	25	23	42	33,6	17	5/5

**TERMINAL LUGS FOR COPPER CONDUCTORS · UNINSULATED · MEDIUM VOLTAGE · DOUBLE HOLE**

**TERMINAL MATERIAL:** tinned copper

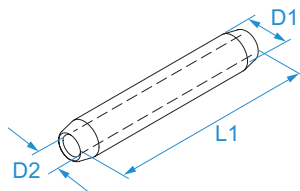
**RATED VOLTAGE:** from 1 kV to 35 kV AC

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**CONDUCTOR CLASS:** Class 2 (stranded non compacted circular, compacted circular and shaped conductors) according to EN 60228

**INSPECTION HOLE:** no

Code	Conductor section no compacted circular or shaped (mm <sup>2</sup> )	Conductor compacted circular section (mm <sup>2</sup> )	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
73201	25	35	8	5/16"	10	16,5	117	37	11	44,5	13	10	7	8,4	25/50
73211	25	35			10	20	121	37	13	44,5	16	10	7	13	50/50
73202	35		12	1/2"	12	23	121	36	13	44,5	16	13	8,4	13	25/50
73203	50				12	20	122	35	17,5	44,5	13,5	13	9,5	13	25/50
73204	70				16	27	127	37,5	16	44,5	14	18	11,5	13	25/50
73205	95				20	28	131	43	16	44,5	14	20	13,5	15	10/10
73206	120	150			22	32	138	49,5	16	44,5	14	23	15,3	15	10/10
73207	150	160			22	34	145	49	16	44,5	13	23,5	17	15	10/10
73208	185	240	14	9/16"	28	41,5	148	54	18	44,5	16	30	20	15	10/10
73209	240	300-315			28	43	147	53	18	44,5	16	30	21,8	15	10/10
73210	300				28	43	150	46	18	44,5	16	30	24	15	10/10
73212	400				35	50	162	60	18	44,5	16	35	27	15	5/5
73213	500		16	5/8"	38	56	192	68	22	44,5	19	38	30	17	5/5
73214	630				42	61	208	83	25	44,5	23	42	33,6	17	5/5

**JOINTS · FOR COPPER CONDUCTORS · MEDIUM VOLTAGE**

**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**VOLTAGE:** up to 35kV

**CHARACTERISTIC:** conical edge at both sides

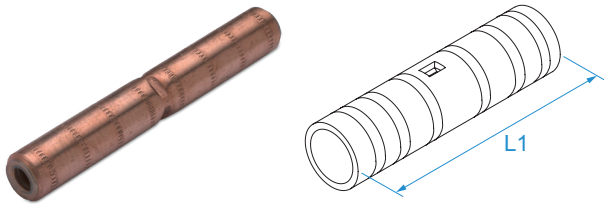
Code	Sezione conduttore non compatto circolare o settoriale	Conductor compacted circular section	Indent	L1 (mm)	D1 (mm)	D2 (mm)	
72025	25	35	10	60	10	7	25/50
72035	35	-	12	60	13	8,4	25/25
72050	50	-	12	60	13	9,5	25/25
72070	70	-	16	70	18	11,5	25/25
72095	95	-	20	80	20	13,5	25/25
72120	120 - 125	150	22	80	23	15,3	25/25
72150	150	160	22	80	23,5	17	25/25
72200	200	240	28	100	30	20	10/10
72240	240	300 - 315	28	100	30	21,8	10/10
72300	300 - 315	-	28	104	30	24	10/10
72400	400	-	35	116	35	27	5/5
72500	500	-	38	118	38	30	5/5
72630	630	-	42	130	42	33,6	5/5

**FULL TENSILE JOINTS - FOR COPPER CONDUCTORS AND AERIAL LINES**

**TERMINAL MATERIAL:** electrolytic copper

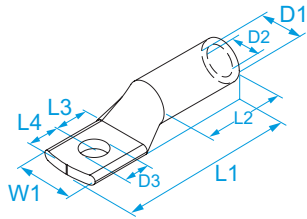
**CHARACTERISTIC:** high mechanical resistance to traction

**APPLICATION:** connection of medium voltage aerial lines



TERMINALS

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Wires (# Wires)	conductor external Ø (mm)	L1 (mm)	
75010	10	(8)	7 x 1.35	4.05	62	25/25
75016	16	(6)	1 x 4.5	4.5	78	10/10
75017	16	(6)	7 x 1.35	5.1	78	10/10
75025	25	(4)	7 x 2.14	6.42	91	10/10
75035	35	(2)	7 x 2.52	7.56	100	10/10
75050	50	(1/0)	7 x 3, 19 x 1.80	9	125	10/10
75070	63 ÷ 70	(2/0)	19 x 2, 19 x 2.14	10.5 - 10.70	125	10/10
75095	95	(3/0)	19 x 2.52	12.6	189	10/10

**TERMINAL LUGS FOR ALUMINUM CONDUCTORS - UNINSULATED - DIN 48201**


**TERMINAL MATERIAL:** aluminum 1050 A EN573-3 with no less than 99.5% purity

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

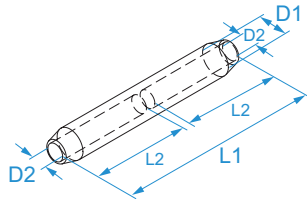
**ACCORDING TO STD.:** DIN 48201

**PROTECTION:** the conductor housing is filled with grease (dropping point 90 °C) and plugged with a plastic cap to avoid oxidation.

**INSPECTION HOLE:** no

Code	Conductor section no compacted circular or shaped (mm <sup>2</sup> )	Conductor compacted circular section (mm <sup>2</sup> )	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
76016	16	25	8	5/16"	12	18	66	33,5	12,5	12,5	12	5,8	8,5	25/25
76017	16	25	10	3/8"	12	18	66	33,5	12,5	12,5	12	5,8	10,5	50/50
76025	25	35	8	5/16"	12	18	72,5	40	12,5	12,5	12	6,8	8,5	50/50
76026	25	35	10	3/8"	12	18	72,5	40	12,5	12,5	12	6,8	10,5	50/50
76035	35	50	10	3/8"	13	21	80	44	14	13	14	8	10,5	25/25
76036	35	50	12	1/2"	13	21	80	44	14	13	14	8	13	25/25
76050	50	70	10	3/8"	15	25	86	46	15	14	16	9,8	10,5	25/25
76051	50	70	12	1/2"	15	25	86	46	15	14	16	9,8	13	25/25
76070	70	95	10	3/8"	18	28	101	54	16	14	18,5	11,2	10,5	25/25
76071	70	95	12	1/2"	18	28	101	54	16	14	18,5	11,2	13	25/25
76095	95	120	10	3/8"	21	32	105	57	16	14	22	13,2	10,5	25/25
76096	95	120	12	1/2"	21	32	105	57	16	14	22	13,2	13	25/25
76097	95	120	16	5/8"	21	34	110	57	19	16	22	13,2	17	25/25
76120	120	150	12	1/2"	22	34	108	59	18	17	23	14,7	13	25/25
76121	120	150	16	5/8"	22	34	108	59	18	17	23	14,7	17	25/25
76150	150	185	12	1/2"	25	35	120	64	19	17	25	16,3	13	10/10
76151	150	185	16	5/8"	25	35	120	64	19	17	25	16,3	17	10/10
76152	150	185	20	3/4"	25	35	126	64	22	20	25	16,3	21	10/10
76185	185	240	12	1/2"	28	40	127	64	24,5	21	28,5	18,3	13	10/10
76186	185	240	16	5/8"	28	40	127	64	24,5	21	28,5	18,3	17	10/10
76187	185	240	20	3/4"	28	40	127	64	24,5	21	28,5	18,3	21	10/10
76240	240	300	12	1/2"	32	45	140	70	25	24	32	21	13	10/10
76241	240	300	16	5/8"	32	45	140	70	25	24	32	21	17	10/10
76242	240	300	20	3/4"	32	45	140	70	25	24	32	21	21	10/10

### JOINTS - FOR ALUMINUM CONDUCTORS - MEDIUM VOLTAGE



**TERMINAL MATERIAL:** aluminum with no less than 99.5% purity

**ACCORDING TO STD.:** DIN 48201

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**VOLTAGE:** up to 35kV

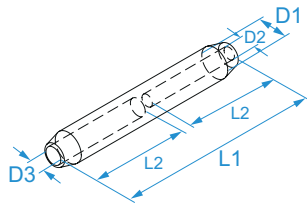
**PROTECTION:** the conductor housing is filled with grease (dropping point 90°C) and plugged with a plastic cap to avoid oxidation.

**TYPE:** with central diaphragm for a right insertion of the conductor.

The diaphragm is sealed to avoid the mixture of paper filled cables to get in touch with cables with solid insulation.

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Indent	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	
70202	35 ÷ 35	(2 - 2)	20	138	67	20	8	10/10
70203	50 ÷ 50	(1/0 - 1/0)	20	138	67	20	9	10/10
70204	70 ÷ 70	(2/0 - 2/0)	20	138	67	20	11	10/10
70205	95 ÷ 95	(3/0 - 3/0)	20	138	67	20	12,5	10/10
70206	120 ÷ 120	(4/0 - 4/0)	25	164	80	25	13,7	10/10
70207	150 ÷ 150	(300 - 300)	25	164	80	25	15,5	10/10
70208	185 ÷ 185	(400 - 400)	32	176	86	32	17	10/10
70209	240 ÷ 240	(500 - 500)	32	176	86	32	19,5	10/10

### REDUCTION JOINTS - FOR ALUMINUM OR COPPER CONDUCTORS - MEDIUM VOLTAGE



**TERMINAL MATERIAL:** aluminum with no less than 99.5% purity

**ACCORDING TO STD.:** DIN 48201

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**VOLTAGE:** up to 35kV

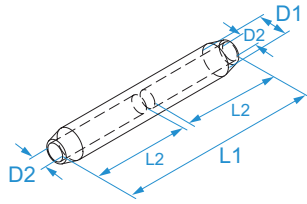
**PROTECTION:** the conductor housing is filled with grease (dropping point 90°C) and plugged with a plastic cap to avoid oxidation.

**TYPE:** with central diaphragm for a right insertion of the conductor.

The diaphragm is sealed to avoid the mixture of paper filled cables to get in touch with cables with solid insulation.

**APPLICATION:** connection of Al conductors to smaller Al or Cu conductors

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Indent	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
70232	50 ÷ 35	(1/0 - 2)	20	138	67	20	8	9	10/10
70243	70 ÷ 50	(2/0 - 1/0)	20	138	67	20	9	11	10/10
70253	95 ÷ 50	(3/0 - 1/0)	20	138	67	20	9	12,5	10/10
70254	95 ÷ 70	(3/0 - 2/0)	20	138	67	20	11	13,7	10/10
70264	120 ÷ 70	(4/0 - 2/0)	25	164	80	25	11	13,7	10/10
70265	120 ÷ 95	(4/0 - 3/0)	25	164	80	25	12,5	15,5	10/10
70275	150 ÷ 95	(300 - 3/0)	25	164	80	25	12,5	15,5	10/10
70276	150 ÷ 120	(300 - 4/0)	25	164	80	25	13,7	17	10/10
70284	185 ÷ 50	(400 - 1/0)	32	176	86	32	9	17	10/10
70285	185 ÷ 95	(400 - 3/0)	32	176	86	32	12,5	17	10/10
70286	185 ÷ 120	(400 - 4/0)	32	176	86	32	13,7	17	10/10
70287	185 ÷ 150	(400 - 300)	32	176	86	32	15,5	17	10/10
70297	240 ÷ 150	(500 - 300)	32	176	86	32	15,5	19,5	10/10
70298	240 ÷ 185	(500 - 400)	32	176	86	32	17	19,5	10/10

**JOINTS - FOR ALUMINUM CONDUCTORS - DIN 48201**


**TERMINAL MATERIAL:** aluminum 1050 A EN573-3 with no less than 99.5% purity

**ACCORDING TO STD.:** DIN 48201

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

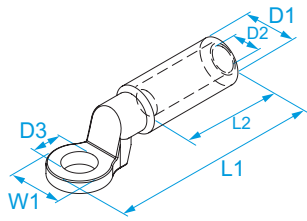
**PROTECTION:** the conductor housing is filled with grease (dropping point 90°C) and plugged with a plastic cap to avoid oxidation.

**TYPE:** with central and sealed diaphragm for a right insertion of the conductor.

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Indent	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	
70402	35 ÷ 35	(2 - 2)	13	95	45,5	14	8	10/10
70403	50 ÷ 50	(1/0 - 1/0)	15	95	45,5	16	9,8	10/10
70404	70 ÷ 70	(2/0 - 2/0)	18	100	48	18,5	11,2	1/1
70405	95 ÷ 95	(3/0 - 3/0)	21	105	50,5	22	13,5	10/10
70406	120 ÷ 120	(4/0 - 4/0)	22	110	52,5	23	14,7	10/10
70407	150 ÷ 150	(300 - 300)	25	110	52,5	25	16,3	1/1
70408	185 ÷ 185	(400 - 400)	28	130	62	28,5	18,3	1/1
70409	240 ÷ 240	(500 - 500)	32	130	62	32	21	5/5



### BIMETALLIC TERMINAL LUGS - UNINSULATED - RING



**PALM MATERIAL:** copper 99.9%

**BARREL MATERIAL:** aluminum 99.5%

**CONDUCTOR CABLE MATERIAL:** L.V. and M.V. aluminium

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

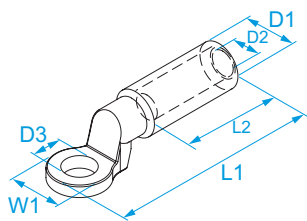
**APPLICATIONS:** useful where an aluminum cable has to be terminated by a copper bus bar or copper contact. Indeed a galvanic action occurs if terminals of only copper or aluminum are used due to dissimilar contact.

**PROTECTION:** the conductor housing is filled with grease (dropping point 90 °C) and plugged with a plastic cap to avoid oxidation.

**INSPECTION HOLE:** no

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
70000	16	(6)	12	1/2"	15	22,5	87	47,5	16	5,6	13	10/10
70001	25	(4)	12	1/2"	15	22,5	87	47,5	16	6,6	13	10/10
70002	35	(2)	12	1/2"	20	25	88	47,5	20	8,2	13	10/10
70003	50	(1/0)	12	1/2"	20	25	88	47,5	20	9,2	13	10/10
70004	70	(2/0)	12	1/2"	20	25	88	47,5	20	11,2	13	10/10
70005	95	(3/0)	12	1/2"	20	25	88	47,5	20	12,7	13	10/10
70006	120	(4/0)	12	1/2"	25	32	113	64,5	25	13,9	13	10/10
70007	150	(300)	12	1/2"	25	32	113	64,5	25	15,7	13	10/10
70008	185	(400)	12	1/2"	32	35,5	118	64,5	32	17,2	13	10/10
70009	240	(500)	12	1/2"	32	35,5	118	64,5	32	19,7	13	10/10
70010	300	(600)	12	1/2"	35	35,5	145	90	34	23,3	13	10/10

### BIMETALLIC TERMINAL LUGS - UNINSULATED DIN 48201 - RING



**PALM MATERIAL:** copper 99.9%

**BARREL MATERIAL:** aluminum 99.5%

**CONDUCTOR CABLE MATERIAL:** L.V. and M.V. aluminium

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**APPLICATIONS:** useful where an aluminum cable has to be terminated by a copper bus bar or copper contact. Indeed a galvanic action occurs if terminals of only copper or aluminum are used due to dissimilar contact.

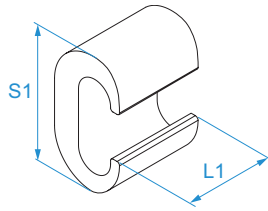
**ACCORDING TO STD.:** DIN 48201

**PROTECTION:** the conductor housing is filled with grease (dropping point 90 °C) and plugged with a plastic cap to avoid oxidation.

**INSPECTION HOLE:** no

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
70602	35	(2)	12	1/2"	13	25	90	43	14	8	13	25/25
70603	50	(1/0)	12	1/2"	15	25	92	43	16	9,8	13	25/25
70604	70	(2/0)	12	1/2"	18	25	92	45	18,5	11,2	13	20/20
70605	95	(3/0)	12	1/2"	21	25	92	45	22	13,2	13	20/20
70606	120	(4/0)	12	1/2"	22	32	120	60	23	14,7	13	10/10
70607	150	(300)	12	1/2"	25	32	120	60	25	16,3	13	10/10
70608	185	(400)	12	1/2"	28	35,5	125	60	28,5	18,3	13	10/10
70609	240	(500)	12	1/2"	32	35,5	125	65	32	21	13	10/10

## C SHUNT



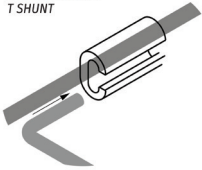
**TERMINAL MATERIAL:** copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

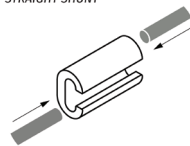
**APPLICATION:** connectors for ground connections

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Straight T shunt Primary (mm <sup>2</sup> )	Straight T shunt Derivative (mm <sup>2</sup> )	Cross shunt Section (mm <sup>2</sup> )	L1 (mm)	S1 (mm)	
01416	6 ÷ 6	(10 - 10)	6 - 2.5	6 - 1.5	-	9	9,8	25/25
01400	10 ÷ 10	(8 - 8)	10	10 - 1.5	-	12	12,6	100/100
01401	16 ÷ 16	(6 - 6)	16	16 - 2.5	-	17,5	19,4	100/100
01408	25 ÷ 10	(4 - 8)	25 - 16	10 - 1.5	-	17	19,8	100/100
01402	25 ÷ 25	(4 - 4)	25	25 - 16	-	17,5	21,4	100/100
01409	35 ÷ 16	(2 - 6)	40 - 10	16 - 1.5	25 - 25	21,5	24,6	100/100
01403	35 ÷ 35	(2 - 2)	40 - 35	40 - 25	35 - 35	21,5	26,6	100/100
01410	50 ÷ 25	(1/0 - 4)	50	25 - 4	-	26,5	32,9	25/25
01404	50 ÷ 50	(1/0 - 1/0)	50	50 - 35	-	26,5	33	25/25
01411	70 ÷ 35	(2/0 - 2)	70 - 63	40 - 4	-	27	33	25/25
01405	70 ÷ 70	(2/0 - 2/0)	70 - 50	70 - 35	50 - 50	27	34	25/25
01412	95 ÷ 35	(3/0 - 2)	95 - 63	40 - 4	-	30	40,5	25/25
01406	95 ÷ 95	(3/0 - 3/0)	100 - 80	100 - 63	-	30	41	25/25
01413	95 ÷ 70	(3/0 - 2/0)	100 - 80	70 - 50	63 - 63, 70 - 70	30	41	25/25
01407	120 ÷ 120	(4/0 - 4/0)	125 - 110	125 - 25	-	30	45	25/25
01414	150 ÷ 120	(300 - 4/0)	160 - 150	125 - 25	95 - 95, 120 - 120	31	45	25/25
01417	150 ÷ 150	(300 - 300)	150	150 - 63	-	30	45,3	25/25
01415	185 ÷ 95	(400 - 3/0)	185	100 - 16	125 - 125	31	45	25/25
01418	185 ÷ 185	(400 - 400)	185 - 120	185 - 120	-	22,6	68	15/15
01421	240 ÷ 120	(500 - 4/0)	240 - 150	120 - 95	-	22,6	68	15/15

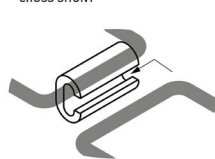
DERIVAZIONE A T  
T SHUNT



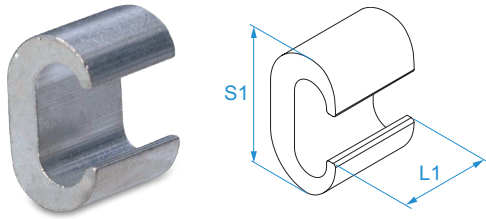
DERIVAZIONE DIRITTA  
STRAIGHT SHUNT



DERIVAZIONE A CROCE  
CROSS SHUNT



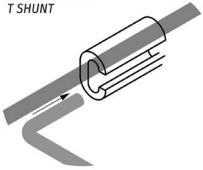
### C SHUNT - TINNED COPPER



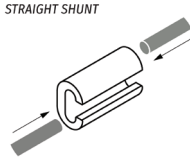
**TERMINAL MATERIAL:** tinned copper  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C  
**APPLICATION:** connectors for ground connections

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Straight T shunt Primary (mm <sup>2</sup> )	Straight T shunt Derivative (mm <sup>2</sup> )	Cross shunt Section (mm <sup>2</sup> )	L1 (mm)	S1 (mm)	
014161	6 ÷ 6	(10 - 10)	6 - 2.5	6 - 1.5	-	9	9,8	100/100
014001	10 ÷ 10	(8 - 8)	10	10 - 1.5	-	12	12,6	100/100
014011	16 ÷ 16	(6 - 6)	16	16 - 2.5	-	17,5	19,4	100/100
014081	25 ÷ 10	(4 - 8)	25 - 16	10 - 1.5	-	17	19,8	100/100
014021	25 ÷ 25	(4 - 4)	25	25 - 16	-	17,5	21,4	100/100
014091	35 ÷ 16	(2 - 6)	40 - 10	16 - 1.5	25 - 25	21,5	24,6	100/100
014031	35 ÷ 35	(2 - 2)	40 - 35	40 - 25	35 - 35	21,5	26,6	100/100
014101	50 ÷ 25	(1/0 - 4)	50	25 - 4	-	26,5	32,9	25/25
014041	50 ÷ 50	(1/0 - 1/0)	50	50 - 35	-	26,5	33	25/25
014111	70 ÷ 35	(2/0 - 2)	70 - 63	40 - 4	-	27	33	25/25
014051	70 ÷ 70	(2/0 - 2/0)	70 - 50	70 - 35	50 - 50	27	34	25/25
014121	95 ÷ 35	(3/0 - 2)	95 - 63	40 - 4	-	30	40,5	25/25
014061	95 ÷ 95	(3/0 - 3/0)	100 - 80	100 - 63	-	30	41	25/25
014131	95 ÷ 70	(3/0 - 2/0)	100 - 80	70 - 50	63 - 63, 70 - 70	30	41	25/25
014071	120 ÷ 120	(4/0 - 4/0)	125 - 110	125 - 25	-	30	45	25/25
014141	150 ÷ 120	(300 - 4/0)	160 - 150	125 - 25	95 - 95, 120 - 120	31	45	25/25
014171	150 ÷ 150	(300 - 300)	150	150 - 63	-	30	45,3	25/25
014151	185 ÷ 95	(400 - 3/0)	185	100 - 16	125 - 125	31	45	25/25
014181	185 ÷ 185	(400 - 400)	185 - 120	185 - 120	-	22,6	68	15/15
014211	240 ÷ 120	(500 - 4/0)	240 - 150	120 - 95	-	22,6	68	15/15

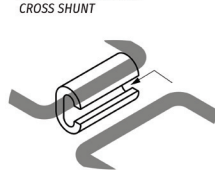
DERIVAZIONE A T  
T SHUNT



DERIVAZIONE DIRITTA  
STRAIGHT SHUNT

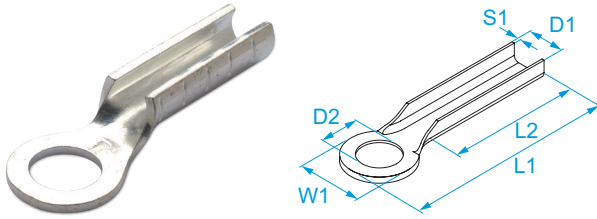


DERIVAZIONE A CROCE  
CROSS SHUNT



### TERMINAL LUGS FOR COPPER CONDUCTORS FOR GROUND - UNINSULATED - RING

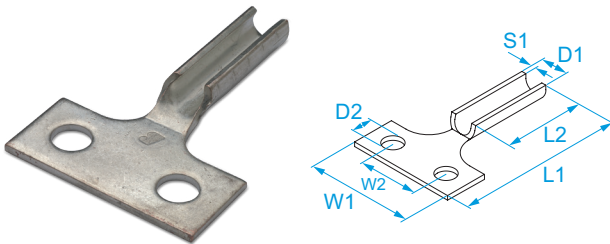
TERMINAL MATERIAL: tinned copper  
 OPERATING TEMPERATURE: from -50 °C to +150 °C



Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
79135	35	(2)	16	5/8"	14	28	84	47	10,8	17	3	25/25

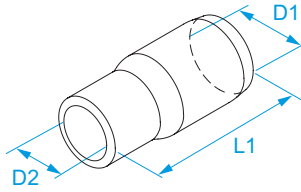
### TERMINAL LUGS FOR COPPER CONDUCTORS FOR GROUND - UNINSULATED - RECTANGULAR

TERMINAL MATERIAL: tinned copper  
 OPERATING TEMPERATURE: from -50 °C to +150 °C



Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	Indent	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	D1 (mm)	D2 (mm)	S1 (mm)	
79235	35	(2)	12	1/2"	14	70	40	100	47	10,8	13	3	25/25

## ACCESSORIES FOR UNINSULATED TERMINAL LUGS - INSULATING SLEEVES



**MATERIAL:** PVC

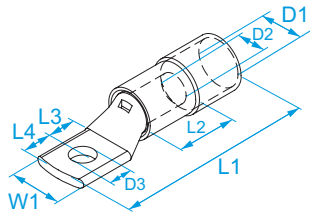
**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**MAX OPERATING TEMPERATURE:** 105°C

**COLOR:** black

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	L1 (mm)	D1 (mm)	D2 (mm)	
81001	1,5	(16)	15	3,8	3,5	100/1000
81002	2,5	(14)	16,7	5	4	100/1000
81006	6	(10)	20,6	7	5,2	100/1000
81010	10	(8)	21	6,8	6,3	100/1000
81016	16	(6)	28	8	7	100/1000
81025	25	(4)	28	8	7,6	100/1000
81035	35	(2)	29	10,3	9,2	100/1000
81050	50	(1/0)	34	12	10,3	100/500
81070	70	(2/0)	42	14	13,5	100/500
81095	95	(3/0)	46	17	16	50/250
81120	120	(4/0)	55	20	18	50/250
81150	150	(300)	60	22	20	50/250
81185	185	(350)	65	24	22	50/150
81240	240	(500)	69	30	24	50/150
81300	300	(600)	75	32	27	50/150
81400	400	(800)	75	34	30	25/75

V0

**TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED - BLACK**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**OPERATING TEMPERATURE:** 125 °C max

**CONDUCTOR CLASS:** Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

**INSPECTION HOLE:** yes

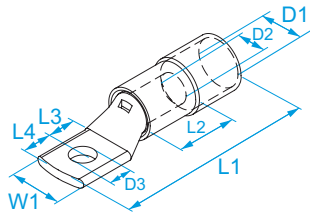
Code	Color	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
004191	Black					5	#10	10	37	9,5	6,3	5	8,2	5	5,2	100/100
004311	Black					6	#12	11	40	9,5	6,5	5,5	8,2	5	6,3	100/100
004371	Black	10	(8)	10	(8)	8	5/16"	13,6	43	9,5	8,8	6,2	8,2	5	8,5	100/100
004431	Black					10	3/8"	17,2	49,2	9,5	9,6	9,5	8,2	5	10,5	100/100
004491	Black					12	1/2"	17	49,3	9,5	9,3	9,3	8,2	5	12,2	100/100
005251	Black					5	#10	11,5	43,6	12	8,7	6,3	9	6	5,3	100/100
005311	Black					6	#12	11,5	44	12	8,5	6	9	6	6,5	100/100
005371	Black	16	(6)	16	(6)	8	5/16"	15	44	12	9	8	9	6	8,5	100/100
005431	Black					10	3/8"	17,5	50	12	10,5	10	9	6	10,5	100/100
005491	Black					12	1/2"	17,5	54	12	10,5	10	9	6	13	100/100
006251	Black					5	#10	14	50	13,5	10	7	11,5	7	5,2	100/100
006311	Black					6	#12	14	50	13,5	10	7	11,5	7	6,3	100/100
006371	Black	25	(4)	25	(4)	8	5/16"	14	50	13,5	10	8	11,5	7	8,4	100/100
006431	Black					10	3/8"	17	51	14	10,5	9,5	11,5	7	10,5	100/100
006491	Black					12	1/2"	18,5	51	14	11	9,5	11,5	7	13	100/100
007311	Black					6	#12	17	57	15	9,5	6	14	8,5	6,4	100/100
007371	Black					8	5/16"	17	56	15	10,5	10	14	8,5	8,5	100/100
007431	Black	35	(2)	35	(2)	10	3/8"	17	64	15	12	9,5	14	8,5	10,5	100/100
007491	Black					12	1/2"	17	63	15	14	11,5	14	8,5	13	100/100
008311	Black					6	#12	18,7	52	18	9	9	15,5	10	6,4	100/100
008371	Black					8	5/16"	18,7	61	18	10	10	15,5	10	8,4	100/100
008431	Black	50	(1/0)	50	(1/0)	10	3/8"	18,7	61	18	11	11	15,5	10	10,5	100/100
008491	Black					12	1/2"	21	69	18	15,3	12	15,5	10	12,5	50/100
008551	Black					14	9/16"	22	70	17	15,3	12	15,5	10	14,5	100/100
009371	Black					8	5/16"	21,8	72	20,5	11	10	18	12	8,5	100/100
009431	Black					10	3/8"	21,8	75	20,5	14,5	11,2	18	12	10,5	100/100
009491	Black	70	(2/0)	70	(2/0)	12	1/2"	22	75	20,5	13	13	18	12	12,5	100/100
009551	Black					14	9/16"	22	75	20,5	14	11,3	18	12	14,5	100/100
009611	Black					16	5/8"	22	75	20,5	14	11,3	18	12	16,5	100/100
051371	Black					8	5/16"	25	83	23	12,5	12,5	19,5	13,8	8,5	50/50
051431	Black					10	3/8"	25	83	23	12,5	12,5	19,5	13,8	10,5	50/50
051491	Black	95	(3/0)	95	(3/0)	12	1/2"	25	84	23	14	13	19,5	13,8	12,5	50/50
051551	Black					14	9/16"	25	90	23	17	13	19,5	13,8	14,5	50/50
051611	Black					16	5/8"	25	89	23	17	13,5	19,5	13,8	16,5	50/50
052371	Black					8	5/16"	28	94	25	14	14	21	15,5	8,5	50/50
052431	Black					10	3/8"	28	94	25	14	14	21	15,5	10,5	50/50
052491	Black	120	(4/0)	120	(4/0)	12	1/2"	28	90	25	14	14	21	15,5	12,5	50/50
052551	Black					14	9/16"	28	96	25	15	16	21	15,5	14,5	50/50
052611	Black					16	5/8"	28	102	25	15	16	21	15,5	16,5	50/50
053371	Black					8	5/16"	31	87,5	28	13	11	23	17	8,4	25/25
053431	Black					10	3/8"	31	87,5	28	13	11	23	17	10,4	25/25
053491	Black					12	1/2"	31	93,5	28	14	13	23	17	12,5	25/25
053551	Black	150	(300)	150	(300)	14	9/16"	31	94	28	15,5	15	23	17	14,5	25/25
053611	Black					16	5/8"	31	98	30	15	16	23	17	16,5	50/50
053671	Black					20	3/4"	31	98	30	22	16	23	17	21	25/25
054491	Black					12	1/2"	35	90	30	16	14	26	19	13	25/25
054551	Black					14	9/16"	35	98	30	18	16	26	19	15	25/25
054611	Black	185	(400)	185	(400)	16	5/8"	35	102	30	19	17	26	19	17	25/25
054671	Black					20	3/4"	35	112	30	22	20	26	19	21	25/25

Code	Color	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)		
055491	Black	240	(500)	240	(500)	12	1/2"	39,5	100	35	16	14	30	21,5	13	25/25	
055551	Black					14	9/16"	39,5	108	35	18	16	30	21,5	15	25/25	
055611	Black					16	5/8"	39,5	112	35	19	17	30	21,5	17	25/25	
055671	Black					20	3/4"	39,5	124	35	22	20	30	21,5	21	25/25	
05649	Black	300	(600)	240	(500)	12	1/2"	44	119	38	22	20	33	24	13	25/25	
05661	Black					16	5/8"	44	119	38	22	20	33	24	17	10/10	
05667	Black					20	3/4"	44	119	38	22	20	33	24	21	10/10	

HALOGEN FREE

125 °C

VO

**TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED - BLACK - CLASS 6**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**OPERATING TEMPERATURE:** 125 °C max

**CONDUCTOR CLASS:** Class 6 according to EN 60228

**APPLICATIONS:** crimping of very flexible conductors designed to withstand repeated twists and bendings (eg robotic systems, welding machines, etc).

**INSPECTION HOLE:** yes

Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
004191					5	#10	10	37	9,5	6,3	5	8,2	5	5,2	100/100
004311					6	#12	11	40	9,5	6,5	5,5	8,2	5	6,3	100/100
004371	10	(8)	10	(8)	8	5/16"	13,6	43	9,5	8,8	6,2	8,2	5	8,5	100/100
004431					10	3/8"	17,2	49,2	9,5	9,6	9,5	8,2	5	10,5	100/100
004491					12	1/2"	17	49,3	9,5	9,3	9,3	8,2	5	12,2	100/100
005251					5	#10	11,5	43,6	12	8,7	6,3	9	6	5,3	100/100
005311					6	#12	11,5	44	12	8,5	6	9	6	6,5	100/100
005371	16	(6)	16	(6)	8	5/16"	15	44	12	9	8	9	6	8,5	100/100
005431					10	3/8"	17,5	50	12	10,5	10	9	6	10,5	100/100
005491					12	1/2"	17,5	54	12	10,5	10	9	6	13	100/100
006251					5	#10	14	50	13,5	10	7	11,5	7	5,2	100/100
006311					6	#12	14	50	13,5	10	7	11,5	7	6,3	100/100
006371	25	(4)	25	(4)	8	5/16"	14	50	13,5	10	8	11,5	7	8,4	100/100
006431					10	3/8"	17	51	14	10,5	9,5	11,5	7	10,5	100/100
006491					12	1/2"	18,5	51	14	11	9,5	11,5	7	13	100/100
007314					6	#12	17	55	15	9,5	6	14	9,3	6,4	25/25
007374					8	5/16"	17	57,5	15	10,5	10	14	9,3	8,5	25/25
007434	35	(2)	35	(2)	10	3/8"	17	61	15	12	9,5	14	9,3	10,5	25/25
007494					12	1/2"	17	63	15	14	11,5	14	9,3	13	25/25
008314					6	#12	20,3	59,5	18	11	10	15,5	11	6,5	25/25
008374					8	5/16"	20,3	64,5	18	11	10	15,5	11	8,5	25/25
008434	50	(1/0)	50	(1/0)	10	3/8"	20,5	65	18	14,5	9,3	15,5	11	10,5	25/25
008494					12	1/2"	24	68	18	15	12	15,5	11	12,5	25/25
009314					6	#12	23,5	71,5	20,5	11	10	18	13	6,5	25/25
009374					8	5/16"	23,5	71,5	20,5	11	10	18	13	8,5	25/25
009434					10	3/8"	23,5	75	20,5	14,5	11,2	18	13	10,5	25/25
009494	70	(2/0)	70	(2/0)	12	1/2"	23,5	70,5	20,5	13	13	18	13	12,5	25/25
009554					14	9/16"	23,5	75,5	20,5	14	11,3	18	13	14,5	25/25
009614					16	5/8"	23,5	75,5	20,5	14	11,3	18	13	16,5	25/25
051374					8	5/16"	27,5	83	23	12,5	12,5	19,5	15	8,5	25/25
051434					10	3/8"	27,5	83	23	12,5	12,5	19,5	15	10,5	25/25
051494	95	(3/0)	95	(3/0)	12	1/2"	27,5	84	23	14	13	19,5	15	12,5	25/25
051554					14	9/16"	25	87	23	17	13	19,5	15	14,5	25/25
051614					16	5/8"	25	94	23	17	13,5	19,5	15	16,5	25/25
052374					8	5/16"	31	87,5	28	13	11	23	17	8,4	25/25
052434					10	3/8"	31	87,5	28	13	11	23	17	10,4	25/25
052494	120	(4/0)	120	(4/0)	12	1/2"	31	93,5	28	14	13	23	17	12,5	25/25
052554					14	9/16"	31	94	28	15,5	15	23	17	14,5	25/25
052614					16	5/8"	31	98	30	15	16	23	17	16,5	25/25
053374					8	5/16"	35	102	30	15	13	26	19	8,5	25/25
053434					10	3/8"	35	103	30	18	16	26	19	10,5	25/25
053494	150	(300)	150	(300)	12	1/2"	36	105	30	14	17	26	19	12,5	25/25
053554					14	9/16"	36	110	30	16	16	26	19	14,5	25/25
053614					16	5/8"	36	108	30	15	17	26	19	17	25/25



Code	Rigid conductor section (mm <sup>2</sup> )	Rigid conductor section (AWG/MCM)	Flexible conductor section (mm <sup>2</sup> )	Flexible conductor section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
053674	150	(300)	150	(300)	20	3/4"	36	102	30	22	17	26	19	21	25/25
054494	185	(400)	185	(400)	12	1/2"	39	110	35	16	14	30	21,5	13	25/25
054554					14	9/16"	39	114	35	18	16	30	21,5	15	25/25
054614					16	5/8"	39	116	35	19	17	30	21,5	17	25/25
054674					20	3/4"	39	119	35	22	20	30	21,5	21	25/25

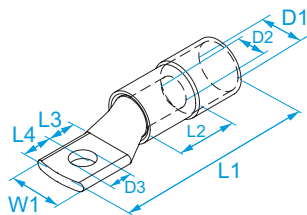
**HALOGEN FREE**

125 °C

**VO**

**SUPERFLEX**

**TERMINAL LUGS FOR COPPER CONDUCTORS · NYLON INSULATED · BLACK · SMALL PLATE**



**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**OPERATING TEMPERATURE:** 125 °C max

**APPLICATIONS:** the reduced width of the palm allows connection to equipment with lugs of dimensions not suitable for standard terminals.

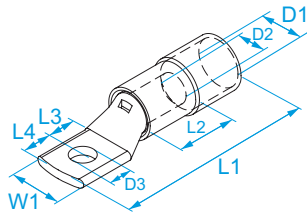
**INSPECTION HOLE:** no

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
917313	Black	35	(2)	6	#12	15	55	16	8	7	14	8,5	6,5	25/25
918313	Black	50	(1/0)	6	#12	15	58	18	8	7	15,5	10	6,5	25/25
918433	10			3/8"	18,5	68	18	13,5	9,5	15,5	10	10,5	25/25	
919313	Black	70	(2/0)	6	#12	17	67,5	20	9,5	6,5	18	12	6,5	25/25
919433	10			3/8"	19	73,5	21	13	10	18	12	10,5	25/25	
931373	Black	95	(3/0)	8	5/16"	19	76,5	24	12	8	19,5	13,8	8,5	25/25
931433	10			3/8"	19	80,5	22	13	10	19,5	13,8	10,5	25/25	
932373	Black	120	(4/0)	8	5/16"	19	83	22	12	9	21	15,5	8,5	25/25
932433	10			3/8"	19	83	22	12	9	21	15,5	10,5	25/25	
933373	Black	150	(300)	8	5/16"	19	93,5	30	17	9	23	17	8,4	25/25
933433	10			3/8"	19	93,5	30	17	9	23	17	10,5	25/25	
934493	Black	185	(400)	12	1/2"	31	110	32	17	14	26	19	13	25/25
935493	Black	240	(500)	12	1/2"	31,5	119	39	17	14	30	21,5	13	25/25

**HALOGEN FREE**

125 °C

**VO**

**TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED - COLOURED**


For the same conductor section, insulants are available with different diameters to accommodate conductors with different insulant thicknesses.

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V2

**OPERATING TEMPERATURE:** 130 °C max

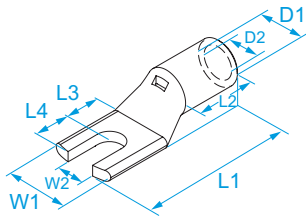
**CONDUCTOR CLASS:** Class 1 and 2 (rigid) and Class 5 (flexible) according to EN 60228

**INSPECTION HOLE:** yes

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
001071	Red	1.5	(16)	3	#4	8	23	5	5	4	4,2	1,9	3,2	100/100
001191	Red			4	#8	8	23	5	5	4	4,2	1,9	4,2	100/100
001251	Red			5	#10	8	23	5	5	4	4,2	1,9	5,2	100/100
001311	Red			6	#12	10	23	5	6	5	4,2	1,9	6,3	100/100
002191	Blue	2.5	(14)	4	#8	8	24,3	7	5	4	4,8	2,4	4,2	100/100
002251	Blue			5	#10	10	28,3	7	6	5	4,8	2,4	5,2	100/100
002311	Blue			6	#12	10	24,3	7	6	5	4,8	2,4	6,3	100/100
003191	Yellow	6	(10)	4	#8	10	33,3	9	6	5	6,6	3,5	4,2	100/100
003251	Yellow			5	#10	10	29,3	9	6	5	6,6	3,5	5,2	100/100
003311	Yellow			6	#12	10	29,3	9	6	5	6,6	3,5	6,3	100/100
003371	Yellow			8	5/16"	12	35,3	9	9	6	6,6	3,5	8,2	100/100
003431	Yellow	10	(8)	10	3/8"	15	42,3	9	11	9	6,6	3,5	10,2	100/100
00419	Red			5	#10	10	37	9,5	6,3	5	16	5	5,2	100/100
00420	Red			5	#10	10	37	9,5	6,3	5	14,8	5	5,2	100/100
00431	Red			6	#12	11	40	9,5	6,5	5,5	8,2	5	6,3	100/100
00432	Red			6	#12	11	40	9,5	6,5	5,5	14,8	5	6,3	100/100
00437	Red			8	5/16"	13,6	40,4	9,5	8,8	6,2	16	5	8,5	100/100
00438	Red			8	5/16"	13,6	40,4	9,5	8,8	6,2	14,8	5	8,5	100/100
00443	Red			10	3/8"	17,2	48,7	9,5	9,6	9,5	16	5	10,5	100/100
00444	Red	10	3/8"	17,2	48,7	9,5	9,6	9,5	14,8	5	10,5	100/100		
00525	Blue	16	(6)	5	#10	11,5	43,6	11	8,7	6,3	9	6	5,3	100/100
00526	Red			5	#10	11,5	43,6	11	8,7	6,3	16	6	5,3	100/100
00531	Blue			6	#12	11,5	44,6	11	8,5	6	9	6	6,5	100/100
00532	Red			6	#12	11,5	44,6	11	8,5	6	16	6	6,5	100/100
00537	Blue			8	5/16"	15	44	12	9	8	9	6	8,5	100/100
00538	Red			8	5/16"	15	44	12	9	8	16	6	8,5	100/100
00543	Blue			10	3/8"	17,5	49,5	12	10,5	10	9	6	10,5	100/100
00544	Red			10	3/8"	17,5	49,5	12	10,5	10	16	6	10,5	100/100
00547	Red	25	(4)	12	1/2"	17,5	53,5	12	10,5	10	16	6	13	100/100
00549	Blue			12	1/2"	17,5	53,5	12	10,5	10	9	6	13	100/100
00625	Yellow			5	#10	14	50	13,5	10	7	11,5	7	5,2	100/100
00626	Red			5	#10	14	50	13,5	10	7	16,8	7	5,2	100/100
00631	Yellow			6	#12	14	50	13,5	10	7	11,5	7	6,3	100/100
00632	Red			6	#12	14	50	13,5	10	7	16,8	7	6,3	100/100
00637	Yellow			8	5/16"	14	50	13,5	10	8	11,5	7	8,4	100/100
00638	Red			8	5/16"	14	50	13,5	10	8	16,8	7	8,4	100/100
00643	Yellow	35	(2)	10	3/8"	17	51	14	10,5	9,5	11,5	7	10,5	100/100
00644	Red			10	3/8"	17	51	14	10,5	9,5	16,8	7	10,5	100/100
00649	Yellow			12	1/2"	18,5	51	14	11	9,5	11,5	7	13	100/100
006492	Red			12	1/2"	18,5	51	14	11	9,5	16,8	7	13	100/100
00731	Red	35	(2)	6	#12	17	57	15	9,5	6	14	8,5	6,4	100/100
00732	Red			6	#12	17	57	15	9,5	6	18,7	8,5	6,4	100/100

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	D3 (mm)	
00737	Red	35	(2)	8	5/16"	17	56	15	10,5	10	14	8,5	8,5	100/100
00738	Red			8	5/16"	17	56	15	10,5	10	18,7	8,5	8,5	100/100
00743	Red			10	3/8"	17	64	15	12	9,5	14	8,5	10,5	100/100
00744	Red			10	3/8"	17	64	15	12	9,5	18,7	8,5	10,5	100/100
00749	Red			12	1/2"	17	63	15	14	11,5	14	8,5	13	100/100
00752	Red			12	1/2"	17	63	15	14	11,5	18,7	8,5	13	100/100
00831	White	50	(1/0)	6	#12	18,7	52	18	9	9	15,5	10	6,4	100/100
00832	Red			6	#12	18,7	52	18	9	9	20,8	10	6,4	100/100
00837	White			8	5/16"	18,7	61	18	10	10	15,5	10	8,4	100/100
00838	Red			8	5/16"	18,7	61	18	10	10	20,8	10	8,4	100/100
00843	White			10	3/8"	18,7	61	18	11	11	15,5	10	10,5	50/100
00844	Red			10	3/8"	18,7	61	18	11	11	20,8	10	10,5	50/100
00849	White			12	1/2"	21	69	18	15,3	12	15,5	10	12,5	100/100
00852	Red			12	1/2"	21	69	18	15,3	12	20,8	10	12,5	100/100
00855	White			14	9/16"	22	70	17	15,3	12	15,5	10	14,5	100/100
00856	Red			14	9/16"	22	70	17	15,3	12	20,8	10	14,5	100/100
00937	Blue	70	(2/0)	8	5/16"	21,8	72	20,5	11	10	22	12	8,5	100/100
00943	Blue			10	3/8"	21,8	75	20,5	14,5	11,2	22	12	10,5	100/100
00949	Blue			12	1/2"	22	75	20,5	13	13	22	12	12,5	100/100
00955	Blue			14	9/16"	22	75	20,5	14	11,3	22	12	14,5	100/100
00961	Blue			16	5/8"	22	75	20,5	14	11,3	22	12	16,5	100/100
05137	White	95	(3/0)	8	5/16"	25	83	23	12,5	12,5	26	13,8	8,5	50/50
05143	White			10	3/8"	25	83	23	12,5	12,5	26	13,8	10,5	50/50
05149	White			12	1/2"	25	84	23	14	13	26	13,8	12,5	50/50
05155	White			14	9/16"	25	90	23	17	13	26	13,8	14,5	50/50
05161	White			16	5/8"	25	89	23	17	13,5	26	13,8	16,5	25/25
05237	Red	120	(4/0)	8	5/16"	28	94	25	14	14	27	15,5	8,5	25/25
05243	Red			10	3/8"	28	94	25	14	14	27	15,5	10,5	25/25
05249	Red			12	1/2"	28	90	25	14	14	27	15,5	12,5	25/25
05255	Red			14	9/16"	28	96	25	25	26	27	15,5	14,5	50/50
05261	Red			16	5/8"	28	102	25	15	16	27	15,5	16,5	25/25
05337	Blue			150	(300)	8	5/16"	31	87,5	28	13	11	29	17
05343	Blue	10	3/8"			31	87,5	28	13	11	29	17	10,4	50/50
05349	Blue	12	1/2"			31	93,5	28	14	13	29	17	12,5	25/25
05355	Blue	14	9/16"			31	94	28	15,5	15	29	17	14,5	25/25
05361	Blue	16	5/8"			31	98	30	15	16	29	17	16,5	50/50
05367	Blue	20	3/4"			31	98	30	22	16	29	17	21	25/25
05449	Red	185	(400)	12	1/2"	35	90	30	16	14	32	19	13	25/25
05455	Red			14	9/16"	35	98	30	18	16	32	19	15	25/25
05461	Red			16	5/8"	35	102	30	19	17	32	19	17	25/25
05467	Red			20	3/4"	35	112	30	22	20	32	19	21	25/25
05549	Red	240	(500)	12	1/2"	39,5	100	35	16	14	36	21,5	13	25/25
05555	Red			14	9/16"	39,5	108	35	18	16	36	21,5	15	25/25
05561	Red			16	5/8"	39,5	112	35	19	17	36	21,5	17	25/25
05567	Red			20	3/4"	39,5	124	35	22	20	36	21,5	21	25/25

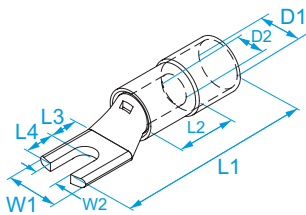


**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - FORK**

**TERMINAL MATERIAL:** tinned copper

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

**INSPECTION HOLE:** yes

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	
01420	10	(8)	4	#8	10	4,3	30,5	9,5	8	7	7	5	100/300
01426			5	#10	10	5,3	30,5	9,5	8	7	7	5	100/300
01523	16	(6)	4	#8	11,5	4,3	34	11	9,5	8	8	6	100/300
01526			5	#10	11,5	5,3	34	11	9,5	8	8	6	100/300

**TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED - BLACK - FORK**

**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**OPERATING TEMPERATURE:** 125 °C max

**INSPECTION HOLE:** yes

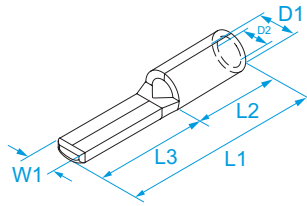
Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	For screw Ø screw (mm)	For screw Stud size	W1 (mm)	W2 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	D2 (mm)	
004201	■ Black	10	(8)	4	#8	10	4,3	42	9,5	8	7	8,2	5	100/100
004261	■ Black			5	#10	10	5,3	42	9,5	8	7	8,2	5	100/100
005231	■ Black	16	(6)	4	#8	11,5	4,3	47	11	9,5	8	9	6	100/100
005261	■ Black			5	#10	11,5	5,3	47	11	9,5	8	9	6	100/100

HALOGEN FREE

125 °C

**V0**

**TERMINAL LUGS FOR COPPER CONDUCTORS - UNINSULATED - PIN - SILVER ALLOY BRAZED DIN 46234**



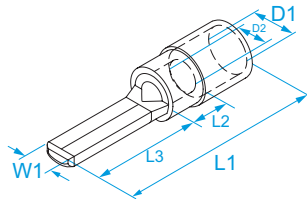
**TERMINAL MATERIAL:** tinned copper

**SEAM:** brazed silver alloy

**OPERATING TEMPERATURE:** from -50 °C to +150 °C

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
01450	10	(8)	4,3	22	8	12	7	4,5	100/300
01550	16	(6)	5,5	25	10	13	8,5	5,8	100/300
01650	25	(4)	6,8	33,5	13,5	15	9,6	6,7	100/300
01750	35	(2)	8	40,5	16	24,5	11,8	8,4	100/300
01850	50	(1/0)	9,5	45	19	26	13,6	9,6	100/300
01950	70	(2/0)	11	55	24	31	15,8	11,4	50/100
02050	95	(3/0)	12,5	55	24	31	18,9	13,5	50/100

**TERMINAL LUGS FOR COPPER CONDUCTORS - NYLON INSULATED - BLACK - PIN**



**TERMINAL MATERIAL:** tinned copper

**INSULATION MATERIAL:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING GRADE:** UL 94 V0

**OPERATING TEMPERATURE:** 125 °C max

Code	Color	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	D1 (mm)	D2 (mm)	
00450	■ Black	10	(8)	4,3	35,5	8	12	8,2	4,5	100/100
00550	■ Black	16	(6)	5,5	38	10	13	9	5,8	100/100
00650	■ Black	25	(4)	6,8	47,5	13,5	15	11,5	6,7	100/100

**HALOGEN FREE**

125 °C

**V0**

**INSULATED END-SLEEVES · SINGLE CABLE · 0.5÷2.5**

ASSORTMENT TYPE: box



Code	Description	Cable type	Section (mm²)	Section from (AWG/MCM)
00421	Plastic box with insulated single cable end-sleeves	single	0.5 ÷ 2.5	(20 - 14)

Component	Description	Pcs / code
00601	Insul End Sleeves 0.5x8 White	50
00506	Insul End Sleeves 2.5x8 Blu	50
00602	Insul End Sleeves 0.75x8 Grey	100
00603	Insul End Sleeves 1x8 Red	100
00604	Insul End Sleeves 1.5x8 Black	100

**INSULATED END-SLEEVES · SINGLE CABLE · 4÷16**

ASSORTMENT TYPE: box



Code	Description	Cable type	Section (mm²)	Section from (AWG/MCM)
00422	Plastic box with insulated single cable end-sleeves	single	4 ÷ 16	(12 - 6)

Component	Description	Pcs / code
00508	Insul End Sleeves 4x10 Grey	50
00610	Insul End Sleeves 6x12 Yellow	20
00612	Insul End Sleeves 10x12 Red	20
00614	Insul End Sleeves 16x12 Blue	10

## INSULATED END-SLEEVES · DOUBLE CABLE · 2x0.75÷2.5

ASSORTMENT TYPE: box



Code	Description	Cable type	Section (mm²)	Section from (AWG/MCM)
00423	Plastic box with insulated double cable end-sleeves	double	0.75 ÷ 2.5	(18 - 14)

Component	Description	Pcs / code
00652	Twin End Sleeves 2x0.75-L8 Grey	50
00654	Twin End Sleeves 2x1-L8 Red	50
00656	Twin End Sleeves 2x1.5-L8 Black	50
00558	Twin End Sleeves 2x2.5-L10 Blue	50

## INSULATED END-SLEEVES · DOUBLE CABLE · 2x4÷16

ASSORTMENT TYPE: box



Code	Description	Cable type	Section (mm²)	Section from (AWG/MCM)
00424	Plastic box with insulated double cable end-sleeves	double	4 ÷ 16	(12 - 6)

Component	Description	Pcs / code
00560	Twin End Sleeves 2x4-L12 Grey	20
00661	Twin End Sleeves 2x6-L14 Yellow	10
00662	Twin End Sleeves 2x10-L14 Red	10
00663	Twin End Sleeves 2x16-L14 Blue	5

## INSULATED COPPER TERMINAL LUGS 0.25÷6 + 536 CRIMPING TOOL

ASSORTMENT TYPE: with crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80411	Assortment of insulated copper terminals + crimping tool 536	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
536	Crimping Tool x Ins.term.0.5-6	1
00108	Insul Fork Term. 1.5 F3	8
00119	Insul Ring Term. 1.5 F4	8
00120	Insul Fork Term. 1.5 F4	8
00150	Insul Round Pin 1.5	8
00220	Insul Fork Term. 2.5 F4	8
00225	Insul Ring Term. 2.5 F5	8
00250	Insul Round Pin 2.5	8
00325	Insul Ring Term. 6 F5	8
00331	Insul Ring Term. 6 F6	8
00350	Insul Round Pin 6	8

## INSULATED END-SLEEVES 0.25÷2.5 + 540 CRIMPING TOOL

ASSORTMENT TYPE: with crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80415	Assortment of insulated end-sleeve terminals + crimping tool 540	0.25 ÷ 2.5	(22 - 14)

Component	Description	Pcs / code
540	Crimping tool x End-Sleeves 0.25-2.5	1
00500	Insul End Sleeves 0.25x8 Light Blue	25
00501	Insul End Sleeves 0.5x8 Orange	25
00502	Insul End Sleeves 0.75x8 White	25
00503	Insul End Sleeves 1x8 Yellow	25
00504	Insul End Sleeves 1.5x8 Red	25
005041	Insul End Sleeves 1.5x10 Red	25
00506	Insul End Sleeves 2.5x8 Blue	25
005061	Insul End Sleeves 2.5x12 Blue	25
005002	Insul End Sleeves 0.34x8 Turque	25
00507	Insul End Sleeves 2.5x18 Blue	25



## INSULATED END-SLEEVES 0.5÷16 + 541 CRIMPING TOOL

ASSORTMENT TYPE: with crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80416	Assortment of insulated end-sleeve terminals + crimping tool 541	0.5 ÷ 16	(20 - 6)

Component	Description	Pcs / code
541	Crimping Tool x End-Sleeves 0.75-16	1
00501	Insul End Sleeves 0.5x8 Orange	25
00502	Insul End Sleeves 0.75x8 White	25
00503	Insul End Sleeves 1x8 Yellow	25
00504	Insul End Sleeves 1.5x8 Red	25
005041	Insul End Sleeves 1.5x10 Red	25
00506	Insul End Sleeves 2.5x8 Blu	25
00508	Insul End Sleeves 4x10 Grey	25
00510	Insul End Sleeves 6x12 Black	10
00512	Insul End Sleeves 10x12 Ivory	10
00514	Insul End Sleeves 16x12 Green	5

## INSULATED QUICK-CONNECTORS 0.25÷6 + 536 CRIMPING TOOL

ASSORTMENT TYPE: with crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80412	Assortment of quick-connect terminals + crimping tool 536	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
536	Crimping Tool x Ins.term.0.5-6	1
00190	Insul Female 1.5-6.3x0.8	5
00180	Quick Connect Term Insul Male 1.5-6.30x0.8	5
00130	Insul cylinder plug male 1,5 D4	5
00140	Insul cylinder plug female 1,5 D4	5
00290	Insul Female 2.5-6.3x0.8	5
00280	Quick Connect Term Insul Male 2.5-6.3x0.8	5
00298	Quick Connect Term Insul Male + Female 2,5 6,3x0,8	5
00391	Insul Female 6 6.3x0.8	5
00380	Quick Connect Term Insul Male 6 6.3x0.8	5
00360	Insul Butt Connector 6	5

**UNINSULATED COPPER TERMINAL LUGS 0.25÷6 + 535 CRIMPING TOOL**
**ASSORTMENT TYPE:** in double case, with automatic crimping tool


Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80403	Assortment in plastic case of uninsulated copper terminals + crimping tool 535	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
535	Crimping Tool x Uninsulated Terminals 0,5-10	1
B2025	Ny Cable Ties 200x2.5 Nat	50
01107	Ring Term 1,5F3	15
01108	Fork Term 1,5F3	15
01119	Ring Term 1,5F4	15
01120	Fork Term 1,5F4	15
01125	Ring Term 1,5F5	15
01150	Pin Term 1,5	15
01219	Ring Term 2,5F4	15
01220	Fork Term 2,5F4	15
01225	Ring Term 2,5F5	15
01226	Fork Term 2,5F5	15
01250	Pin Term 2,5	15
01325	Ring Term 6F5	15
01326	Fork Term 6F5	15
01331	Ring Term 6F6	15
01160	Butt Connector 1,5	15
01260	Butt Connector 2,5	15
01360	Butt Connector 6	15

## INSULATED COPPER TERMINAL LUGS 0.25÷6 + 534 CRIMPING TOOL

ASSORTMENT TYPE: in double case, with automatic crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80401	Assortment in plastic case of insulated copper terminals + crimping tool 534	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
534	Crimping Tool x Ins.term. 0.5-6	1
B2025	Ny Cable Ties 200x2.5 Nat	50
00107	Insul Ring Term. 1.5F3	15
00108	Insul Ring Term. 1.5F3	15
00119	Insul Ring Term. 1.5F4	15
00120	Insul Fork Term. 1.5F4	15
00125	Insul Ring Term. 1.5F5	15
00150	Insul Round Pin 1.5	15
00219	Insul Ring Term. 2.5F4	15
00220	Insul Fork Term. 2.5F4	15
00225	Insul Ring Term. 2.5F5	15
00226	Insul Fork Term. 2.5F5	15
00250	Insul Round Pin 2.5	15
00325	Insul Ring Term. 6F5	15
00326	Insul Fork Term. 6F5	15
00331	Insul Ring Term. 6F6	15
00160	Insul Butt Connector Red 1.5	15
00260	Insul Butt Connector Blue 2.5	15
00360	Insul Butt Connector 6	15

**INSULATED END-SLEEVES 0.14÷4 + 537 CRIMPING TOOL**
**ASSORTMENT TYPE:** in double case, with automatic crimping tool


Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80405	Assortment in plastic case of insulated end-sleeve terminals + crimping tool 537	0.14 ÷ 4	(26 - 12)

Component	Description	Pcs / code
537	Crimping Tool x End-Sleeves 0.5-4	1
B2025	Ny Cable Ties 200x2.5 Nat	50
005001	Insul End Sleeves 0.14x8 Grey	50
00500	Insul End Sleeves 0.25x8 Light Blue	50
005002	Insul End Sleeves 0.34x8 Turque	50
00502	Insul End Sleeves 0.75x8 White	50
00503	Insul End Sleeves 1x8 Yellow	50
00504	Insul End Sleeves 1.5x8 Red	50
005041	Insul End Sleeves 1.5x10 Red	50
00506	Insul End Sleeves 2.5x8 Blue	50
00508	Insul End Sleeves 4x10 Grey	50
00501	Insul End Sleeves 0.5x8 Orange	50
00505	Insul End Sleeves 1.5x18 Red	25
005061	Insul End Sleeves 2.5x12 Blue	25
00507	Insul End Sleeves 2.5x18 Blue	25
005081	Insul End Sleeves 4x12 Grey	25
00509	Insul End Sleeves 4x18 Grey	25

## INSULATED QUICK-CONNECTORS 0.5÷2.5 + SLEEVES + 531 CRIMPING TOOL

ASSORTMENT TYPE: in double case, with automatic crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
80404	Assortment in plastic case of insulated quick-connect terminals + sleeves + crimping tool 531	0.5 ÷ 2.5	(20 - 14)

Component	Description	Pcs / code
531	Crimping Tool x barrel brass terminals 0.5-6	1
B2025	Ny Cable Ties 200x2.5 Nat	50
91103	Insul Ring Brass F3 0.5-1	10
91104	Insul Ring Brass F4 0.5-1	10
91105	Insul Ring Brass F5 0.5-1	10
91203	Insul Ring Brass F3 1-2.5	10
91204	Insul Ring Brass F4 1-2.5	10
91205	Insul Ring Brass F5 1-2.5	10
01190	Female 1,5 6,3x0,8	10
01180	Male 1 6,3x0,8	10
01290	Female 2,5 6,3x0,8	10
01280	Male 2,5 6,3x0,8	10
01198	Piggy-Backs 1 6,3x0,8	10
01298	Piggy-Backs 2,5 6,3x0,8	10
01295	Female Flag 2 6,3x0,8	10
01017	Sleevs For Femal 6,3 Pvc	10
01005	Male 45°	10
01014	Double Male	10
01016	Sleevs For Male	10

**INSULATED QUICK-CONNECTORS 0.25÷6 + 534 CRIMPING TOOL**

ASSORTMENT TYPE: in double case, with automatic crimping tool



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
<b>80402</b>	Assortment in plastic case of insulated quick-connect terminals + crimping tool 534	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
534	Crimping Tool x Ins.term.0.5-6	1
B2025	Ny Cable Ties 200x2.5 Nat	50
00390	Insul Femal 1,5-2,8x0,8	10
00190	Insul Femal 1,5-6,3x0,8	10
00180	Insul Male 1,5-6,3x0,8	10
00198	Insul Piggy-Backs 1,5-6,3x0,8	10
00130	Insul Cylinder Plug Male 1,5-4	10
00140	Insul Cylinder Plug Female 1,5-4	10
00290	Insul Femal 2,5-6,3x0,8	10
00280	Insul Male 2,5-6,3x0,8	10
00230	Insul Bullet 2,5-d5	10
00240	Insul Socket 2,5-d5	10
00298	Insul Piggy-Backs 2,5-6,3x0,8	10
00391	Insul Femal 6 6,3x0,8	10
00380	Insul Male 6 6,3x0,8	10
00260	Insul Butt Connector 2.5	10
00270	End Connector 1.5-2.5	10
00370	End Connector 2.5-6	10
00360	Insul Butt Connector 6	10

## INSULATED COPPER TERMINAL LUGS 0.25÷6 + 534 CRIMPING TOOL

ASSORTMENT TYPE: with automatic crimping tool, with removable boxes, in plastic case



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
00411	Assortment in plastic case with removable boxes of insulated copper terminals + crimping tool 534	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
534	Crimping Tool x Ins.term. 0.5-6	1
00119	Insul Ring Term. 1.5F4	100
00120	Insul Fork Term. 1.5F4	100
00125	Insul Ring Term. 1.5F5	100
00150	Insul Round Pin 1.5	100
00219	Insul Ring Term. 2.5F4	100
00220	Insul Fork Term. 2.5F4	100
00225	Insul Ring Term. 2.5F5	100
00250	Insul Round Pin 2.5	100
00160	Insul Butt Connector Red 1.5	100
00260	Insul Butt Connector Blue 2.5	100
00190	Insul Femal 1,5-6,3x0,8	100
00290	Insul Femal 2,5-6,3x0,8	100
00180	Insul Male 1,5-6,3x0,8	100
00280	Insul Male 2,5-6,3x0,8	100
00325	Insul Ring Term. 6F5	50
00331	Insul Ring Term. 6F6	50
00360	Insul Butt Connector 6	50
00291	Tot Insul Femal 2.5-6.3x0.8	50
00405	Plastic case with removable boxes	1

**INSULATED END-SLEEVES 0.75÷16 + 541 CRIMPING TOOL**

**ASSORTMENT TYPE:** with automatic crimping tool, with removable boxes, in plastic case

Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
00412	Assortment in plastic case with removable boxes of single and double cable insulated end-sleeve terminals + crimping tool 541	0.75 ÷ 16	(18 - 6)

Component	Description	Pcs / code
541	Tool x End-Sleeves 0.75-16	1
00502	Insul End Sleeves 0.75x8 White	500
00503	Insul End Sleeves 1x8 Yellow	500
00504	Insul End Sleeves 1.5x8 Red	500
00506	Insul End Sleeves 2.5x8 Blu	250
00508	Insul End Sleeves 4x10 Grey	200
00552	Twin End Sleeves 2x0.75-L8 White	200
00554	Twin End Sleeves 2x1-L8 Yellow	200
00556	Twin End Sleeves 2x1.5-L8 Red	200
00510	Insul End Sleeves 6x12 Black	100
00558	Twin End Sleeves 2x2.5-L9 Blu	100
00560	Twin End Sleeves 2x4-L12 Grey	100
00512	Insul End Sleeves 10x12 Ivory	50
00514	Insul End Sleeves 16x12	50
00561	Twin End Sleeves 2x6-L14 Black	50
00405	Plastic case with removable boxes	1



## INSULATED END-SLEEVES 0.75÷16 + 5382 CRIMPING TOOL

ASSORTMENT TYPE: with automatic crimping tool, with removable boxes, in plastic case



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
00413	Assortment in plastic case with removable boxes of single and double cable insulated end-sleeve terminals + crimping tool 5382	0.75 ÷ 16	(18 - 6)

Component	Pcs / code
5382	Crimping Tool x End-Sleeves 0.008-16 1
00502	Insul End Sleeves 0.75x8 White 500
00503	Insul End Sleeves 1x8 Yellow 500
00504	Insul End Sleeves 1.5x8 Red 500
00506	Insul End Sleeves 2.5x8 Blue 250
00508	Insul End Sleeves 4x10 Grey 200
00552	Twin End Sleeves 2x0.75-L8 White 200
00554	Twin End Sleeves 2x1-L8 Yellow 200
00556	Twin End Sleeves 2x1.5-L8 Red 200
00510	Insul End Sleeves 6x12 Black 100
00558	Twin End Sleeves 2x2.5-L9 Blue 100
00560	Twin End Sleeves 2x4-L12 Grey 100
00512	Insul End Sleeves 10x12 Ivory 50
00514	Insul End Sleeves 16x12 50
00561	Twin End Sleeves 2x6-L14 Black 50
00405	Plastic case with removable boxes 1

## INSULATED END-SLEEVES 0.75÷16 + 53816 CRIMPING TOOL

ASSORTMENT TYPE: with automatic crimping tool, with removable boxes, in plastic case



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
00417	Assortment in plastic case with removable boxes of single and double cable insulated end-sleeve terminals + crimping tool 53816	0.75 ÷ 16	(18 - 6)

Component	Description	Pcs / code
53816	Crimping Tool x End sleeves 0.08-16	1
00502	Insul End Sleeves 0.75x8 White	500
00503	Insul End Sleeves 1x8 Yellow	500
00504	Insul End Sleeves 1.5x8 Red	500
00506	Insul End Sleeves 2.5x8 Blue	250
00508	Insul End Sleeves 4x10 Grey	200
00552	Twin End Sleeves 2x0.75-L8 White	200
00554	Twin End Sleeves 2x1-L8 Yellow	200
00556	Twin End Sleeves 2x1.5-L8 Red	200
00510	Insul End Sleeves 6x12 Black	100
00558	Twin End Sleeves 2x2.5-L9 Blue	100
00560	Twin End Sleeves 2x4-L12 Grey	100
00512	Insul End Sleeves 10x12 Ivory	50
00514	Insul End Sleeves 16x12	50
00561	Twin End Sleeves 2x6-L14 Black	50
00405	Plastic case with removable boxes	1

## INSULATED COPPER TERMINAL LUGS 0.25÷6 + 53P02H CRIMPING TOOL

ASSORTMENT TYPE: with automatic crimping tool, with removable boxes, in plastic case



Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
00441	Assortment in plastic case with removable boxes of insulated copper terminals + crimping tool 53P02H	0.25 ÷ 6	(22 - 10)

Component	Description	Pcs / code
53P02H	Crimping Tool CRIMPAR for insulated terminals 0.25-6	1
00119	Insul Ring Term. 1.5F4	100
00120	Insul Fork Term. 1.5F4	100
00125	Insul Ring Term. 1.5F5	100
00150	Insul Round Pin 1,5	100
00219	Insul Ring Term. 2.5F4	100
00220	Insul Fork Term. 2.5F4	100
00225	Insul Ring Term. 2.5F5	100
00250	Insul Round Pin 2,5	100
00160	Insul Butt Connector 1.5	100
00260	Insul Butt Connector 2.5	100
00190	Insul Female 1.5 6.3x0.8	100
00290	Insul Female 2.5 6.3x0.8	100
00180	Quick Connect Term Insul Male 1.5 6.30x0.8	100
00280	Quick Connect Term Insul Male 2.5 6.3x0.8	100
00325	Insul Ring Term. 6F5	50
00331	Insul Ring Term. 6F6	50
00360	Insul Butt Connector 6	50
00291	Tot Insul Femal 2.5 6.3x0.8	50
00405	Plastic case with removable boxes	1

**INSULATED END-SLEEVES 0.75÷16 + 53P02E CRIMPING TOOL + 53M2E1 DIE**

**ASSORTMENT TYPE:** with automatic crimping tool, with removable boxes, in plastic case

Code	Description	Section (mm <sup>2</sup> )	Section from (AWG/MCM)
00442	Assortment in plastic case with removable boxes of single and double cable insulated end-sleeve terminals + crimping tool 53P02E + DIE 53M2E1	0.75 ÷ 16	(18 - 6)

Component	Description	Pcs / code
53P02E	Crimping Tool CRIMPAR for insulated terminals 0,5-4	1
53M2E1	Die for end-sleeve terminals 6-16	1
00502	Insul End Sleeves 0.75x8 White	500
00503	Insul End Sleeves 1x8 Yellow	500
00504	Insul End Sleeves 1.5x8 Red	500
00506	Insul End Sleeves 2.5x8 Blue	250
00508	Insul End Sleeves 4x10 Grey	200
00552	Twin End Sleeves 2x0.75-L8 White	200
00554	Twin End Sleeves 2x1-L8 Yellow	200
00556	Twin End Sleeves 2x1.5-L8 Red	200
00510	Insul End Sleeves 6x12 Black	200
00558	Twin End Sleeves 2x2.5-L9 Blue	100
00560	Twin End Sleeves 2x4-L12 Grey	100
00512	Insul End Sleeves 10x12 Ivory	50
00514	Insul End Sleeves 16x12	50
00561	Twin End Sleeves 2x6-L14 Black	50
00405	Plastic case with removable boxes	1

## INSULATED COPPER TERMINAL LUGS 0.25÷6 + INSULATED END-SLEEVES 0.75÷16 + 5305 CRIMPING TOOL

ASSORTMENT TYPE: in box, with automatic crimping tool



Code	Description
00600	Assortment of insulated copper terminals lugs + insulated end-sleeves + crimping tool and 5 dies, in case with boxes for small components

Component	Description	Pcs / code
1818	Case with boxes for small components	1
5305	Crimping tool and 5 interchangeable dies	1
00119	Insul Ring Term. 1.5F4	100
00120	Insul Fork Term. 1.5F4	100
00125	Insul Ring Term. 1.5F5	100
00150	Insul Round Pin 1.5	100
00219	Insul Ring Term. 2.5F4	100
00220	Insul Fork Term. 2.5F4	100
00225	Insul Ring Term. 2.5F5	100
00250	Insul Round Pin 2.5	100
00260	Insul Butt Connector Blue 2.5	100
00190	Insul Femal 1,5 6,3x0,8	100
00290	Insul Femal 2,5 6,3x0,8	100
00180	Insul Male 1,5 6,3x0,8	100
00280	Insul Male 2,5 6,3x0,8	100
00325	Insul Ring Term. 6F5	50
00331	Insul Ring Term. 6F6	50
00360	Insul Butt Connector 6	50
00291	Tot Insul Femal 2.5 6.3x0.8	50
00502	Insul End Sleeves 0.75x8 White	500
00503	Insul End Sleeves 1x8 Yellow	500
00504	Insul End Sleeves 1.5x8 Red	500
00506	Insul End Sleeves 2.5x8 Blue	250
00508	Insul End Sleeves 4x10 Grey	200
00552	Twin End Sleeves 2x0.75-L8 White	200
00554	Twin End Sleeves 2x1-L8 Yellow	200
00556	Twin End Sleeves 2x1.5-L8 Red	200
00510	Insul End Sleeves 6x12 Black	100
00558	Twin End Sleeves 2x2.5-L9 Blue	100
00560	Twin End Sleeves 2x4-L12 Grey	100
00512	Insul End Sleeves 10x12 Ivory	50
00514	Insul End Sleeves 16x12	50
00561	Twin End Sleeves 2x6-L14 Black	50

**INSULATED COPPER TERMINAL LUGS 0.25÷6 + INSULATED END-SLEEVES 0.75÷16 + 53KPBF CRIMPING TOOL**

ASSORTMENT TYPE: in box, with automatic crimping tool



Code	Description
00700	Assortment of insulated copper terminals lugs + insulated end-sleeves + crimping tool and 5 dies, in case with boxes for small components

Component	Description	Pcs / code
1818	Case with boxes for small components	1
53KPBF	Crimping tool and 5 interchangeable dies	1
00119	Insul Ring Term. 1.5F4	100
00120	Insul Fork Term. 1.5F4	100
00125	Insul Ring Term. 1.5F5	100
00150	Insul Round Pin 1,5	100
00219	Insul Ring Term. 2.5F4	100
00220	Insul Fork Term. 2.5F4	100
00225	Insul Ring Term. 2.5F5	100
00250	Insul Round Pin 2,5	100
00160	Insul Butt Connector 1.5	100
00260	Insul Butt Connector 2.5	100
00190	Insul Female 1.5 6.3x0.8	100
00290	Insul Female 2.5 6.3x0.8	100
00180	Quick Connect Term Insul Male 1.5 6.30x0.8	100
00280	Quick Connect Term Insul Male 2.5 6.3x0.8	100
00325	Insul Ring Term. 6F5	50
00331	Insul Ring Term. 6F6	50
00360	Insul Butt Connector 6	50
00291	Tot Insul Femal 2.5 6.3x0.8	50
00502	Insul End Sleeves 0.75x8 White	500
00503	Insul End Sleeves 1x8 Yellow	500
00504	Insul End Sleeves 1.5x8 Red	500
00506	Insul End Sleeves 2.5x8 Blue	250
00508	Insul End Sleeves 4x10 Grey	200
00552	Twin End Sleeves 2x0.75-L8 White	200
00554	Twin End Sleeves 2x1-L8 Yellow	200
00556	Twin End Sleeves 2x1.5-L8 Red	200
00510	Insul End Sleeves 6x12 Black	100
00558	Twin End Sleeves 2x2.5-L9 Blu	100
00560	Twin End Sleeves 2x4-L12 Grey	100
00512	Insul End Sleeves 10x12 Ivory	50
00514	Insul End Sleeves 16x12	50
00561	Twin End Sleeves 2x6-L14 Black	50



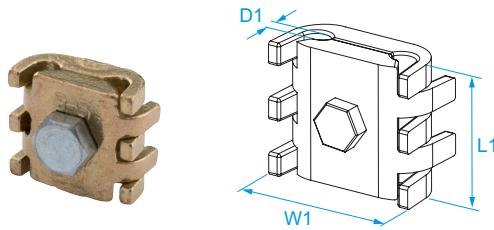


# SCREW CONNECTIONS

BRASS CLAMPING LUGS & EARTH LUGS	pag. 104
BRASS NICKEL PLATES TERMINAL LUGS	pag. 107
CLAMPING LUGS	pag. 109



### UNIVERSAL 1-BOLT COMB LUGS



**MATERIAL:** die-cast brass

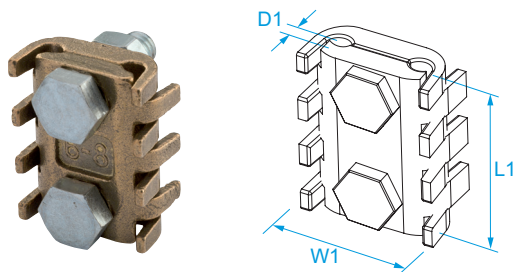
**SECTION:** main and derived conductor of the same section

**OPERATING TEMPERATURE:** da -50 °C a +150 °C

**APPLICATIONS:** grounding systems, to connect copper wire ropes or copper conductors suitable for earthing

Code	Section (mm <sup>2</sup> )	Cable diameter (mm)	D1 (mm)	W1 (mm)	L1 (mm)	Screw	
5251	6 ÷ 16	3 ÷ 5	5	25,5	20,5	M6	100/100
5252	25 ÷ 50	6 ÷ 8	9	29,5	25	M8	50/50
5253	50 ÷ 70	9 ÷ 12	12	37,5	30	M8	50/50

### UNIVERSAL 2-BOLT COMB LUGS



**MATERIAL:** die-cast brass

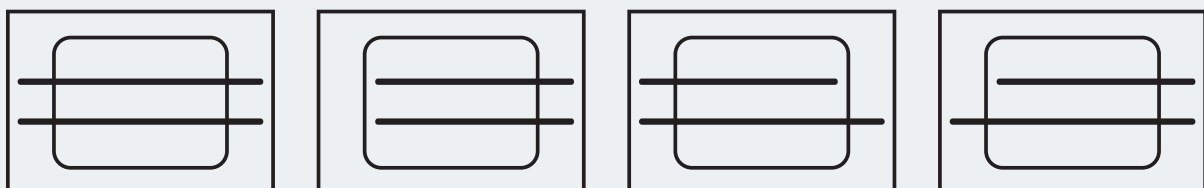
**SECTION:** main and derived conductor of the same or different section

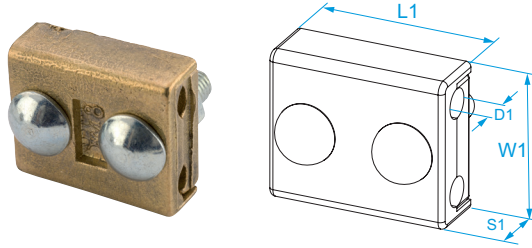
**OPERATING TEMPERATURE:** da -50 °C a +150 °C

**APPLICATIONS:** grounding systems, to connect copper wire ropes or copper conductors suitable for earthing


Code	Section (mm <sup>2</sup> )	Cable diameter (mm)	D1 (mm)	W1 (mm)	L1 (mm)	Screw	
5261	6 ÷ 16	3 ÷ 5	5	25	32	M6	100/100
5262	25 ÷ 50	6 ÷ 8	9	32	38	M6	100/100
5263	50 ÷ 70	9 ÷ 12	12	42	45	M8	50/50
5264	70 ÷ 95	12 ÷ 14	14	53	53	M10	25/25
5265	95 ÷ 150	14 ÷ 16	16	54,5	57,5	M10	20/20
5266	150 ÷ 300	16 ÷ 22	22	66	67	M12	10/10

### CONNECTION TYPES



**TWO-WIRE DIAMOND LUGS**

**MATERIAL:** die-cast brass

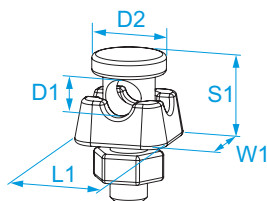
**OPERATING TEMPERATURE:** da -50 °C a +150 °C


Code	Section (mm <sup>2</sup> )	D1 (mm)	W1 (mm)	L1 (mm)	S1 (mm)	Screw	
5211	6	3	19	23	8	M5	100/100
5212	10	4	20	27	9,5	M5	100/100
5213	16	5	24	29,5	10,75	M6	100/100
5214	25	6	27	34,5	11,5	M6	50/50
5215	35	7	30	36	11,5	M6	50/50
5216	40	8	33,5	39,5	14	M8	25/25
5217	50	9	35,5	43	15	M8	25/25
5218	63	10	37,5	47,5	16	M10	25/25
5219	70	11	43,5	53	17,5	M10	25/25
5220	80	12	46,5	56	18	M10	25/25
5221	95	13	46,5	56	18	M10	20/20
5222	120	14	50	58,5	18,5	M10	10/20
5223	135	15	50	58,5	18,5	M10	10/10

## 1-BOLT EARTHING LUGS

**MATERIAL:** die-cast brass

**OPERATING TEMPERATURE:** da -50 °C a +150 °C

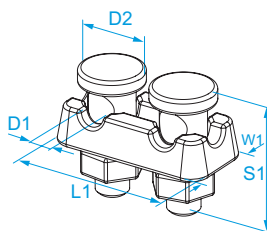



Code	Section (mm <sup>2</sup> )	D1 (mm)	D2 (mm)	W1 (mm)	L1 (mm)	S1 (mm)	Screw	
22	50	10	21	26	26,5	41	M10	100/100

## 2-BOLT EARTHING LUGS

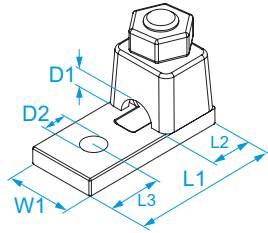
**MATERIAL:** die-cast brass

**OPERATING TEMPERATURE:** da -50 °C a +150 °C



Code	Section (mm <sup>2</sup> )	D1 (mm)	D2 (mm)	W1 (mm)	L1 (mm)	S1 (mm)	Screw	
23	50	10	21	26	51,5	41	M10	25/50

## 1-BOLT TERMINALS

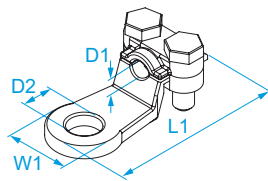


**MATERIAL:** nickel-plated die-cast brass

**OPERATING TEMPERATURE:** da -50 °C a +150 °C

Code	Section (mm <sup>2</sup> )	Cable diameter (mm)	For screw Ø screw (mm)	For screw Stud size	D1 (mm)	D2 (mm)	W1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	Screw	
5160	4 ÷ 10	2 ÷ 4	5	#10	4,2	5,25	12	26,5	12	7	M5	100/100
5161	10 ÷ 25	4 ÷ 6	5	#10	6,2	6	14	36	11	8	M6	100/100
5162	25 ÷ 35	6 ÷ 8,5	5	#10	8,5	6	17	38	12,5	8	M7	100/100
5163	35 ÷ 50	8,5 ÷ 11	7	9/32"	11,5	8,3	23	50	18	12	M10	50/50
5164	70 ÷ 95	11 ÷ 14	10	3/8"	15	10,5	26,5	55	20,5	14,5	M12	25/25
5165	95 ÷ 120	14 ÷ 17	10	3/8"	27,5	11,5	32	64	23	16	M14	25/25
5166	150 ÷ 185	17 ÷ 20,5	14	9/16"	21	14	37,5	79	26	18	M16	20/20
5167	185 ÷ 240	20,5 ÷ 24	16	5/8"	24	17	40	94	31,5	23	M16	10/20

## 2-BOLT TERMINALS



**MATERIAL:** nickel-plated die-cast brass

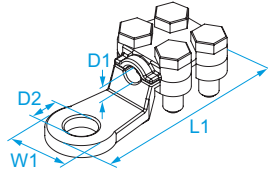
**OPERATING TEMPERATURE:** da -50 °C a +150 °C

Code	Section (mm <sup>2</sup> )	For screw Ø screw (mm)	For screw Stud size	D1 (mm)	D2 (mm)	W1 (mm)	L1 (mm)	Screw	
5140	10	5	#10	4	6	15	32,5	M5	100/200
5141	16	8	5/16"	5,1	8,5	17	37	M5	200/200
5142	25	8	5/16"	6,3	6,3	18,75	42	M5	150/150
5143	35	10	3/8"	7,5	7,5	21,5	49	M5	100/100

### 4-BOLT TERMINALS

**MATERIAL:** nickel-plated die-cast brass

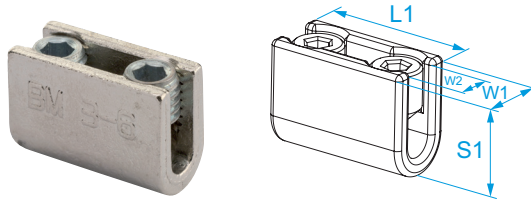
**OPERATING TEMPERATURE:** da -50 °C a +150 °C



Code	Section (mm <sup>2</sup> )	For screw Ø screw (mm)	For screw Stud size	D1 (mm)	D2 (mm)	W1 (mm)	L1 (mm)	Screw	
5144	50	10	3/8"	9,5	10,5	23	56,5	M6	100/200
5145	75	12	1/2"	11	13,25	26	61	M6	50/50
5146	100	12	1/2"	13	14,3	29	65	M6	50/50
5147	120	14	9/16"	14	14,8	32	71	M6	50/50
5148	170	14	9/16"	16	16	33	81	M8	25/25
5149	200	16	5/8"	17	17	35	85	M8	25/25
5150	250	16	5/8"	18	17	38	87,5	M8	25/25
5151	300	18	13/16"	21	19,8	45	118	M10	15/15
5152	400 ÷ 500	22	7/8"	25,5	22	53	132	M10	10/10
5153	700	22	7/8"	34	22	60	150	M10	1/1

## “U” HEAD CONNECTORS

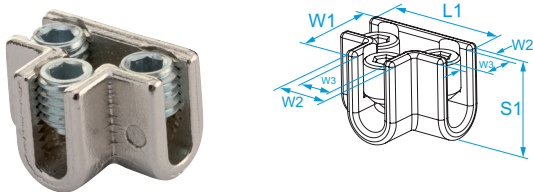
MATERIAL: nickel-plated die-cast brass



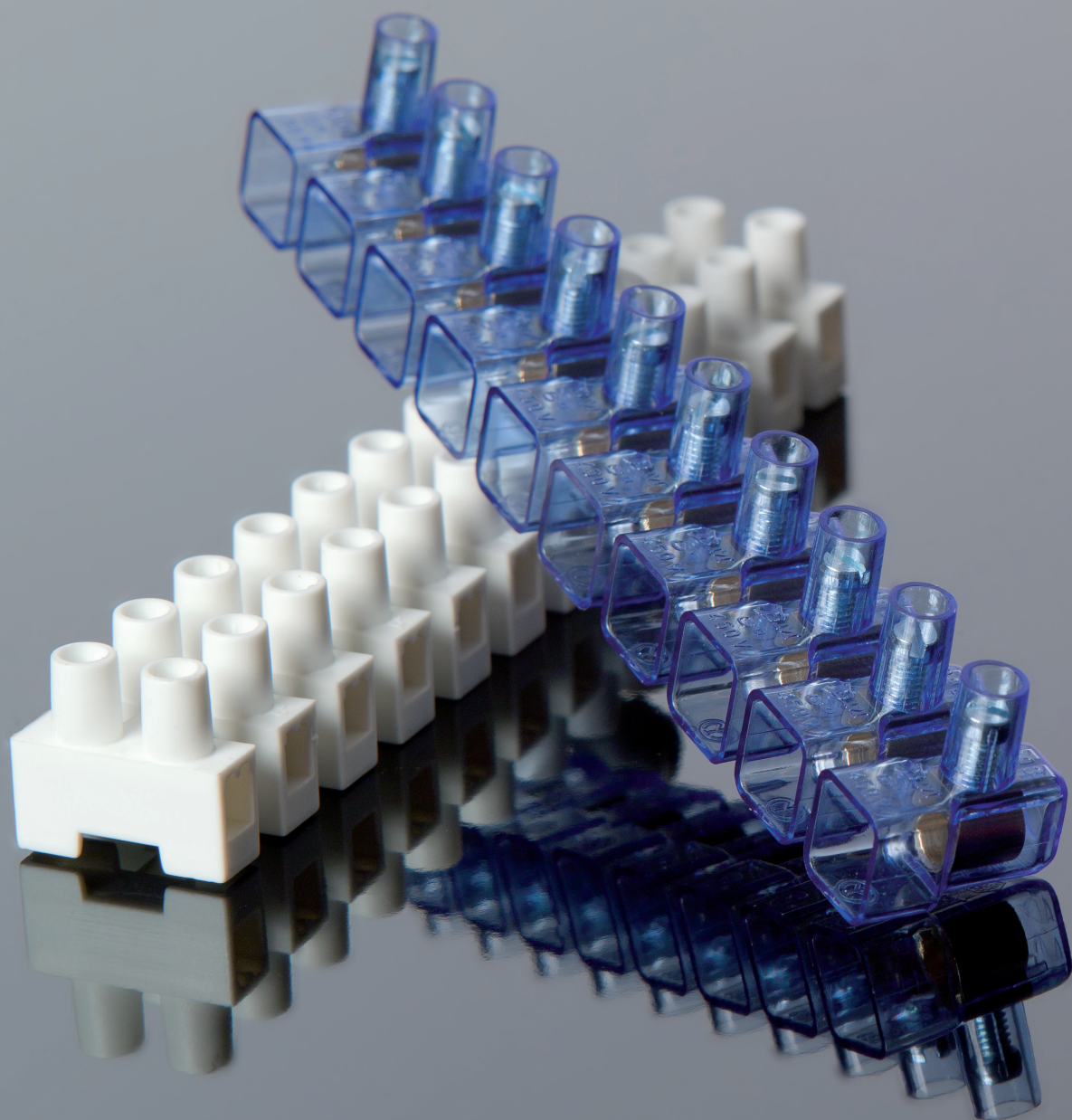
Code	Section (mm <sup>2</sup> )	Cable diameter (mm)	W1 (mm)	W2 (mm)	L1 (mm)	S1 (mm)	Screw	
2300	4 ÷ 16	2 ÷ 4,5	10,25	5	23	15,25	M7	100/100
2301	10 ÷ 25	3 ÷ 6	14	6,5	30	20	M10	100/100
2302	25 ÷ 35	7 ÷ 8	17	8,25	42	22,5	M12	50/50
2303	35 ÷ 70	9 ÷ 10	19,5	10,3	51	26	M14	50/50
2304	70 ÷ 95	11 ÷ 13	27	13,5	71	30	M20	10/10
2305	95 ÷ 185	14 ÷ 16	31	16	73	38	M24	10/10

## “T” HEAD CONNECTORS

MATERIAL: nickel-plated die-cast brass



Code	Section (mm <sup>2</sup> )	Cable diameter (mm)	W1 (mm)	W2 (mm)	W3 (mm)	L1 (mm)	S1 (mm)	Screw	
2350	4 ÷ 16	2 ÷ 4,5	16,75	10,75	5	23	15,5	M7	100/100
2351	10 ÷ 25	3 ÷ 6	22	13,75	7	30	20	M10	100/100
2352	25 ÷ 35	7 ÷ 8	31,5	17	8,15	42,5	22,5	M12	50/50
2353	35 ÷ 70	9 ÷ 10	36	19,5	10	52	25,5	M14	25/50
2354	70 ÷ 95	11 ÷ 13	50	27	13	71	30	M20	10/10
2355	90 ÷ 185	14 ÷ 16	53	32	16,25	72	38	M24	10/10



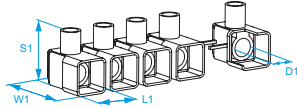


# TERMINAL BLOCKS

ONE-WAY TERMINAL BLOCKS	pag. 112
CONNECTORS	pag. 119
MULTIWAY TERMINAL BLOCKS	pag. 129



## ONE-WAY TERMINAL BLOCKS - END CONNECTORS - BARS



**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**CAPTIVE SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 85 °C

**PROTECTION GRADE:** IP20

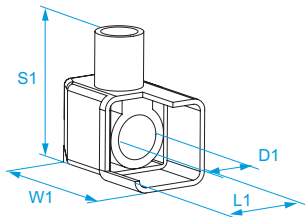
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

Code	Conductor section (mm <sup>2</sup> )	Connection capability Section (mm <sup>2</sup> )	Connection capability N. rigid conductors	Connection capability N. flexible conductors	Rated voltage (V)	Test current (A)	Screw	D1 (mm)	L1 (mm)	W1 (mm)	S1 (mm)	Ways	
991	1.5	1.5	2	2	450	18	M3	3,1	7,5	15	14,5	10	10/500
		1	2 ÷ 3	2 ÷ 3									
992	2.5	0.75	2 ÷ 4	2 ÷ 4	450	24	M3.5	4,1	9	17,5	18,2	10	10/600
		2.5	2	2									
9924	4	1.5	2 ÷ 4	2 ÷ 4	450	32	M4	4,5	10,3	21	20	10	10/400
		4	2	2									
993	6	6	2 ÷ 3	2	450	41	M4	6	11,8	22,5	23	10	10/300
		4	2 ÷ 4	2 ÷ 4									
994	10	10	2	2	450	57	M6	7,9	14,7	26	26	10	10/200
		6	2 ÷ 3	2									
995	16	4	2 ÷ 4	2 ÷ 4	450	76	M8	10,5	18,8	31,8	32,2	10	10/100
		16	2	2									



## ONE-WAY TERMINAL BLOCKS - END CONNECTORS



**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**CAPTIVE SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

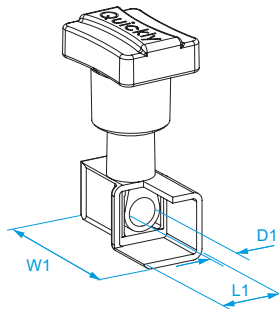
**MAX OPERATING TEMPERATURE:** 85 °C

**PROTECTION GRADE:** IP00

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

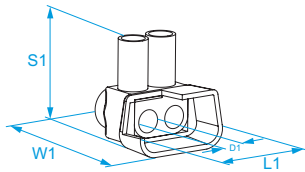
Code	Conductor section (mm <sup>2</sup> )	Connection capability Section (mm <sup>2</sup> )	Connection capability N. rigid conductors	Connection capability N. flexible conductors	Rated voltage (V)	Test current (A)	Screw	D1 (mm)	L1 (mm)	W1 (mm)	S1 (mm)	Ways	
9960	25	25	2	2	450	101	M10	12	22,5	36,3	41,9	25/25	
		16	2 ÷ 3	2 ÷ 3									
		10	2 ÷ 4	2 ÷ 4									
9961	35	35	2	2	450	125	M10	13,9	26,1	43,5	49,4	25/25	
		25	2 ÷ 3	2									
		16	2 ÷ 4	2 ÷ 3									



**ONE-WAY TERMINAL BLOCKS - END CONNECTORS - WITH MANUAL TIGHTENING**


**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0  
**CONDUCTIVE BODY:** brass  
**CAPTIVE SCREW IN:** galvanized steel  
**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11  
**CONDUCTOR TYPE:** rigid and flexible  
**MAX OPERATING TEMPERATURE:** 85 °C  
**PROTECTION GRADE:** IP20  
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Connection capability Section (mm <sup>2</sup> )	Connection capability N. rigid conductors	Connection capability N. flexible conductors	Rated voltage (V)	Test current (A)	Screw	D1 (mm)	L1 (mm)	W1 (mm)	
9924Q	4	4 2.5 1.5	2 2 ÷ 3 2 ÷ 4	2 2 ÷ 3 2 ÷ 4	450	32	M4	4,5	10,3	21	20/20
993Q	6	6 4 2,5	2 2 ÷ 3 2 ÷ 4	2 2 2 ÷ 4	450	41	M4	6	11,8	22,5	20/20
994Q	10	10 6 4	2 2 ÷ 3 2 ÷ 4	2 2 2 ÷ 4	450	57	M6	7,9	14,7	26	20/20

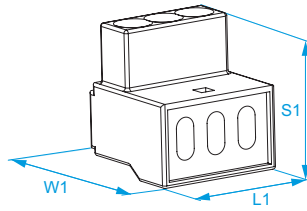

**ONE-WAY TERMINAL BLOCKS - END CONNECTORS - 2 INPUTS**


**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0  
**CONDUCTIVE BODY:** brass  
**CAPTIVE SCREW IN:** galvanized steel  
**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11  
**CONDUCTOR TYPE:** rigid and flexible  
**MAX OPERATING TEMPERATURE:** 85 °C  
**PROTECTION GRADE:** IP20  
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Connection capability Section (mm <sup>2</sup> )	Connection capability N. rigid conductors	Connection capability N. flexible conductors	Rated voltage (V)	Test current (A)	Screw	D1 (mm)	L1 (mm)	W1 (mm)	S1 (mm)	
9416	2 x 16	16 10 6	2	- 2 2	450	76	M5	5,5	20,5	22,6	24,5	30/30
9425	2 x 25	25 16 10	2	- 2 2	450	101	M6	7	25	26,2	25,4	20/20
9435	2 x 35	35 25 16	2	- 2 2	450	125	M8	9	32	31,2	33,4	10/10



## ONE-WAY TERMINAL BLOCKS - 3 INPUTS



Unipolar terminal block with multiple inputs that can be fixed on DIN 46277/1 and DIN 46277/3 rail

**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**CAPTIVE SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 85 °C

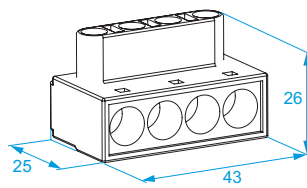
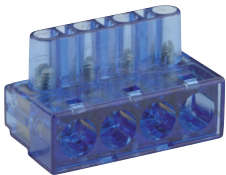
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Wire protection	Rated voltage (V)	Test current (A)	Inputs	Stripping length (mm)	Screw	L1 (mm)	W1 (mm)	S1 (mm)	
996	1 ÷ 6	stainless steel	450	16	3	10	M4	22	21	24	50/50
9984	16 ÷ 35		750	125	3	18	M8	47	36,4	36	25/25



**HALOGEN FREE**

## ONE-WAY TERMINAL BLOCKS - 4 INPUTS



**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**CAPTIVE SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 85 °C

**PROTECTION GRADE:** IP20

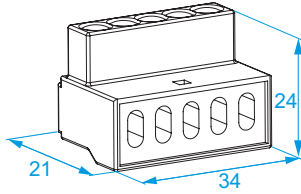
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Rated voltage (V)	Test current (A)	Inputs	Stripping length (mm)	Screw	
998	6 ÷ 16	750	40	4	10	M5	25/25



**HALOGEN FREE**

## ONE-WAY TERMINAL BLOCKS - 5 INPUTS



Unipolar terminal block with multiple inputs that can be fixed on DIN 46277/1 and DIN 46277/3 rail

**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**CAPTIVE SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

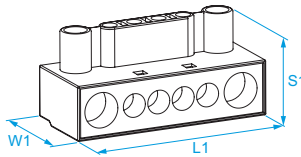
**MAX OPERATING TEMPERATURE:** 85 °C

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Wire protection	Rated voltage (V)	Test current (A)	Inputs	Stripping length (mm)	Screw	
997	1 ÷ 6	stainless steel	450	16	5	10	M4	50/50



## ONE-WAY TERMINAL BLOCKS - 6 INPUTS



**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 85 °C

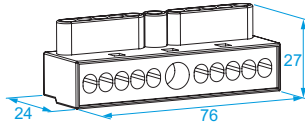
**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Rated voltage (V)	Test current (A)	Inputs	Stripping length (mm)	Screw	L1 (mm)	W1 (mm)	S1 (mm)	
9981	(2,5 ÷ 6) x 4 (6 ÷ 16) x 2	750	40	6	11	M4	48	24	26	25/25
9983	(6 ÷ 16) x 4 (16 ÷ 35) x 2	750	125	6	16 18	M5, M8	77	35	35	25/25



## ONE-WAY TERMINAL BLOCKS - 11 INPUTS



**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** brass

**SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 85 °C

**PROTECTION GRADE:** IP20

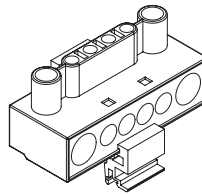
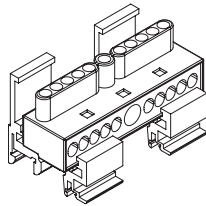
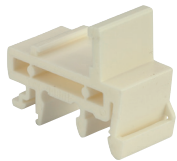
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Conductor section (mm <sup>2</sup> )	Rated voltage (V)	Test current (A)	Inputs	Stripping length (mm)	Screw	
9982	(2,5 ÷ 6) x 10 (6 ÷ 16) x 1	750	40	11	11	M4	25/25



TERMINAL BLOCKS

## ACCESSORIES FOR ONE-WAY TERMINAL BLOCKS WITH MULTIPLE INPUTS - DIN BAR BASE



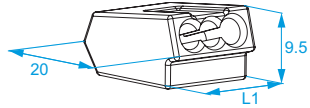
Base for fixing one-way terminals with multiple inputs on DIN 46277/1 and DIN 46277/3 rail

**INSULATING HOUSING:** polypropylene (PP) natural color

**MAX OPERATING TEMPERATURE:** 85 °C

**ASSEMBLY:** The terminal blocks can be mounted on the rail by means of a slight pressure and can be released by inserting a screwdriver into the head opening.

Code	Terminal block type	Bases per terminal block	
99601	996-997	1	50/50
99811	998-9981	1	50/50
99821	9982	2	50/50
99831	9983	2	50/50
99841	9984	1	50/50

**ONE-WAY TERMINAL BLOCKS - QUICK-CONNECT**


One-way push-wire terminal block for rigid conductors

**INSULATING HOUSING:** polyamide (PA 6.6)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid

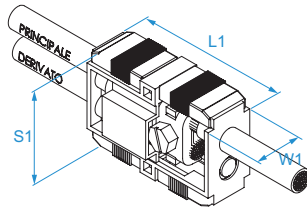
**MAX OPERATING TEMPERATURE:** 85 °C

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-2: 2004

Code	Conductor section (mm <sup>2</sup> )	Rated voltage (V)	Inputs	Stripping length (mm)	L1 (mm)	
803	0,75 ÷ 2,5	450	3	10 ÷ 13	14	100/100
805	0,75 ÷ 2,5	450	5	10 ÷ 13	22	100/100



## INDIRECT CLAMPING TERMINAL BLOCK · TWIN BLOCK



One-way terminal block with multiple inputs and indirect clamping for electrical cables, useful for channel or flying shunts or junctions.

**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

**CONDUCTIVE BODY:** nickel-plated die-cast brass

**SAFETY CLIP IN:** black polyamide (PA 6.6)

**SCREW IN:** galvanized steel

**MAX OPERATING TEMPERATURE:** 85 °C

**CLAMPING TYPE:** indirect

**TEST VOLTAGE:** 2500 V

**PROTECTION GRADE:** IP20

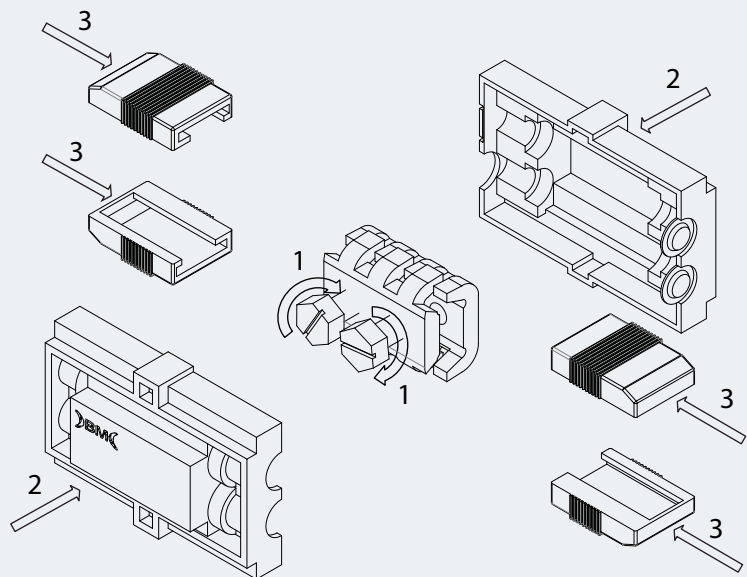
**ACCORDING TO STD.:** EN 60947-7-1, EN 60998-1: 2004, EN 60998-2-1: 2004, EN 60999

Code	Conductor section (mm <sup>2</sup> )	Connectable flexible conductors Primary (mm <sup>2</sup> )	Connectable flexible conductors Derivative (mm <sup>2</sup> )	Rated voltage (V)	L1 (mm)	W1 (mm)	S1 (mm)	
95261	10-25	25	25	450	64	27	43	1/10
		25	16					
		25	10					
		16	16					
		16	10					
		10	10					
95262	25-50	50	50	450	71	34	49	1/10
		50	35					
		50	25					
		35	35					
		35	25					
		25	25					
95263	50-95	95	95	450	77	41	61	1/10
		95	70					
		95	50					
		70	70					
		70	50					
		50	50					
95264	70-120	120	120	450	90	50	72	1/5
		120	95					
		120	70					
		95	95					
		95	70					
		70	70					



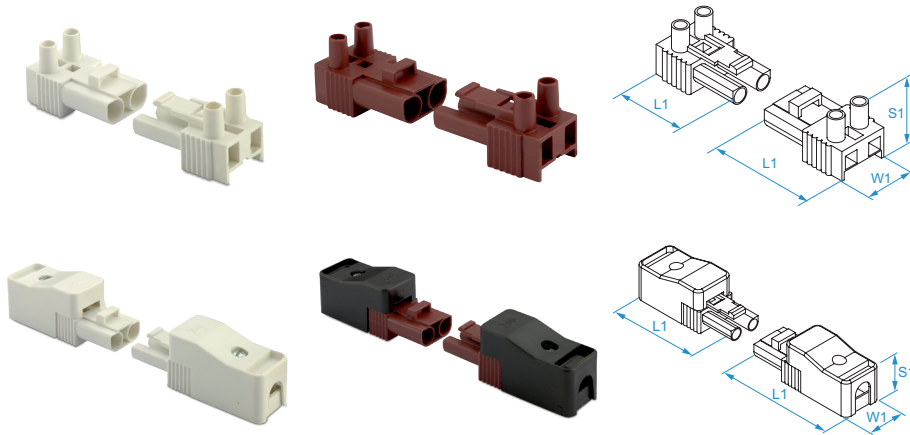
### ASSEMBLY INSTRUCTIONS

Remove the black clips, open the blue shell, make electrical connections, close the shell and insert the safety clips



### CONNECTION TYPES



**POLARIZED PLUG TERMINALS · 2-WAY CONNECTORS · M902 SERIES**


**BROWN PLUG AND SOCKET:** polyamide (PA 6.6) and 25% fiberglass

**WHITE PLUG AND SOCKET:** polyamide (PA 6.6)

**WHITE AND BLACK SHELL AND CABLE CLAMP:** polyamide (PA 6.6)

**CONDUCTIVE BODY IN:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel

**TEST CURRENT:** 16 A

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002 +A2:2006 (par. 30.2.3), EN 60695-2-11

**RATED IMPULSE VOLTAGE:** 4 kV

**CONDUCTOR TYPE:** rigid and flexible

**OPERATING CYCLES:** 5000

**RATED VOLTAGE:** 400 V

**POLLUTION DEGREE:** 2

**PROTECTION GRADE:** IP20

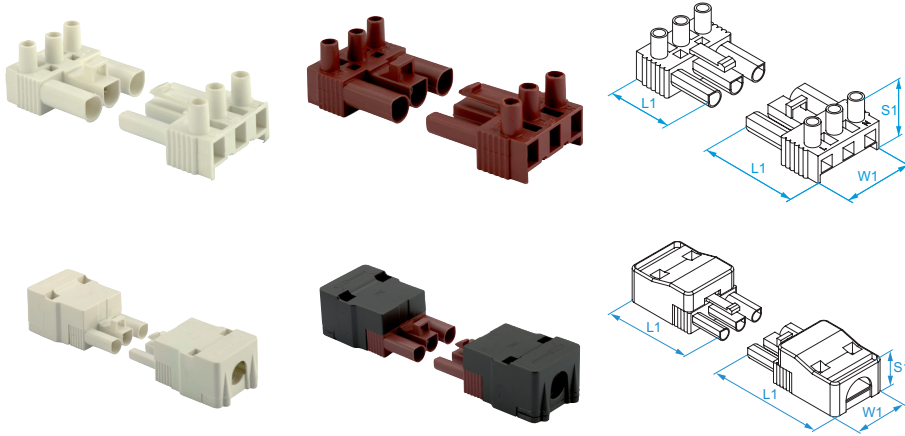
**ACCORDING TO STD.:** EN 61984: 2009

Code	Description	Section (mm <sup>2</sup> )	Operating temperature	Terminal Block Material	Terminal Block Color	Shells Material	Shells Color	Shells Cable clamp	W1 (mm)	L1 (mm)	S1 (mm)			
B9021	Male plug	2,5	from -10 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	White		-	19	32	20	100/100		
B9022	Female receptacle	2,5	from -10 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	White		-	19	32	20	100/100		
B9023	Male plug with shell	2,5	from -10 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	White	PA 6.6	<input type="checkbox"/>	White	5,7 - 7	19	60	21	50/50
B9024	Female receptacle with shell	2,5	from -10 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	White	PA 6.6	<input type="checkbox"/>	White	5,7 - 7	19	60	21	50/50
M9021	Male plug high temperature	2,5	from -10 °C to 150 °C max	PA 6.6 + fiberglass	<input checked="" type="checkbox"/>	Brown		-	19	32	20	100/100		
M9022	Female receptacle high temperature	2,5	from -10 °C to 150 °C max	PA 6.6 + fiberglass	<input checked="" type="checkbox"/>	Brown		-	19	32	20	100/100		
M9023	Male plug high temperature with shell	2,5	from -10 °C to 105 °C max	PA 6.6 + fiberglass	<input checked="" type="checkbox"/>	Brown	PA 6.6	<input checked="" type="checkbox"/>	Black	5,7 - 7	19	60	21	50/50
M9024	Female receptacle high temperature with shell	2,5	from -10 °C to 105 °C max	PA 6.6 + fiberglass	<input checked="" type="checkbox"/>	Brown	PA 6.6	<input checked="" type="checkbox"/>	Black	5,7 - 7	19	60	21	50/50





**POLARIZED PLUG TERMINALS · 3-WAY CONNECTORS · M903 SERIES**

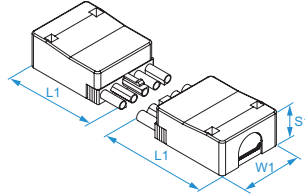
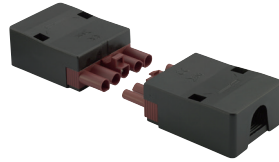
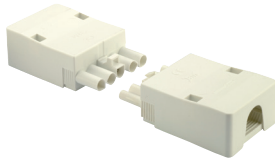
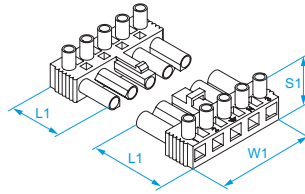
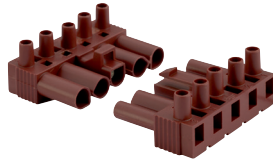
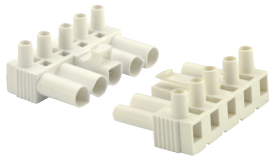


**BROWN PLUG AND SOCKET:** polyamide (PA 6.6) and 25% fiberglass  
**WHITE PLUG AND SOCKET:** polyamide (PA 6.6)  
**WHITE AND BLACK SHELL AND CABLE CLAMP:** polyamide (PA 6.6)  
**CONDUCTIVE BODY IN:** nickel-plated brass  
**CAPTIVE SCREW IN:** galvanized steel  
**TEST CURRENT:** 16 A  
**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002 +A2:2006 (par. 30.2.3), EN 60695-2-11  
**RATED IMPULSE VOLTAGE:** 4 kV  
**CONDUCTOR TYPE:** rigid and flexible  
**OPERATING CYCLES:** 5000  
**RATED VOLTAGE:** 400 V  
**POLLUTION DEGREE:** 2  
**PROTECTION GRADE:** IP20  
**ACCORDING TO STD.:** EN 61984: 2009

TERMINAL BLOCKS

Code	Description	Section (mm <sup>2</sup> )	Operating temperature	Terminal Block Material	Terminal Block Color	Shells Material	Shells Color	Shells Cable clamp	W1 (mm)	L1 (mm)	S1 (mm)	
B9031	Male plug	2,5	from -10 °C to 105 °C max	PA 6.6	White			-	29	32	20	50/50
B9032	Female receptacle	2,5	from -10 °C to 105 °C max	PA 6.6	White			-	29	32	20	50/50
B9033	Male plug with shell	2,5	from -10 °C to 105 °C max	PA 6.6	White	PA 6.6	White	4,5 - 10,5	32	57	23	50/50
B9034	Female receptacle with shell	2,5	from -10 °C to 105 °C max	PA 6.6	White	PA 6.6	White	4,5 - 10,5	32	57	23	50/50
M9031	Male plug high temperature	2,5	from -10 °C to 150 °C max	PA 6.6 + fiberglass	Brown			-	29	32	20	50/50
M9032	Female receptacle high temperature	2,5	from -10 °C to 150 °C max	PA 6.6 + fiberglass	Brown			-	29	32	20	50/50
M9033	Male plug high temperature with shell	2,5	from -10 °C to 105 °C max	PA 6.6 + fiberglass	Brown	PA 6.6	Black	4,5 - 10,5	32	57	23	50/50
M9034	Female receptacle high temperature with shell	2,5	from -10 °C to 105 °C max	PA 6.6 + fiberglass	Brown	PA 6.6	Black	4,5 - 10,5	32	57	23	50/50



**POLARIZED PLUG TERMINALS · 5-WAY CONNECTORS · M905 SERIES**


**BROWN PLUG AND SOCKET:** polyamide (PA 6.6) and 25% fiberglass

**WHITE PLUG AND SOCKET:** polyamide (PA 6.6)

**WHITE AND BLACK SHELL AND CABLE CLAMP:** polyamide (PA 6.6)

**CONDUCTIVE BODY IN:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel

**TEST CURRENT:** 16 A

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002 +A2:2006 (par. 30.2.3), EN 60695-2-11

**RATED IMPULSE VOLTAGE:** 4 kV

**CONDUCTOR TYPE:** rigid and flexible

**OPERATING CYCLES:** 5000

**RATED VOLTAGE:** 400 V

**POLLUTION DEGREE:** 2

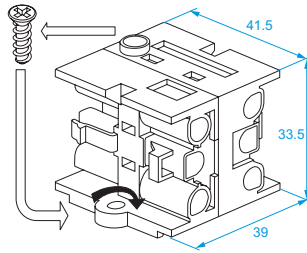
**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 61984: 2009

Code	Description	Section (mm <sup>2</sup> )	Operating temperature	Terminal Block Material	Terminal Block Color	Shells Material	Shells Color	Shells Cable clamp	W1 (mm)	L1 (mm)	S1 (mm)		
B9051	Male plug	2,5	from -10 °C to 105 °C max	PA 6.6		White		-	48,5	32	20	50/50	
B9052	Female receptacle	2,5	from -10 °C to 105 °C max	PA 6.6		White		-	48,5	32	20	50/50	
B9053	Male plug with shell	2,5	from -10 °C to 105 °C max	PA 6.6		White	PA 6.6	White	1x(9-14)- 2x(9-10,5)	48,5	76,5	26	50/50
B9054	Female receptacle with shell	2,5	from -10 °C to 105 °C max	PA 6.6		White	PA 6.6	White	1x(9-14)- 2x(9-10,5)	48,5	76,5	26	50/50
M9051	Male plug high temperature	2,5	from -10 °C to 150 °C max	PA 6.6 + fiberglass		Brown		-	48,5	32	20	50/50	
M9052	Female receptacle high temperature	2,5	from -10 °C to 150 °C max	PA 6.6 + fiberglass		Brown		-	48,5	32	20	50/50	
M9053	Male plug high temperature with shell	2,5	from -10 °C to 105 °C max	PA 6.6 + fiberglass		Brown	PA 6.6	Black	1x(9-14)- 2x(9-10,5)	48,5	76,5	26	50/50
M9054	Female receptacle high temperature with shell	2,5	from -10 °C to 105 °C max	PA 6.6 + fiberglass		Brown	PA 6.6	Black	1x(9-14)- 2x(9-10,5)	48,5	76,5	26	50/50



## ACCESSORIES FOR M903 SERIES - 3-WAY SHUNT BLOCK



**CONDUCTIVE BODY IN:** nickel-plated brass

**SHUNT:** 3 female sockets + 1 male plug

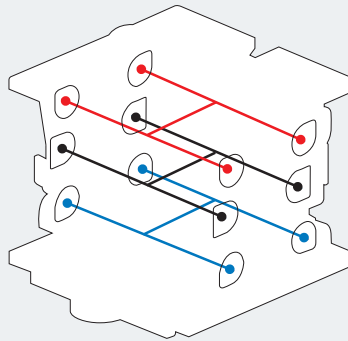
**INSULATING HOUSING IN:** polycarbonate (PC), black

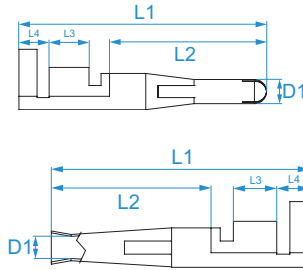
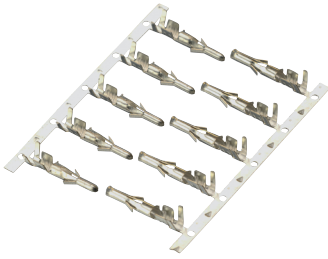
**INSULATION SELF-EXTINGUISHING:** UL 94 V0

Code	Operating temperature	
M9039	90 °C max	10/10



### M9039 ASSEMBLY INSTRUCTIONS



**AUTOMATIC CRIMPING CONNECTORS - TERMINALS - M620 SERIES - REEL**

**TEST CURRENT:** 15 A

**TERMINAL MATERIAL:** tinned brass

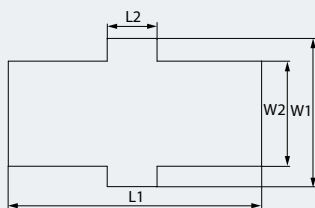
**RATED VOLTAGE:** 300 AC/DC V

**MAX CONTACT RESISTANCE:** 10 (20 after environmental testing) mΩ

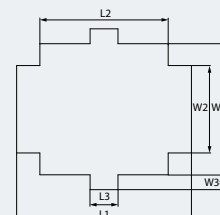
Code	Type	Section (mm <sup>2</sup> )	Section (AWG)	Ø insulant (mm)	Operating temperature	Tools	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	
02230	male	0.5÷2.0	(20-14)	1.9 - 3.4	from -25 °C to 105 °C max	53P000 +53M2C2	20,5	12,8	3,2	2,8	2	4000/4000
02240	female	0.5÷2.0	(20-14)	1.9 - 3.4	from -25 °C to 105 °C max	53P000 +53M2C2	20,5	12,8	3,2	2,8	1,9	4000/4000


**ACCESSORIES FOR AUTOMATIC CRIMPING CONNECTORS - EXTRACTION TOOL**


Code	Description	
1107	Tool for extracting terminals from housing	1/1

**PANEL ASSEMBLY INSTRUCTIONS**


SHAPE I

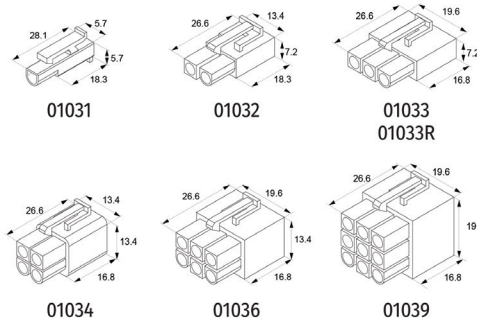
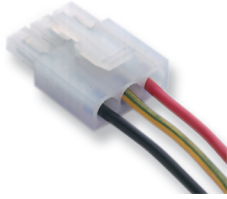


SHAPE II

Template for code	# ways	Shape	Panel hole size tolerance ± 0.13 mm					
			L1	L2	L3	W1	W2	W3
01042	2	I	18,8	3,7		11	7,8	-
01043	3	I	25	3,7		11	7,8	-
01044	4	II	18,8	13,8	4	14,1	9,4	1,6
01046	6	II	25	20	4	14,1	9,4	1,6
01049	9	II	25	20	4	20,3	9,4	1,6

Applicable on boards 0.8 - 2 mm thick

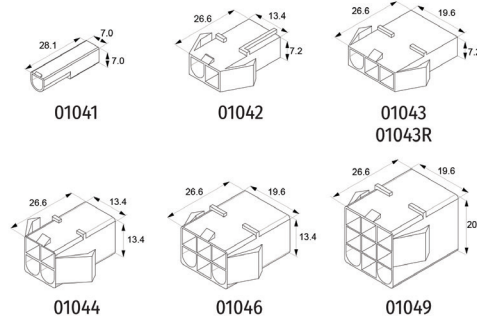
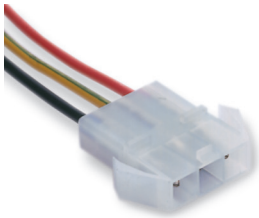
## ACCESSORIES FOR CRIMPING CONNECTORS - M620 SERIES - MALE HOUSING



**INSULATING HOUSING IN:** polyamide (PA 6.6) natural color  
**DIELECTRIC STRENGTH:** 1500 AC-1 minute V  
**INSULATION SELF-EXTINGUISHING:** UL 94 V2

Code	Type	Operating temperature	Shells Material	Shells Color	Ways	Rated voltage (V)	Current (A)	
01031	male	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	15	500/500
01032	male	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	15	500/500
01033	male	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	14	500/500
01033R	male	from -25 °C to 105 °C max	PA 6.6	<input checked="" type="checkbox"/>	Red	300	14	500/500
01034	male	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	13	500/500
01036	male	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	12	300/300
01039	male	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	9	200/200

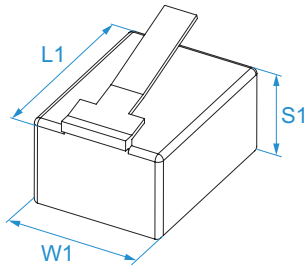
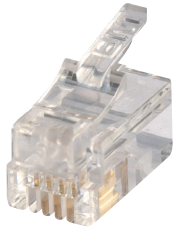
## ACCESSORIES FOR CRIMPING CONNECTORS - M620 SERIES - FEMALE HOUSING



**INSULATING HOUSING IN:** polyamide (PA 6.6) natural color  
**DIELECTRIC STRENGTH:** 1500 AC-1 minute V  
**INSULATION SELF-EXTINGUISHING:** UL 94 V2

Code	Type	Operating temperature	Shells Material	Shells Color	Ways	Rated voltage (V)	Current (A)	
01041	female	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	15	500/500
01042	female	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	15	500/500
01043	female	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	14	500/500
01043R	female	from -25 °C to 105 °C max	PA 6.6	<input checked="" type="checkbox"/>	Red	300	14	500/500
01044	female	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	13	300/300
01046	female	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	12	300/300
01049	female	from -25 °C to 105 °C max	PA 6.6	<input type="checkbox"/>	Natural	300	9	200/200

## RJ PHONE PLUGS



**CABLE TYPE:** phone cables

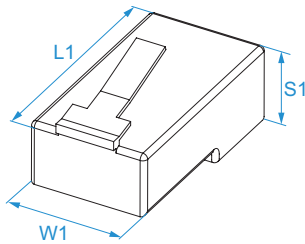
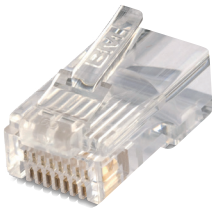
**CONDUCTOR SECTION:** (26-24) AWG

**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V2

**PIN MATERIAL:** phosphor bronze with 50 micro inch gilding

Code	Description	Positions - Contacts	Tools	W1 (mm)	L1 (mm)	S1 (mm)	
01064	RJ22	4P - 4C	549	6,5	12,5	7,5	100/100
01065	RJ11/RJ14	6P - 4C	549	6,5	12,5	9,5	100/100
01066	RJ12	6P - 6C	549	6,5	12,5	9,5	100/100

## RJ 45 LAN PLUGS



**CABLE TYPE:** 5e category (TIA/EIA-568-B)

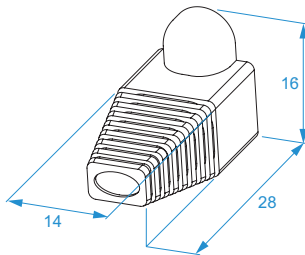
**CONDUCTOR SECTION:** (26-24) AWG

**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V2

**PIN MATERIAL:** phosphor bronze with 50 micro inch gilding

Code	Description	Positions - Contacts	Tools	W1 (mm)	L1 (mm)	S1 (mm)	
01068	RJ45	8P - 8C	549, 53P5YA	8	21	11,5	100/100
01069	fully shielded RJ45	8P - 8C	549, 53P5YA	8,2	21,2	11,7	100/100

## ACCESSORIES FOR RJ 45 - PLUG BOOTS



**MATERIAL:** polycarbonate (PC) UL 94 V0

Code	Shells Color	
01060B	Blue	100/100
01060N	Black	100/100
01060R	Red	100/100
01060V	Green	100/100

## RJ PLUG + PLUG BOOTS + 549 CRIMPING TOOL



Code	Description
00410	RJ plugs for phone and data networks, plug boots and crimping tool in plastic case

Component	Description	Pcs / code
549	Crimping tool for RJ connectors	1
01065	RJ phone plugs	100
01068	RJ45 lan plugs	400
01060B	Plug boots for RJ45, blu	50
00405	Plastic case	1

# MULTIWAY TERMINAL BLOCKS

### POLYPROPYLENE TERMINAL BLOCKS

+  
85 °C MAX

### STEATITE TERMINAL BLOCKS

+  
300 °C MAX

for higher temperatures

- Nylon standard
- Nylon "CS" with wire protection

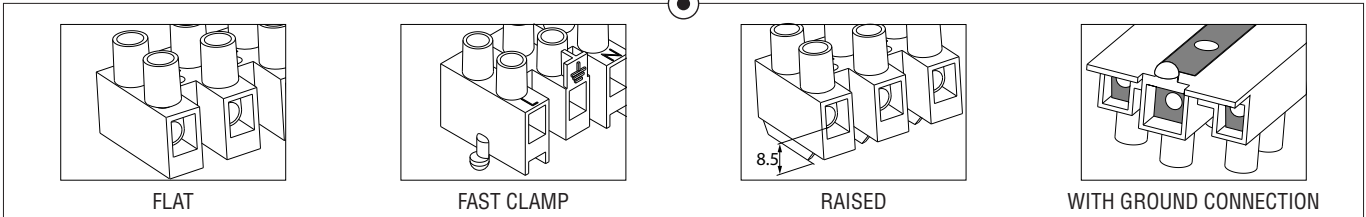
+  
100 °C ±125 °C MAX

- Nylon "GF" with fiberglass for the highest temperatures
- Nylon "GF/CS" with fiberglass for the highest temperatures with wire protection

+  
110 °C ±150 °C MAX

## NYLON TERMINAL BLOCKS

- Number of poles  
1 to 12
- More insulating  
base types
- Customizable  
marking





## ACCESSORIES · WAY MARKING

Ways marking is printed on the insulation of the screws of the terminal blocks. Markings are printed in black on natural colour terminal blocks, in white on brown terminal blocks. For markings that are not available in the following tables, contact BM.

**ACCORDING TO SDT:** ↓ symbol complies to IEC 60417-5017 (Earth); ⊕ symbol complies to 60417-5019 (Protective Earth)

### FOR M092 SERIES

Drawing	# ways	Way marking											
		1	2	3	4	5	6	7	8	9	10	11	12
4376	1	L											
4377		N											
4200	2	L	N										
4257	3	L	↓	N									
4162		↓	L	N									
4316		N	L	↓									
4153		↓	N	L									
4349	6	1	2	3	4	5	6						
4157	10	L	N	N	↓	L	N	↓	L	+	-		
4363	12	A	B	C	D	E	F	G	H	I	L	M	N

### FOR M094 SERIES

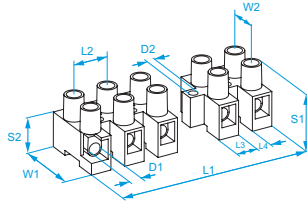
Drawing	# ways	Way marking											
		1	2	3	4	5	6	7	8	9	10	11	12
4091	2	N	L										
4090	3	N	↓	L									
4368		G	R	S									
4148		↓	N	L									
4154		L	↓	N									
4288	4	N	L	↓									
4182		L	N	↓									
4119	5	F	-	N									
4245		↓	N	P	F								
4327		1	2	↓	N								
4112		L	↓	N	-								
4329	6	L	-	N	↓								
4309		L	N	↓	-								
4308	7	L	N	↓	L	N							
4292		N	L	↓	-								
4304		1	2	3	N	↓							
4464	8	⊕	N	1	2	3	4						
4331		2	1	-	-	N	↓						
4305		1	2	3	4	5	↓						
4314	12	P	N	↓	P	N	↓	P	N	↓	P	N	↓
4152		P	N	↓	L	P	N	↓	L	P	N	↓	L

### FOR M095 SERIES

Drawing	# ways	Way marking											
		1	2	3	4	5	6	7	8	9	10	11	12
4315	2	N	L										
4311	3	↓	1	2									
4313		L	↓	N									
4312	6	↓	1	2	3	4	5						
4330	12	P	N	↓	P	N	↓	P	N	↓	P	N	↓
4176		P	N	↓	L	P	N	↓	L	P	N	↓	L

### FOR M093, M093H, N920 SERIES

Drawing	# ways	Way marking											
		1	2	3	4	5	6	7	8	9	10	11	12
4192	1	↓											
4118	2	L	N										
4350		⊕	-										
4365	3	⊕	N	L									
4364		L	⊕	N									
4143		L	↓	N									
4193		L	N	↓									
4117	4	↓	L	N									
4161		↓	N	L									
4088	5	N	↓	L									
4078		-	↓	-									
4178	N	↓	⚡										
4223	6	-	-	↓									
4370		L	L	N									
4371	N	L	L										
4372	7	L	⊕	N	L <sub>1</sub>								
4198		1	2	↓	N								
4367	8	L	N	+	-								
4150		↓	N	1	2								
4089	9	L	N	⚡	-								
4187		-	L	↓	N								
4317	10	↓	C	P	A								
4366		⊕	L	N	+	-							
4310	11	L	↓	N	X	⚡							
4177		N	↓	L	-	-							
4247	12	-	-	-	↓	-							
4352		N	↓	L	1+	2+							
4307	13	L	↓	N	L	⚡							
4306		↓	N	1	2	3	4						
4289	14	L	N	C	M	A	↓						
4369		6	5	4	3	L2	N1						
4186	15	L	N	↓	↓	1	2	3					
4373		7	6	5	4	3	L2	N1					
4263	16	L	N	1	2	3	4	5	6				
4353		1	2	3	4	5	6	7	8				
4374	17	8	7	6	5	4	3	L2	N1				
4185		L	N	↓	↓	1	2	3	4	5			
4375	18	9	8	7	6	5	4	3	L2	N1			
4278		↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	↓	
4328	19	P	N	↓	P	N	↓	P	N	↓	P	N	↓
4175		P	N	↓	L	P	N	↓	L	P	N	↓	L

**MULTIWAY TERMINAL BLOCKS - POLYPROPYLENE - 12 WAYS - 920 SERIES**


**INSULATING HOUSING:** polypropylene (PP) natural color

**CONDUCTIVE BODY:** brass

**CAPTIVE SCREW IN:** galvanized steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 85 °C

**TEST VOLTAGE:** 2500 V (9200, 9201, 9202, 9203), 3000 V (9204)

**PROTECTION GRADE:** IP20

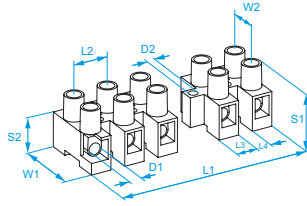
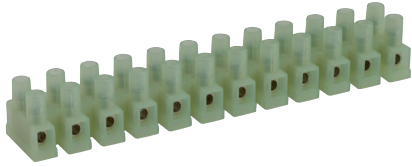
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004, EN 60335-1: 2002 + A2: 2006 (Par. 30.2.3), IEC/EN 60695-2-11

Code	Section (mm <sup>2</sup> )	Rated voltage (V)	Test current (A)	Stripping length (mm)	Screw	Torque (Nm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)		
9200	2,5	400	24	5	M3	0,25	93,7	8	5,6	5,6	16	6	14,7	9	3	2,2	50/700	
9201	4	400	32	7	M3	0,25	116,5	10	6	6	20,5	10	17,2	9,5	3,1	3,1	50/500	
9202	6	400	41	7,5	M3.5	0,4	139,5	12	7,5	7,5	23,5	10	20,1	11,8	4,2	3,6	50/300	
9203	16	450	76	8,5	M4	0,7	175,5	15	10,5	10,5	25,3	11	22,5	13	6	4,1	25/200	
9204	25	500	101	11,5	M5	0,8	228	19,5	14	14	35,2	15	33,5	19	7,2	4,1	10/80	



## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - N9201 SERIES

TERMINAL BLOCKS



Standard version of the N9201 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 125 °C

**MAX SHORT-TIME TEMPERATURE:** 160 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

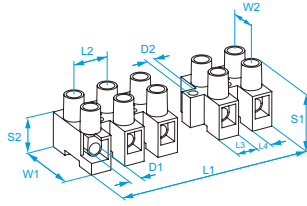
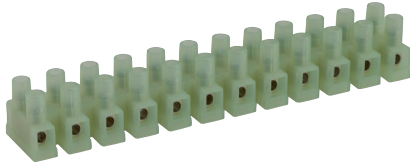
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	4	-	400	32	125	0,25
	-	18-14	600	15(**)	115	0,5

\*\* 25 A rated for Factory Wiring Only

Code	Ways	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
N9201/1	1	6	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/2	2	16	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/3	3	26	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/4	4	36	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/5	5	46	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/6	6	56	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	Contact BM
N9201/7	7	66	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/8	8	76	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/9	9	86	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/10	10	96	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201/11	11	106	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201	12	116,5	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	50/500

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - N9201 SERIES WITH WIRE PROTECTION**


Wire protection version of the N9201 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 125 °C

**MAX SHORT-TIME TEMPERATURE:** 160 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	400	24	125	0,25
	-	18-14	600	15 (**)	115	0,5

\*\* 25 A rated for Factory Wiring Only

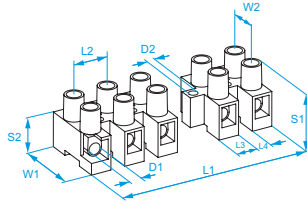
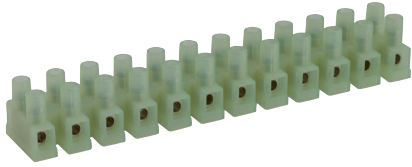
Code	Ways	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
N9201CS1	1	6	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS2	2	16	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS3	3	26	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS4	4	36	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS5	5	46	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS6	6	56	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	Contact BM
N9201CS7	7	66	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS8	8	76	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS9	9	86	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS10	10	96	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS11	11	106	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	
N9201CS	12	116,5	10	5,8	4,2	20,2	10	17,2	9,8	3,1	3,1	50/500

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - N9202 SERIES**

TERMINAL BLOCKS



Standard version of the N9202 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3,5)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 125 °C

**MAX SHORT-TIME TEMPERATURE:** 160 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

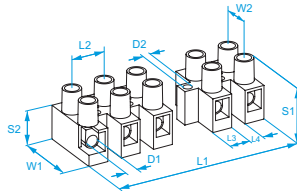
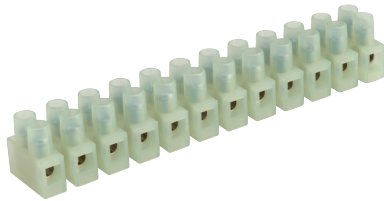
**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	6	10	400	41	125	0,4

Code	Ways	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
<a href="#">N9202/1</a>	1	7,5	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/2</a>	2	19,5	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/3</a>	3	31,5	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/4</a>	4	43,5	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/5</a>	5	55,5	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/6</a>	6	67	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	Contact BM
<a href="#">N9202/7</a>	7	79	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/8</a>	8	91	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/9</a>	9	103	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/10</a>	10	115	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202/11</a>	11	127	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	
<a href="#">N9202</a>	12	139,5	12	7,4	4,5	23	10	20,1	11,9	4,2	3,6	10/50



**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M092 SERIES**


Standard version of the M092 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	250/380	24	125	0,25
	-	20-16	600	10 (*)	105	0,5

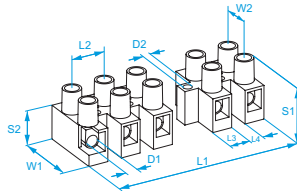
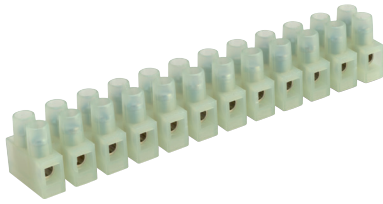
\* 15 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
92/1	1	<input type="checkbox"/> Natural	5,6 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	Contact BM
92/2	2	<input type="checkbox"/> Natural	13,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/3	3	<input type="checkbox"/> Natural	21,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/4	4	<input type="checkbox"/> Natural	30 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/5	5	<input type="checkbox"/> Natural	37,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/6	6	<input type="checkbox"/> Natural	45,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/7	7	<input type="checkbox"/> Natural	54 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/8	8	<input type="checkbox"/> Natural	61,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/9	9	<input type="checkbox"/> Natural	69,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/10	10	<input type="checkbox"/> Natural	77,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92/11	11	<input type="checkbox"/> Natural	85,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
M092	12	<input type="checkbox"/> Natural	93,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	50/700

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M092 SERIES WITH WIRE PROTECTION**



Wire protection version of the M092 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

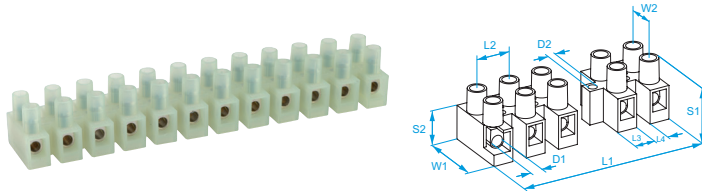
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	250/380	24	125	0,25
	-	20-16	600	10 (*)	105	0,5

\* 15 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
92CS1	1	<input type="checkbox"/> Natural	5,6 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS2	2	<input type="checkbox"/> Natural	13,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS3	3	<input type="checkbox"/> Natural	21,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS4	4	<input type="checkbox"/> Natural	30 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS5	5	<input type="checkbox"/> Natural	37,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS6	6	<input type="checkbox"/> Natural	45,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	Contact BM
92CS7	7	<input type="checkbox"/> Natural	54 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS8	8	<input type="checkbox"/> Natural	61,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS9	9	<input type="checkbox"/> Natural	69,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS10	10	<input type="checkbox"/> Natural	77,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92CS11	11	<input type="checkbox"/> Natural	85,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
M92CS	12	<input type="checkbox"/> Natural	93,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	50/700

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093 SERIES**


Standard version of the M093 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	4	-	400	32	125	0,25
	-	18-12	600	20 (*)	105	0,5

\* 30 A rated for Factory Wiring Only

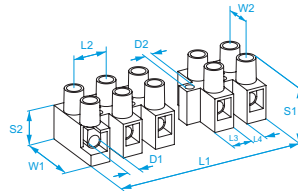
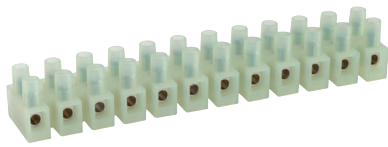
Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93/1	1	<input type="checkbox"/> Natural	6,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	Contact BM
93/2	2	<input type="checkbox"/> Natural	16,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/3	3	<input type="checkbox"/> Natural	26,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/4	4	<input type="checkbox"/> Natural	36,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/5	5	<input type="checkbox"/> Natural	46,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/6	6	<input type="checkbox"/> Natural	56,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/7	7	<input type="checkbox"/> Natural	67 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/8	8	<input type="checkbox"/> Natural	77 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/9	9	<input type="checkbox"/> Natural	87 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/10	10	<input type="checkbox"/> Natural	97 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93/11	11	<input type="checkbox"/> Natural	107 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
M093	12	<input type="checkbox"/> Natural	117 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	50/700

file n° E 70156

**HALOGEN FREE**



**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093 SERIES WITH WIRE PROTECTION**



Wire protection version of the M093 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

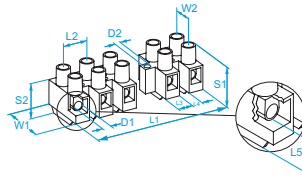
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	400	24	125	0,25
	-	18-12	600	20 (*)	105	0,5

\* 30 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93CS1	1	<input type="checkbox"/> Natural	6,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS2	2	<input type="checkbox"/> Natural	16,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS3	3	<input type="checkbox"/> Natural	26,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS4	4	<input type="checkbox"/> Natural	36,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS5	5	<input type="checkbox"/> Natural	46,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS6	6	<input type="checkbox"/> Natural	56,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	Contact BM
93CS7	7	<input type="checkbox"/> Natural	67 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS8	8	<input type="checkbox"/> Natural	77 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS9	9	<input type="checkbox"/> Natural	87 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS10	10	<input type="checkbox"/> Natural	97 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93CS11	11	<input type="checkbox"/> Natural	107 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
M93CS	12	<input type="checkbox"/> Natural	117 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	50/700

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093H SERIES**


Standard version of the M093H series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**CLEARANCE:** 8.5 mm to withstand 8000V rated impulse voltage (EN 60335-1, par.29)

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	4	-	400	32	125	0,25
	-	18-12	600	20 (*)	105	0,5

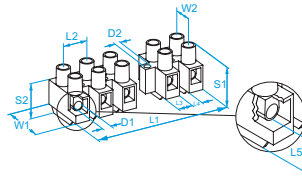
\* 30 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
M93H1	1	<input type="checkbox"/> Natural	6,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	Contact BM
M93H2	2	<input type="checkbox"/> Natural	16,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H3	3	<input type="checkbox"/> Natural	26,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H4	4	<input type="checkbox"/> Natural	36,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H5	5	<input type="checkbox"/> Natural	46,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H6	6	<input type="checkbox"/> Natural	56,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H7	7	<input type="checkbox"/> Natural	67 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H8	8	<input type="checkbox"/> Natural	77 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H9	9	<input type="checkbox"/> Natural	87 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H10	10	<input type="checkbox"/> Natural	97 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93H11	11	<input type="checkbox"/> Natural	107 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M093H	12	<input type="checkbox"/> Natural	117 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	50/500

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093H SERIES WITH WIRE PROTECTION**



Wire protection version of the M093H series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**CLEARANCE:** 8.5 mm to withstand 8000V rated impulse voltage (EN 60335-1, par.29)

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

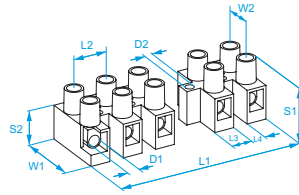
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	400	24	125	0,25
	-	18-12	600	20 (*)	105	0,5

\* 30 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93HCS1	1	<input type="checkbox"/> Natural	67 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	Contact BM
93HCS2	2	<input type="checkbox"/> Natural	16,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS3	3	<input type="checkbox"/> Natural	26,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS4	4	<input type="checkbox"/> Natural	36,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS5	5	<input type="checkbox"/> Natural	46,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS6	6	<input type="checkbox"/> Natural	56,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS7	7	<input type="checkbox"/> Natural	67 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS8	8	<input type="checkbox"/> Natural	77 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS9	9	<input type="checkbox"/> Natural	87 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS10	10	<input type="checkbox"/> Natural	97 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HCS11	11	<input type="checkbox"/> Natural	107 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93HCS	12	<input type="checkbox"/> Natural	117 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	50/50

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M094 SERIES**


Standard version of the M094 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3,5)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7.5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	6	-	400	41	125	0,7
	-	18-10	600	30 (*)	105	0,9

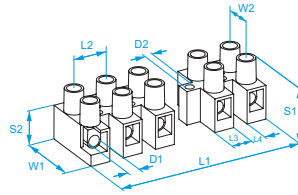
\* 40 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
M94/1	1	<input type="checkbox"/> Natural	7,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	Contact BM
M94/2	2	<input type="checkbox"/> Natural	19,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/3	3	<input type="checkbox"/> Natural	31,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/4	4	<input type="checkbox"/> Natural	43,6 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/5	5	<input type="checkbox"/> Natural	55,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/6	6	<input type="checkbox"/> Natural	68 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/7	7	<input type="checkbox"/> Natural	80 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/8	8	<input type="checkbox"/> Natural	92 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/9	9	<input type="checkbox"/> Natural	104 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/10	10	<input type="checkbox"/> Natural	116 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94/11	11	<input type="checkbox"/> Natural	128 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M094	12	<input type="checkbox"/> Natural	140 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	50/300

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M094 SERIES WITH WIRE PROTECTION**



Wire protection version of the M094 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3,5)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7.5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

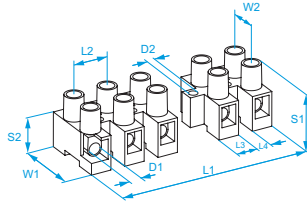
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	4	-	400	23	125	0,9
	-	18-10	600	30 (*)	105	0,9

\* 40 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
94CS1	1	<input type="checkbox"/> Natural	7,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS2	2	<input type="checkbox"/> Natural	19,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS3	3	<input type="checkbox"/> Natural	31,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS4	4	<input type="checkbox"/> Natural	43,6 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS5	5	<input type="checkbox"/> Natural	55,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS6	6	<input type="checkbox"/> Natural	68 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	Contact BM
94CS7	7	<input type="checkbox"/> Natural	80 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS8	8	<input type="checkbox"/> Natural	92 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS9	9	<input type="checkbox"/> Natural	104 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS10	10	<input type="checkbox"/> Natural	116 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94CS11	11	<input type="checkbox"/> Natural	128 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94CS	12	<input type="checkbox"/> Natural	140 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	50/50

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M095 SERIES**


Standard version of the M095 series

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M4)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 9 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

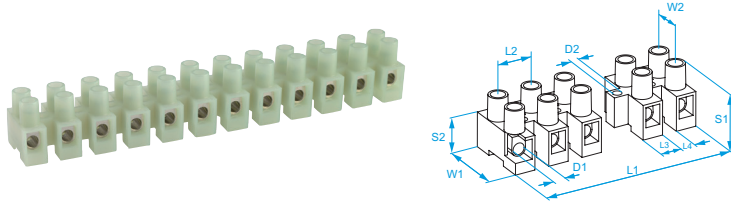
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	10	-	400	57	125	0,7
	-	18-8	600	50	105	1,2

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
95/1	1	<input type="checkbox"/> Natural	9,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	Contact BM
95/2	2	<input type="checkbox"/> Natural	24,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/3	3	<input type="checkbox"/> Natural	39 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/4	4	<input type="checkbox"/> Natural	54,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/5	5	<input type="checkbox"/> Natural	69,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/6	6	<input type="checkbox"/> Natural	84 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/7	7	<input type="checkbox"/> Natural	99 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/8	8	<input type="checkbox"/> Natural	114,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/9	9	<input type="checkbox"/> Natural	129,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/10	10	<input type="checkbox"/> Natural	145 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95/11	11	<input type="checkbox"/> Natural	160,2 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
M095	12	<input type="checkbox"/> Natural	174 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	10/200

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M095 SERIES WITH WIRE PROTECTION**



- INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2
- CONDUCTIVE BODY:** nickel-plated brass
- CAPTIVE SCREW IN:** galvanized steel (M4)
- WIRE PROTECTION:** stainless steel
- INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C
- CONDUCTOR TYPE:** rigid and flexible
- TEST VOLTAGE:** 2500 V
- STRIPPING LENGTH:** 9 mm
- PROTECTION GRADE:** IP20
- ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

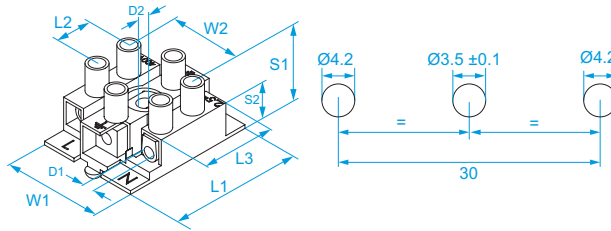
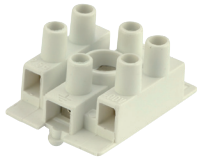
TERMINAL BLOCKS

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	6	-	400	41	125	0,7
	-	18-8	600	50	105	1,2

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
95CS1	1	<input type="checkbox"/> Natural	9,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS2	2	<input type="checkbox"/> Natural	24,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS3	3	<input type="checkbox"/> Natural	39 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS4	4	<input type="checkbox"/> Natural	54,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS5	5	<input type="checkbox"/> Natural	69,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS6	6	<input type="checkbox"/> Natural	84 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	Contact BM
95CS7	7	<input type="checkbox"/> Natural	99 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS8	8	<input type="checkbox"/> Natural	114,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS9	9	<input type="checkbox"/> Natural	129,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS10	10	<input type="checkbox"/> Natural	145 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95CS11	11	<input type="checkbox"/> Natural	160,2 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
M95CS	12	<input type="checkbox"/> Natural	174 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	10/10

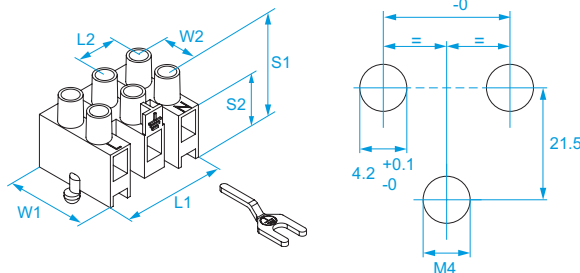
file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - 3-WAY - FOR DIRECT GROUNDING**


**INSULATING HOUSING:** polyamide (PA 6.6) natural color  
**CONDUCTIVE BODY:** nickel-plated brass  
**CAPTIVE SCREW IN:** galvanized steel (M3)  
**MARKING:** L ↓ N on the ways  
**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C  
**CONDUCTOR TYPE:** rigid and flexible  
**MAX OPERATING TEMPERATURE:** 100 °C  
**MAX SHORT-TIME TEMPERATURE:** 160 °C  
**TEST VOLTAGE:** 2500 V  
**STRIPPING LENGTH:** 11 mm  
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004  
**ASSEMBLY:** Grounding screw hole for metal sheets with thickness up to 1 mm:  $\varnothing 3,5 \pm 0,1$ . Drilling template as shown in the figure.  
**GROUNDING SCREW:** M4x10

Code	Section (mm <sup>2</sup> )	Ways	Rated voltage (V)	Test current (A)	Torque (Nm)	L1 (mm)	L2 (mm)	L3 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
M096	2,5	3	400	24	0,25	36	10	24	27	20,5	17,5	10	3,1	4,2	1000/1000


**MULTIWAY TERMINAL BLOCKS - NYLON - 3-WAY - FOR FIXING ON SHEET**


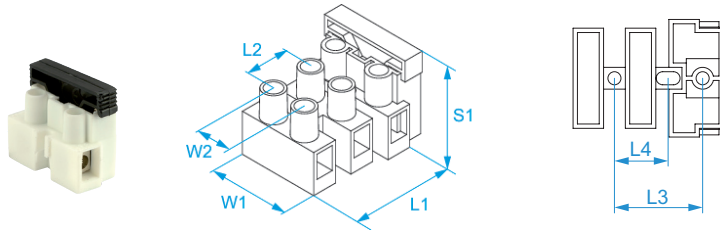
**INSULATING HOUSING:** polyamide (PA 6.6) white color  
**CONDUCTIVE BODY:** nickel-plated brass  
**CAPTIVE SCREW IN:** galvanized steel (M3)  
**GROUNDING FORK FOR M4 SCREW (T VERSION):** brass  
**MARKING:** L ↓ N on the ways  
**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C  
**CONDUCTOR TYPE:** rigid and flexible  
**MAX OPERATING TEMPERATURE:** 110 °C  
**MAX SHORT-TIME TEMPERATURE:** 160 °C  
**TEST VOLTAGE:** 2500 V  
**STRIPPING LENGTH:** 7 mm  
**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004  
**ASSEMBLY:** Drilling template as shown in the figure. Fasten on metal sheets with 0,6 ÷ 1 mm thickness by pressing the pins.

Code	Description	Section (mm <sup>2</sup> )	Rated voltage (V)	Test current (A)	Torque (Nm)	L1 (mm)	L2 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	
963		2,5	450	24	0,25	27	10	24,5	10	18,5	10,5	1000/1000
963CS	with stainless steel wire protection	2,5	450	24	0,25	27	10	24,5	10	18,5	10,5	1000/1000





**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 5 WAYS - WITH FUSE HOLDER - M097 SERIES**

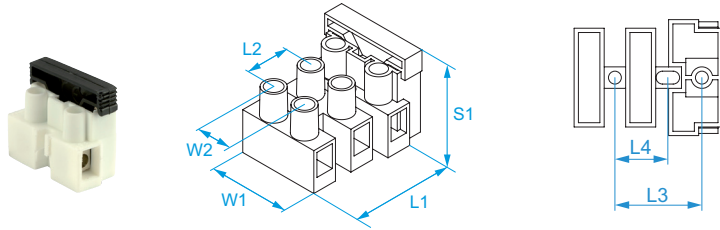


Standard version of the M097 series  
**INSULATING HOUSING:** polyamide (PA 6.6) white color  
**CONDUCTIVE BODY:** nickel-plated brass  
**CAPTIVE SCREW IN:** galvanized steel (M3)  
**FUSE:** 5x20 fuse compliant to IEC 127 (not included)  
**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C  
**CONDUCTOR TYPE:** rigid and flexible  
**MAX OPERATING TEMPERATURE:** 100 °C  
**MAX SHORT-TIME TEMPERATURE:** 160 °C  
**TEST VOLTAGE:** 2500 V  
**STRIPPING LENGTH:** 7 mm  
**ACCORDING TO STD.:** EN 60257, EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	450	24	100	0,25

Code	Ways	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	
971	1	12,85	10	20	10	21	10	22,7	100/100
972	2	22,05	10	20	10	21	10	22,7	100/100
973	3	32,05	10	20	10	21	10	22,7	100/100
974	4	42,05	10	20	10	21	10	22,7	100/100
975	5	52,05	10	20	10	21	10	22,7	100/100



**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 5 WAYS - WITH FUSE HOLDER - M097 SERIES WITH WIRE PROTECTION**


Wire protection version of the M097 series

**INSULATING HOUSING:** polyamide (PA 6.6) white color

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**FUSE:** 5x20 fuse compliant to IEC 127 (not included)

**INSULATION SELF-EXTINGUISHING:** EN 60695-2-10 a 850 °C

**CONDUCTOR TYPE:** rigid and flexible

**MAX OPERATING TEMPERATURE:** 100 °C

**MAX SHORT-TIME TEMPERATURE:** 160 °C

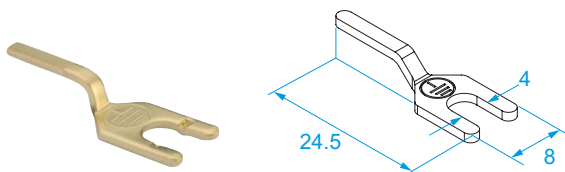
**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**ACCORDING TO STD.:** EN 60257, EN 60998-1: 2004, EN 60998-2-1: 2004

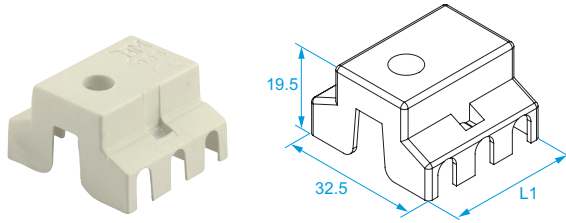
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	450	24	100	0,25

Code	Ways	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	
971CS	1	12,85	10	20	10	21	10	22,7	100/100
972CS	2	22,05	10	20	10	21	10	22,7	100/100
973CS	3	32,05	10	20	10	21	10	22,7	100/100
974CS	4	42,05	10	20	10	21	10	22,7	100/100
975CS	5	52,05	10	20	10	21	10	22,7	100/100


**ACCESSORIES FOR 963/963CS AND M092, M093, M094 SERIES - FORK TERMINAL FOR GROUNDING**


Code	Description	
963T	Fork terminal for grounding	100/1000

### ACCESSORIES FOR M093 SERIES - PROTECTION COVERS - FROM 3 TO 5 WAYS



**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

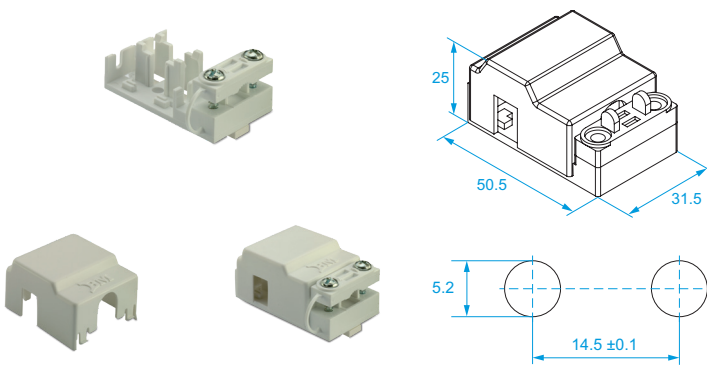
**MAX OPERATING TEMPERATURE:** 110 °C

**ASSEMBLY:** Snap onto M093 series terminal block or fasten with M3 screw through the through hole on the cover and terminal block.

Code	Terminal block ways	Color	L1 (mm)	
933	2-3	<input type="checkbox"/> Natural	30	1000/1000
935	4-5	<input type="checkbox"/> Natural	50	500/500

**HALOGEN FREE**

### ACCESSORIES FOR M093 AND M094 SERIES - TERMINAL-BLOCK BASES - 3 WAYS



Polyamide holder with cable clamp and cover for M093 and M094 3 series terminal blocks.

The holder can be supplied without cover.

**INSULATING HOUSING:** polyamide (PA 6.6) natural color UL 94 V2

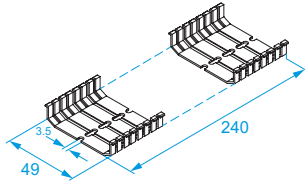
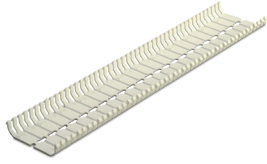
**MAX OPERATING TEMPERATURE:** 100 °C

**ASSEMBLY:** Drilling template as shown in the figure

Code	Description	Terminal block ways	
M0983	Holder for M093 series	3	1000/1000
M0984	Holder for M094 series	3	1000/1000
M098C	protection cover		500/500

**HALOGEN FREE**

## ACCESSORIES FOR M093 AND M094 SERIES - TERMINAL-BLOCK BASES - 24 WAYS



Accessory for properly routing input and output cables, to increase the insulation between terminal blocks and board, and to protect against accidental exit of conductors from the terminal block.

Pre-cut for easy sizing based on the number of terminal block poles.

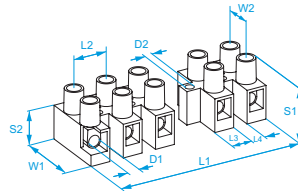
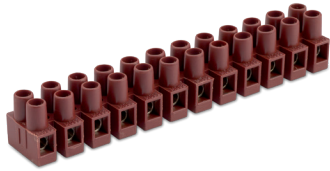
**INSULATING HOUSING:** polyamide (PA 6.6) white color UL 94 V2

**MAX OPERATING TEMPERATURE:** 125 °C

Code	Terminal block ways	
M099	1-24	50/200

**HALOGEN  
FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M092 SERIES WITH FIBERGLASS**



High temperature version of the M092 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	250	24	140	0,25
	-	20-16	600	10 (*)	110	0,5

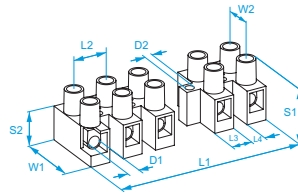
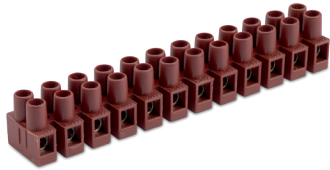
\* 15 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
92GF1	1	Brown	5,6 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF2	2	Brown	13,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF3	3	Brown	21,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF4	4	Brown	30 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF5	5	Brown	37,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF6	6	Brown	45,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	Contact BM
92GF7	7	Brown	54 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF8	8	Brown	61,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF9	9	Brown	69,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF10	10	Brown	77,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GF11	11	Brown	85,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
M92GF	12	Brown	93,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	50/50

file n° E 70156

**HALOGEN FREE**

## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M092 SERIES WITH FIBERGLASS AND WIRE PROTECTION



High temperature version with wire protection of the M092 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	250	24	140	0,25
	-	20-16	600	10 (*)	110	0,5

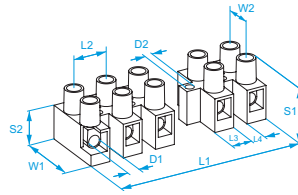
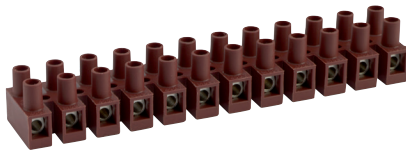
\* 15 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
92FS1	1	Brown	5,6 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS2	2	Brown	13,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS3	3	Brown	21,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS4	4	Brown	30 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS5	5	Brown	37,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS6	6	Brown	45,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	Contact BM
92FS7	7	Brown	54 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS8	8	Brown	61,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS9	9	Brown	69,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS10	10	Brown	77,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92FS11	11	Brown	85,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	
92GFCS	12	Brown	93,5 ± 1	8	5,5	2,5	15,2	6	15,3	8,7	3	2,6	50/700

file n° E 70156

**HALOGEN FREE**

## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093 SERIES WITH FIBERGLASS



High temperature version of the M093 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	4	-	400	32	150	0,25
	-	18-12	600	20 (*)	110	0,5

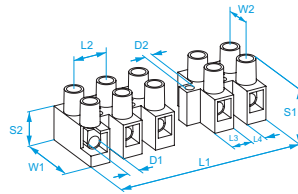
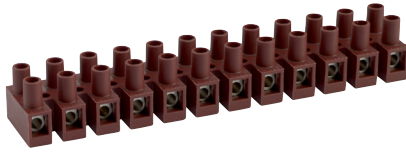
\* 30 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93GF1	1	Brown	6,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF2	2	Brown	16,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF3	3	Brown	26,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF4	4	Brown	36,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF5	5	Brown	46,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF6	6	Brown	56,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	Contact BM
93GF7	7	Brown	67 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF8	8	Brown	77 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF9	9	Brown	87 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF10	10	Brown	97 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GF11	11	Brown	107 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
M93GF	12	Brown	117 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	50/50

file n° E 70156

**HALOGEN FREE**

## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093 SERIES WITH FIBERGLASS AND WIRE PROTECTION



High temperature version with wire protection of the M093 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2.5	-	400	24	150	0,25
	-	18-12	600	20 (*)	110	0,5

\* 30 A rated for Factory Wiring Only

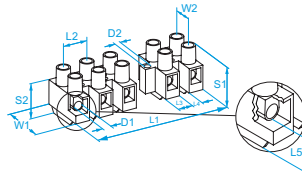
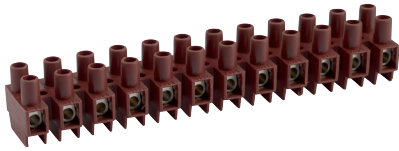
Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93FS1	1	Brown	6,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS2	2	Brown	16,7 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS3	3	Brown	26,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS4	4	Brown	36,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS5	5	Brown	46,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS6	6	Brown	56,6 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	Contact BM
93FS7	7	Brown	67 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS8	8	Brown	77 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS9	9	Brown	87 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS10	10	Brown	97 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93FS11	11	Brown	107 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	
93GFCS	12	Brown	117 ± 1	10	6,7	3,3	20,5	10	17,5	10	3,3	3,3	50/50

file n° E 70156

**HALOGEN FREE**



**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093H SERIES WITH FIBERGLASS**



High temperature version of the M093H series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**CLEARANCE:** 8.5 mm to withstand 8000V rated impulse voltage (EN 60335-1, par.29)

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	400	32	150	0,25
	-	18-12	600	20 (*)	110	0,5

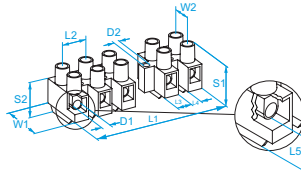
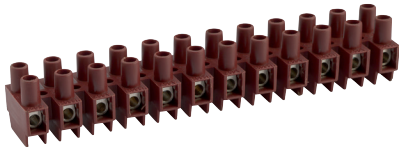
\* 30 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93HGF1	1	Brown	6,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF2	2	Brown	16,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF3	3	Brown	26,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF4	4	Brown	36,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF5	5	Brown	46,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF6	6	Brown	56,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	Contact BM
93HGF7	7	Brown	67 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF8	8	Brown	77 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF9	9	Brown	87 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF10	10	Brown	97 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HGF11	11	Brown	107 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93HGF	12	Brown	117 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	50/50

file n° E 70156

**HALOGEN FREE**

## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M093H SERIES WITH FIBERGLASS AND WIRE PROTECTION



High temperature version with wire protection of the M093H series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7 mm

**PROTECTION GRADE:** IP20

**CLEARANCE:** 8.5 mm to withstand 8000V rated impulse voltage (EN 60335-1, par.29)

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	2,5	-	400	24	150	0,25
	-	18-12	600	20 (*)	110	0,5

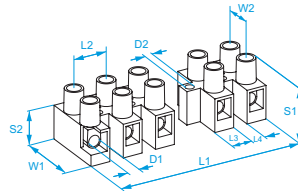
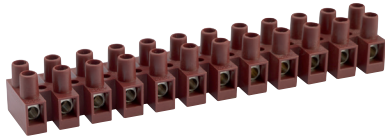
\* 30 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
93HFS1	1	Brown	6,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS2	2	Brown	16,7 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS3	3	Brown	26,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS4	4	Brown	36,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS5	5	Brown	46,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS6	6	Brown	56,6 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	Contact BM
93HFS7	7	Brown	67 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS8	8	Brown	77 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS9	9	Brown	87 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS10	10	Brown	97 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
93HFS11	11	Brown	107 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	
M93HGFC5	12	Brown	117 ± 1	10	6,7	3,4	8,5	20,5	10	20	12,5	3,3	3,3	50/50

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M094 SERIES WITH FIBERGLASS**



High temperature version of the M094 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3,5)

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7.5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	6	-	400	41	140	0,7
	-	18-10	600	30 (*)	110	0,9

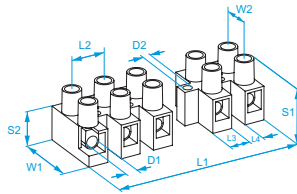
\* 40 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
94GF1	1	Brown	7,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF2	2	Brown	19,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF3	3	Brown	31,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF4	4	Brown	43,6 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF5	5	Brown	55,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF6	6	Brown	68 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	Contact BM
94GF7	7	Brown	80 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF8	8	Brown	92 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF9	9	Brown	104 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF10	10	Brown	116 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GF11	11	Brown	128 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
M94GF	12	Brown	140 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	50/50

file n° E 70156

**HALOGEN FREE**

## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M094 SERIES WITH FIBERGLASS AND WIRE PROTECTION



High temperature version with wire protection of the M094 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M3,5)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 7.5 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	4	-	400	23	140	0,7
	-	18-10	600	30 (*)	110	0,9

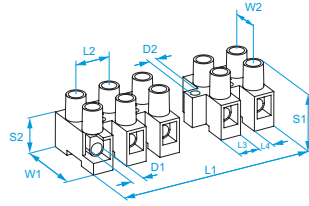
\* 40 A rated for Factory Wiring Only

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
94FS1	1	Brown	7,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS2	2	Brown	19,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS3	3	Brown	31,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS4	4	Brown	43,6 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS5	5	Brown	55,5 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS6	6	Brown	68 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	Contact BM
94FS7	7	Brown	80 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS8	8	Brown	92 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS9	9	Brown	104 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS11	11	Brown	128 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94FS10	10	Brown	116 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	
94GFCS	12	Brown	140 ± 1	12	7,3	4,7	23	10	20,7	12,2	4,2	3,1	50/300

file n° E 70156

**HALOGEN FREE**

**MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M095 SERIES WITH FIBERGLASS**



High temperature version of the M095 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M4)

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 9 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

TERMINAL BLOCKS

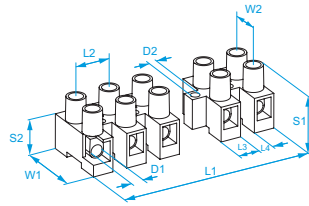
	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	10	-	400	57	140	0,7
	-	18-8	600	50	110	1,2

Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
95GF1	1	Brown	9,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF2	2	Brown	24,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF3	3	Brown	39 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF4	4	Brown	54,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF5	5	Brown	69,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF6	6	Brown	84 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	Contact BM
95GF7	7	Brown	99 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF8	8	Brown	114,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF9	9	Brown	129,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF10	10	Brown	145 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GF11	11	Brown	160,2 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
M95GF	12	Brown	174 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	10/10

file n° E 70156

**HALOGEN FREE**

## MULTIWAY TERMINAL BLOCKS - NYLON - FROM 1 TO 12 WAYS - M095 SERIES WITH FIBERGLASS AND WIRE PROTECTION



High temperature version with wire protection of the M095 series

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel (M4)

**WIRE PROTECTION:** stainless steel

**INSULATION SELF-EXTINGUISHING:** EN 60335-1: 2002+A2:2006 (par. 30.2.3), EN 60695-2-10 a 850 °C, EN 60695-2-11

**CONDUCTOR TYPE:** rigid and flexible

**MAX SHORT-TIME TEMPERATURE:** 200 °C

**TEST VOLTAGE:** 2500 V

**STRIPPING LENGTH:** 9 mm

**PROTECTION GRADE:** IP20

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

	Section (mm <sup>2</sup> )	Section (AWG)	Rated voltage (V)	Test current (A)	Max operating temperature (°C)	Torque (Nm)
	6	-	400	41	140	0,7
	-	18-8	600	50	110	1,2

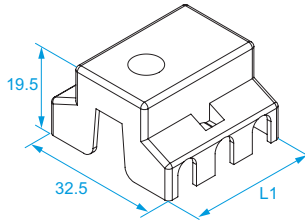
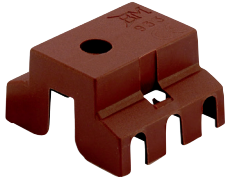
Code	Ways	Color	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	S2 (mm)	D1 (mm)	D2 (mm)	
95FS1	1	Brown	9,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS2	2	Brown	24,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS3	3	Brown	39 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS4	4	Brown	54,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS5	5	Brown	69,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS6	6	Brown	84 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	Contact BM
95FS7	7	Brown	99 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS8	8	Brown	114,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS9	9	Brown	129,5 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS10	10	Brown	145 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95FS11	11	Brown	160,2 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	
95GFCS	12	Brown	174 ± 1	15	9,4	5,6	25,3	11	25,7	15,7	5	4,2	10/200

**ACCESSORIES FOR M093 SERIES - PROTECTION COVERS WITH FIBERGLASS - FROM 3 TO 5 WAYS**

**INSULATING HOUSING:** polyamide (PA 6.6) brown color and 25% fiberglass UL 94 V0

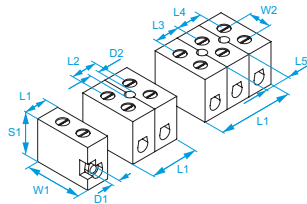
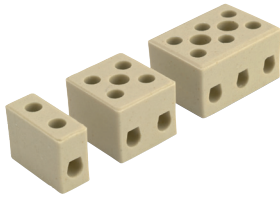
**MAX OPERATING TEMPERATURE:** 150 °C

**ASSEMBLY:** Snap onto M093 series terminal block or fasten with M3 screw through the through hole on the cover and terminal block.



Code	Terminal block ways	Color	L1 (mm)	
933GF	2-3	Brown	30	1000/1000
935GF	4-5	Brown	50	500/500

**HALOGEN  
FREE**

**MULTIWAY TERMINAL BLOCKS - STEATITE**


Terminal blocks for high temperature applications

**INSULATING HOUSING:** steatite

**CONDUCTIVE BODY:** brass

**CONDUCTOR TYPE:** rigid and flexible

**MOUNTING HOLE:** through hole (no threaded)

**MAX OPERATING TEMPERATURE (METALLIC PARTS):** 300 °C

**MAX OPERATING TEMPERATURE (INSULATING HOUSING):** 1000 °C

**PROTECTION GRADE:** IP00

**ACCORDING TO STD.:** EN 60998-1: 2004, EN 60998-2-1: 2004

Code	Section (mm <sup>2</sup> )	Ways	Test current (A)	Screw	Torque (Nm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	L5 (mm)	W1 (mm)	W2 (mm)	S1 (mm)	D1 (mm)	D2 (mm)	
9516	4	1	32	M3	0,25	10					25	10	18,5	3,1		117/117
9517		2	32	M3	0,25	22	11,5				25	10	18,5	3,1	4,1	54/54
9518		3	32	M3	0,25	34		11,5	11,5	11,5	25	10	18,5	3,1	4,1	36/36
9519	6	1	41	M3.5	0,4	11					26	10	20,5	4,2		117/117
9520		2	41	M3.5	0,4	24	12,5				26	10	20,5	4,2	4,1	54/54
9521		3	41	M3.5	0,4	37		11,5	11,5	11,5	26	10	20,5	4,2	4,1	36/36
9522	16	1	76	M4	0,7	15					32,5	13	23	6		54/54
9523		2	76	M4	0,7	30	14,5				32,5	13	23	6	4,1	27/27
9524		3	76	M4	0,7	45		11,5	11,5	11,5	32,5	13	23	6	4,1	18/18









# CABLE-GLANDS

NYLON CABLE GLANDS	pag. 166
BRASS CABLE GLANDS	pag. 182
ACCESSORIES	pag. 189

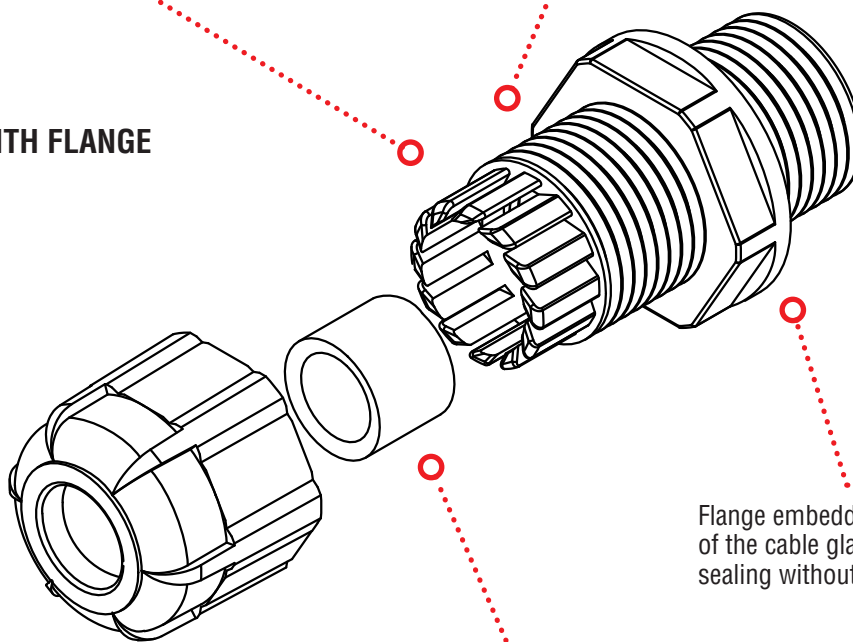
# CERTIFIED CABLE GLANDS FOR ELECTRICAL INSTALLATIONS

CABLE-GLANDS

Sealing slots that allow for smooth progressive clamping and provide remarkable resistance to the cable's traction and twist.

Cable gland with a thread design engineered to ensure excellent mechanical sealing and prevent accidental unscrewing.

## CABLE GLAND WITH FLANGE PG THREAD IP68



Flange embedded directly on the body of the cable gland guaranteeing IP68 sealing without the need of a gasket.

Pressure-screw with strengthened hexagon that allows easy and secure screwing.

Nitrile rubber inner gasket that guarantees perfect IP68 sealing on the cable.



file n° E171361



file n° E171361

**IP68**

Find detailed information about this product on page 174.

## CABLE GLANDS: CORRECT INSTALLATION

### THREAD DIAMETER · INSTALLATION HOLE DIAMETER

#### Metric Thread EN 60423

		M 12x1,5	M 16x1,5	M 20x1,5	M 25x1,5	M 32x1,5	M 40x1,5	M 50x1,5	M 63x1,5
<b>Thread diameter</b>	mm	12	16	20	25	32	40	50	63
<b>Hole diameter</b>	mm	12,5	16,5	20,5	25,5	32,5	40,5	50,5	63,5

#### PG Thread DIN 40430

		PG 7	PG 9	PG 11	PG 13,5	PG 16	PG 21	PG 29	PG 36	PG 42	PG 48
<b>Thread diameter</b>	mm	12,5	15,2	18,6	20,4	22,5	28,3	37	47	54	59,3
<b>Hole diameter</b>	mm	13	15,5	19	21	23	28,5	37,5	47,5	54,5	60

#### GAS Thread ISO 228/1

		GAS					GAS 1				GAS 2		GAS 3
		1/4	3/8	1/2	5/8	3/4	GAS 1	1/8	1/4	1/2	GAS 2	1/2	GAS 3
<b>Thread diameter</b>	mm	13,2	16,7	21	22,9	26,4	33,3	37,9	41,9	47,8	59,6	75,2	87,9
<b>Hole diameter</b>	mm	13,5	17	21,5	23,5	27	33,5	38,5	42,5	48	60	75,5	88,5

### MINIMUM TORQUE VALUE TO GUARANTEE IP68 PROTECTION

#### Metric Thread EN 60423

		M 12x1,5	M 16x1,5	M 20x1,5	M 25x1,5	M 32x1,5	M 40x1,5	M 50x1,5	M 63x1,5
<b>Head torque</b>	(Nm)	2	2,5	5	6	7	10	11,5	12,5

#### PG Thread DIN 40430

		PG 7	PG 9	PG 11	PG 13,5	PG 16	PG 21	PG 29	PG 36	PG 42	PG 48
<b>Head torque</b>	(Nm)	2,5	3,75	3,75	5	6	7	10	11,5	12,5	12,5

# NYLON CABLE GLANDS

## CLAMPING RANGE

### METRIC THREAD IP68 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																								
M12x1,5	3 - 6,5																																																																																		
M16x1,5	4 - 8																																																																																		
M20x1,5	6 - 12																																																																																		
M25x1,5	13 - 18																																																																																		
M32x1,5	16 - 21																																																																																		
M40x1,5	20 - 26																																																																																		
M50x1,5	32 - 38																																																																																		
M63x1,5	37 - 44																																																																																		

### PG THREAD IP68 CLAMPING RANGE (UL, CSA)

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																											
PG 7	3 - 6,5																																																																					
PG 9	4 - 8																																																																					
PG 11	5 - 10																																																																					
PG 13,5	6 - 12																																																																					
PG 16	10 - 13																																																																					
PG 21	13 - 18																																																																					
PG 29	18 - 25																																																																					
PG 36	25 - 32																																																																					

### PG THREAD IP68 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																					
PG 7	3 - 6,5																																																																															
PG 9	4 - 8																																																																															
PG 11	5 - 10																																																																															
PG 13,5	6 - 11																																																																															
PG 16	10 - 13																																																																															
PG 21	13 - 18																																																																															
PG 29	18 - 25																																																																															
PG 36	22 - 32																																																																															
PG 42	28 - 38																																																																															
PG 48	35 - 45																																																																															

### PG THREAD IP54 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																					
PG 7	3,5 - 6																																																																															
PG 9	4,5 - 7																																																																															
PG 11	6 - 9																																																																															
PG 13,5	9 - 12																																																																															
PG 16	11 - 14																																																																															
PG 21	14 - 18																																																																															
PG 29	18 - 25																																																																															
PG 36	25 - 32																																																																															
PG 42	30 - 38																																																																															
PG 48	38 - 44																																																																															

### GAS THREAD IP54 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																					
GAS 3/8"	7 - 10																																																															
GAS 1/2"	11 - 13																																																															
GAS 5/8"	13,5 - 15																																																															
GAS 3/4"	16 - 18																																																															
GAS 1"	19 - 22																																																															

# BRASS CABLE GLANDS

## CLAMPING RANGE

### METRIC THREAD IP68 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																	
M12x1,5	3 - 6,5																																																																											
M16x1,5	4 - 8																																																																											
M20x1,5	6 - 12																																																																											
M25x1,5	10 - 14																																																																											
M32x1,5	15 - 22																																																																											
M40x1,5	18 - 25																																																																											
M50x1,5	32 - 38																																																																											
M63x1,5	37 - 44																																																																											

### PG THREAD IP68 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																	
PG 7	3 - 6,5																																																																											
PG 9	4 - 8																																																																											
PG 11	5 - 10																																																																											
PG 13,5	6 - 12																																																																											
PG 16	10 - 13																																																																											
PG 21	13 - 18																																																																											
PG 29	18 - 25																																																																											
PG 36	25 - 32																																																																											
PG 42	32 - 38																																																																											
PG 48	37 - 44																																																																											

### METRIC THREAD IP54 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																	
M12x1,5	4 - 6																																																																											
M16x1,5	8 - 10																																																																											
M20x1,5	10 - 12																																																																											
M25x1,5	17 - 19																																																																											
M32x1,5	19 - 22																																																																											
M40x1,5	26 - 30																																																																											
M50x1,5	39 - 41																																																																											
M63x1,5	43 - 45																																																																											

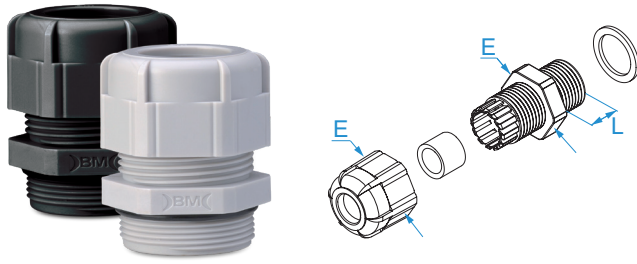
### METRIC THREAD IP54 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45																																							
PG 7	4 - 6																																																																																	
PG 9	8 - 10																																																																																	
PG 11	8 - 10																																																																																	
PG 13,5	10 - 12																																																																																	
PG 16	12 - 14																																																																																	
PG 21	17 - 19																																																																																	
PG 29	26 - 28																																																																																	
PG 36	33 - 35																																																																																	
PG 42	39 - 41																																																																																	
PG 48	43 - 45																																																																																	

### GAS THREAD IP54 CLAMPING RANGE

	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	26	27	28	29	30	31	32	33	34	35	43	44	45	55	56	57	67	68	69																																																																									
GAS 1/4"	4 - 6																																																																																																															
GAS 3/8"	8 - 10																																																																																																															
GAS 1/2"	10 - 12																																																																																																															
GAS 5/8"	12 - 14																																																																																																															
GAS 3/4"	17 - 19																																																																																																															
GAS 1"	19 - 22																																																																																																															
GAS 1 1/8"	26 - 28																																																																																																															
GAS 1 1/4"	26 - 30																																																																																																															
GAS 1 1/2"	33 - 35																																																																																																															
GAS 2"	43 - 45																																																																																																															
GAS 2 1/2"	55 - 57																																																																																																															
GAS 3"	67 - 69																																																																																																															

**NYLON CABLE GLANDS - METRIC THREAD - IP68 - STANDARD**



**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

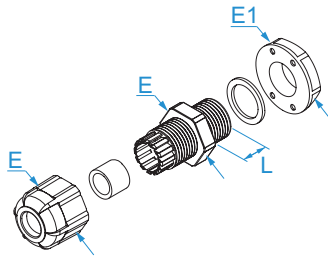
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** don't remove or move the gasket; tighten on a flat and smooth surface.

CABLE-GLANDS

Code	Color	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	
4912	Grey RAL 7035	M 12 x 1.5	3 - 6,5	9	16	50/250
4912N	Black RAL 9005		3 - 6,5	9	16	50/250
4917	Grey RAL 7035	M 16 x 1.5	4 - 8	9	19	50/250
4917N	Black RAL 9005		4 - 8	9	19	50/250
4920	Grey RAL 7035	M 20 x 1.5	6 - 12	10	24	25/125
4920N	Black RAL 9005		6 - 12	10	24	25/125
4925	Grey RAL 7035	M 25 x 1.5	13 - 18	12	33	25/125
4925N	Black RAL 9005		13 - 18	12	33	25/125
4932	Grey RAL 7035	M 32 x 1.5	16 - 21	12	36	20/100
4932N	Black RAL 9005		16 - 21	12	36	20/100
4940	Grey RAL 7035	M 40 x 1.5	20 - 26	15	46	10/50
4940N	Black RAL 9005		20 - 26	15	46	10/50
4950	Grey RAL 7035	M 50 x 1.5	32 - 38	18	60	5/25
4950N	Black RAL 9005		32 - 38	18	60	5/25
4963	Grey RAL 7035	M 63 x 1.5	37 - 44	18	68	5/5
4963N	Black RAL 9005		37 - 44	18	68	5/5



**NYLON CABLE GLANDS - METRIC THREAD - IP68 - WITH LOCKNUT**


**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**LOCKNUT:** with flange

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

**ACCORDING TO STD.:** EN 62444:2013

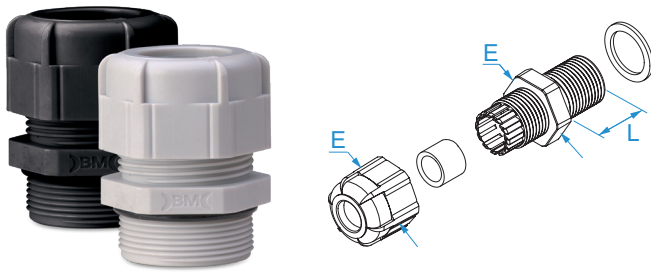
**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

Code	Color	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
4712	Grey RAL 7035	M 12 x 1.5	3 - 6,5	9	16	17	25/250
4712N	Black RAL 9005		3 - 6,5	9	16	17	25/250
4717	Grey RAL 7035	M 16 x 1.5	4 - 8	9	19	22	25/250
4717N	Black RAL 9005		4 - 8	9	19	22	25/250
4720	Grey RAL 7035	M 20 x 1.5	6 - 12	10	24	26	25/250
4720N	Black RAL 9005		6 - 12	10	24	26	25/250
4725	Grey RAL 7035	M 25 x 1.5	13 - 18	12	33	32	20/100
4725N	Black RAL 9005		13 - 18	12	33	32	20/100
4732	Grey RAL 7035	M 32 x 1.5	16 - 21	12	36	41	20/100
4732N	Black RAL 9005		16 - 21	12	36	41	20/100
4740	Grey RAL 7035	M 40 x 1.5	20 - 26	15	46	49	10/10
4740N	Black RAL 9005		20 - 26	15	46	49	10/10
4750	Grey RAL 7035	M 50 x 1.5	32 - 38	18	60	61	5/5
4750N	Black RAL 9005		32 - 38	18	60	61	5/5
4763	Grey RAL 7035	M 63 x 1.5	37 - 44	18	68	73	5/5
4763N	Black RAL 9005		37 - 44	18	68	73	5/5





**NYLON CABLE GLANDS - METRIC THREAD - IP68 - WITH LONG THREAD**



**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

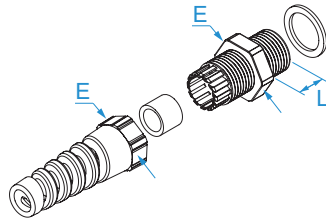
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

CABLE-GLANDS

Code	Color	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	
4912L	Grey RAL 7035	M 12 x 1.5	3 - 6,5	15	16	25/25
4912LN	Black RAL 9005		3 - 6,5	15	16	25/25
4917L	Grey RAL 7035	M 16 x 1.5	4 - 8	15	19	25/25
4917LN	Black RAL 9005		4 - 8	15	19	25/25
4920L	Grey RAL 7035	M 20 x 1.5	6 - 12	15	24	10/10
4920LN	Black RAL 9005		6 - 12	15	24	10/10
4925L	Grey RAL 7035	M 25 x 1.5	13 - 18	15	33	10/10
4925LN	Black RAL 9005		13 - 18	15	33	10/10
4932L	Grey RAL 7035	M 32 x 1.5	16 - 21	15	36	10/10
4932LN	Black RAL 9005		16 - 21	15	36	10/10
4940L	Grey RAL 7035	M 40 x 1.5	20 - 26	18	46	5/5
4940LN	Black RAL 9005		20 - 26	18	46	5/5
4950L	Grey RAL 7035	M 50 x 1.5	32 - 38	20	60	3/3
4950LN	Black RAL 9005		32 - 38	20	60	3/3
4963L	Grey RAL 7035	M 63 x 1.5	37 - 44	20	68	3/3
4963LN	Black RAL 9005		37 - 44	20	68	3/3



**NYLON CABLE GLANDS · METRIC THREAD · IP68 · WITH SPIRAL CABLE PROTECTION**


**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

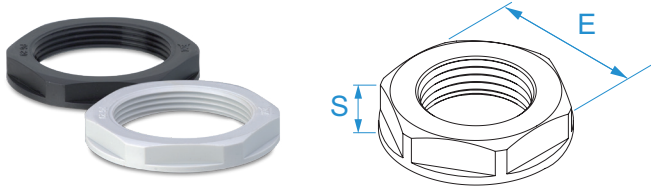
**ACCORDING TO STD.:** EN 62444:2013

Code	Color	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	
4912S	Grey RAL 7035	M 12 x 1.5	3 - 6,5	15	16	25/25
4912SN	Black RAL 9005		3 - 6,5	15	16	25/25
4917S	Grey RAL 7035	M 16 x 1.5	4 - 8	15	19	25/25
4917SN	Black RAL 9005		4 - 8	15	19	25/25
4920S	Grey RAL 7035	M 20 x 1.5	6 - 12	15	24	10/10
4920SN	Black RAL 9005		6 - 12	15	24	10/10
4925S	Grey RAL 7035	M 25 x 1.5	13 - 18	15	33	10/10
4925SN	Black RAL 9005		13 - 18	15	33	10/10



**ACCESSORIES FOR NYLON CABLE GLANDS: METRIC THREAD · HEXAGONAL LOCKNUTS WITH FLANGE**

**MATERIAL:** polyamide reinforced with fiberglass  
**OPERATING TEMPERATURE:** from -20 °C to +90 °C



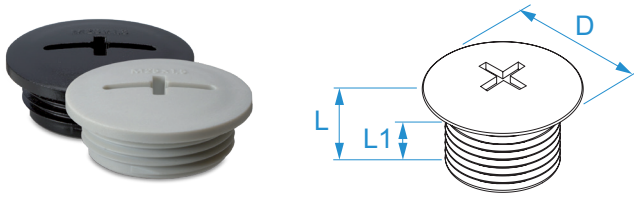
CABLE-GLANDS

Code	Color	Metric thread size (EN60423)	E wrench (nut)	S (mm)	
4812	Grey RAL 7035	M 12 x 1.5	17	5	100/500
4812N	Black RAL 9005		17	5	100/500
4817	Grey RAL 7035	M 16 x 1.5	22	5	100/500
4817N	Black RAL 9005		22	5	100/500
4820	Grey RAL 7035	M 20 x 1.5	26	6	100/500
4820N	Black RAL 9005		26	6	100/500
4825	Grey RAL 7035	M 25 x 1.5	32	6	100/500
4825N	Black RAL 9005		32	6	100/500
4832	Grey RAL 7035	M 32 x 1.5	41	7	50/50
4832N	Black RAL 9005		41	7	50/50
4840	Grey RAL 7035	M 40 x 1.5	50	7	25/25
4840N	Black RAL 9005		50	7	25/25
4850	Grey RAL 7035	M 50 x 1.5	60	8	25/25
4850N	Black RAL 9005		60	8	25/25
4863	Grey RAL 7035	M 63 x 1.5	75	8	10/10
4863N	Black RAL 9005		75	8	10/10

**HALOGEN FREE**

**ACCESSORIES FOR NYLON CABLE GLANDS: METRIC THREAD · IP56 · STOP-ENDS**

**MATERIAL:** polyamide reinforced with fiberglass  
**OPERATING TEMPERATURE:** from -40 °C to +100 °C  
**ASSEMBLY:** tighten on a flat and smooth surface



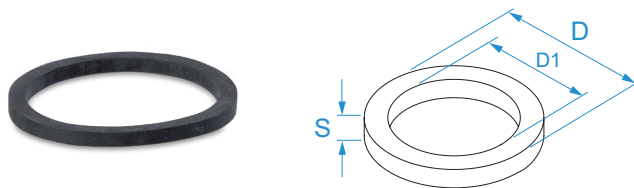
Code	Color	Metric thread size (EN60423)	D (mm)	L (mm)	L1 (mm)	
4612	Grey RAL 7035	M 12 x 1.5	15	8	6	100/100
4612N	Black RAL 9005		15	8	6	100/100
4616	Grey RAL 7035	M 16 x 1.5	20	9	6	100/100
4616N	Black RAL 9005		20	9	6	100/100
4620	Grey RAL 7035	M 20 x 1.5	24	9,5	6	100/100
4620N	Black RAL 9005		24	9,5	6	100/100
4625	Grey RAL 7035	M 25 x 1.5	30	10	8	100/100
4625N	Black RAL 9005		30	10	8	100/100
4632	Grey RAL 7035	M 32 x 1.5	37	13,5	8	100/100
4632N	Black RAL 9005		37	13,5	8	100/100
4640	Grey RAL 7035	M 40 x 1.5	46	15	8	50/50
4640N	Black RAL 9005		46	15	8	50/50
4650	Grey RAL 7035	M 50 x 1.5	56	16	10	50/50
4650N	Black RAL 9005		56	16	10	50/50
4663	Grey RAL 7035	M 63 x 1.5	70	16	12	25/25
4663N	Black RAL 9005		70	16	12	25/25

**HALOGEN**  
**FREE**

**IP56**

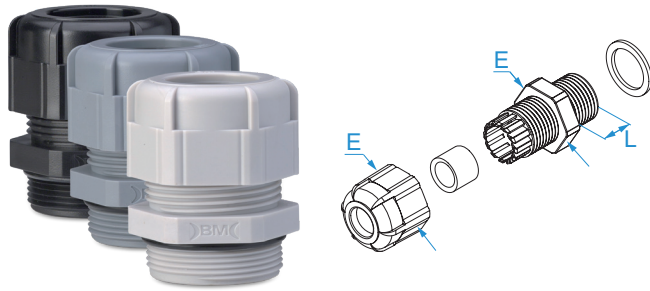
**ACCESSORIES FOR NYLON CABLE GLANDS: METRIC THREAD · FLAT GASKETS**

**MATERIAL:** EPDM, 60 Shore A  
**OPERATING TEMPERATURE:** from -40 °C to +140 °C



Code	For thread	D (mm)	D1 (mm)	S (mm)	
4912G	M 12	16	11,8	2	100/500
4917G	M 16	20	15,8	2	100/500
4920G	M 20	24	19,8	2	100/500
4925G	M 25	29	24,8	2	100/500
4932G	M 32	36	31,8	2	100/500
4940G	M 40	46	39,8	2	100/500
4950G	M 50	56	49,8	2	100/100
4963G	M 63	69	62,8	2	100/100

**NYLON CABLE GLANDS - PG THREAD - IP68 - STANDARD**



**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

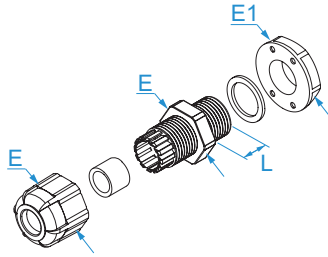
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

CABLE-GLANDS

Code	Color	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	
4007	Grey RAL 7035	PG 7	3 - 6,5	9	16	50/500
4307	Grey RAL 7001		3 - 6,5	9	16	50/500
4007N	Black RAL 9005		3 - 6,5	9	16	50/500
4009	Grey RAL 7035	PG 9	4 - 8	9	19	50/500
4309	Grey RAL 7001		4 - 8	9	19	50/500
4009N	Black RAL 9005		4 - 8	9	19	50/500
4011	Grey RAL 7035	PG 11	5 - 10	9	22	25/25
4311	Grey RAL 7001		5 - 10	9	22	25/25
4011N	Black RAL 9005		5 - 10	9	22	25/25
4013	Grey RAL 7035	PG 13.5	6 - 11	10	24	25/25
4313	Grey RAL 7001		6 - 11	10	24	25/25
4013N	Black RAL 9005		6 - 11	10	24	25/25
4016	Grey RAL 7035	PG 16	10 - 13	10	27	25/25
4316	Grey RAL 7001		10 - 13	10	27	25/25
4016N	Black RAL 9005		10 - 13	10	27	25/25
4021	Grey RAL 7035	PG 21	13 - 18	12	33	20/200
4321	Grey RAL 7001		13 - 18	12	33	20/200
4021N	Black RAL 9005		13 - 18	12	33	20/200
4029	Grey RAL 7035	PG 29	18 - 25	12	42	10/100
4329	Grey RAL 7001		18 - 25	12	42	10/100
4029N	Black RAL 9005		18 - 25	12	42	10/100
4036	Grey RAL 7035	PG 36	25 - 32	15	52	5/50
4336	Grey RAL 7001		25 - 32	15	52	5/50
4036N	Black RAL 9005		25 - 32	15	52	5/50
4042	Grey RAL 7035	PG 42	32 - 38	18	60	5/50
4342	Grey RAL 7001		32 - 38	18	60	5/50
4042N	Black RAL 9005		32 - 38	18	60	5/50
4048	Grey RAL 7035	PG 48	37 - 44	18	68	5/50
4348	Grey RAL 7001		37 - 44	18	68	5/50
4048N	Black RAL 9005		37 - 44	18	68	5/50



**NYLON CABLE GLANDS · PG THREAD · IP68 · WITH LOCKNUT**


**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**LOCKNUT:** with flange

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

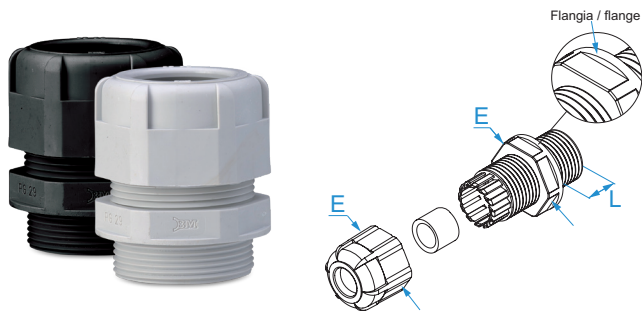
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

Code	Color	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
4707	Grey RAL 7035	PG 7	3 - 6,5	9	16	19	10/100
4707N	Black RAL 9005		3 - 6,5	9	16	19	10/100
4709	Grey RAL 7035	PG 9	4 - 8	9	19	22	10/100
4709N	Black RAL 9005		4 - 8	9	19	22	10/100
4711	Grey RAL 7035	PG 11	5 - 10	9	22	24	10/100
4711N	Black RAL 9005		5 - 10	9	22	24	10/100
4713	Grey RAL 7035	PG 13,5	6 - 11	10	24	27	10/100
4713N	Black RAL 9005		6 - 11	10	24	27	10/100
4716	Grey RAL 7035	PG 16	10 - 13	10	27	30	10/100
4716N	Black RAL 9005		10 - 13	10	27	30	10/100
4721	Grey RAL 7035	PG 21	13 - 18	12	33	36	10/100
4721N	Black RAL 9005		13 - 18	12	33	36	10/100
4729	Grey RAL 7035	PG 29	18 - 25	12	42	46	10/50
4729N	Black RAL 9005		18 - 25	12	42	46	10/50
4736	Grey RAL 7035	PG 36	25 - 32	15	52	56	5/5
4736N	Black RAL 9005		25 - 32	15	52	56	5/5
4742	Grey RAL 7035	PG 42	32 - 38	18	60	65	5/5
4742N	Black RAL 9005		32 - 38	18	60	65	5/5
4748	Grey RAL 7035	PG 48	37 - 44	18	68	69	5/5
4748N	Black RAL 9005		37 - 44	18	68	69	5/5



**NYLON CABLE GLANDS - PG THREAD - IP68 - WITH FLANGE**



**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET:** NBR (nitrile rubber), 60 Shore A

**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** no gasket needed; tighten on a flat and smooth surface.

CABLE-GLANDS

Code	Color	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	
4907**	Grey RAL 7035	PG 7	3 - 6,5	8	15	50/250
49071**	Black RAL 9005		3 - 6,5	8	15	50/250
4909**	Grey RAL 7035	PG 9	4 - 8	8	19	50/250
49091**	Black RAL 9005		4 - 8	8	19	50/250
4911**	Grey RAL 7035	PG 11	5 - 10	8	22	50/250
49111**	Black RAL 9005		5 - 10	8	22	50/250
4913*	Grey RAL 7035	PG 13,5	6 - 12	10	24	50/250
49131*	Black RAL 9005		6 - 12	10	24	50/250
4916*	Grey RAL 7035	PG 16	10 - 14	10	27	50/250
49161*	Black RAL 9005		10 - 14	10	27	50/250
4921*	Grey RAL 7035	PG 21	13 - 18	11	33	25/125
49211*	Black RAL 9005		13 - 18	11	33	25/125
4929	Grey RAL 7035	PG 29	18 - 25	11	42	20/100
49291	Black RAL 9005		18 - 25	11	42	20/100
4936*	Grey RAL 7035	PG 36	22 - 32	13	53	10/50
49361*	Black RAL 9005		22 - 32	13	53	10/50

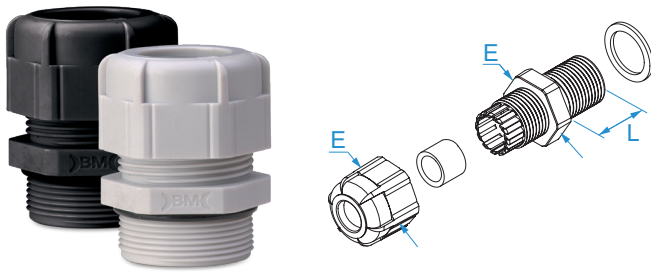


\* file n° E171361



\*\* file n° E171361



**NYLON CABLE GLANDS - PG THREAD - IP68 - WITH LONG THREAD**


**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

**ACCORDING TO STD.:** EN 62444:2013

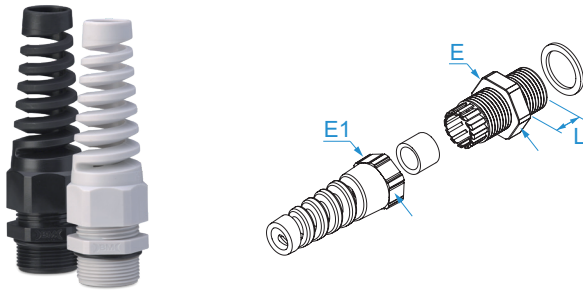
**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

Code	Color	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	
4007L	Grey RAL 7035	PG 7	3 - 6,5	15	16	25/25
4007LN	Black RAL 9005		3 - 6,5	15	16	25/25
4009L	Grey RAL 7035	PG 9	4 - 8	15	19	25/25
4009LN	Black RAL 9005		4 - 8	15	19	25/25
4011L	Grey RAL 7035	PG 11	5 - 10	15	22	25/25
4011LN	Black RAL 9005		5 - 10	15	22	25/25
4013L	Grey RAL 7035	PG 13,5	6 - 11	15	24	10/10
4013LN	Black RAL 9005		6 - 11	15	24	10/10
4016L	Grey RAL 7035	PG 16	10 - 13	15	27	10/10
4016LN	Black RAL 9005		10 - 13	15	27	10/10
4021L	Grey RAL 7035	PG 21	13 - 18	15	33	10/10
4021LN	Black RAL 9005		13 - 18	15	33	10/10
4029L	Grey RAL 7035	PG 29	18 - 25	15	42	10/10
4029LN	Black RAL 9005		18 - 25	15	42	10/10
4036L	Grey RAL 7035	PG 36	25 - 32	18	52	5/5
4036LN	Black RAL 9005		25 - 32	18	52	5/5
4042L	Grey RAL 7035	PG 42	32 - 38	20	60	3/3
4042LN	Black RAL 9005		32 - 38	20	60	3/3
4048L	Grey RAL 7035	PG 48	37 - 44	20	68	3/3
4048LN	Black RAL 9005		37 - 44	20	68	3/3





**NYLON CABLE GLANDS - PG THREAD - IP68 - WITH SPIRAL CABLE PROTECTION**



**MATERIAL:** polyamide (PA 6.6), self-extinguishing according to UL 94 V2 and IEC 695-2-1 (850 °C)

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**INNER GASKET AND WASHER:** NBR (nitrile rubber), 70 Shore A

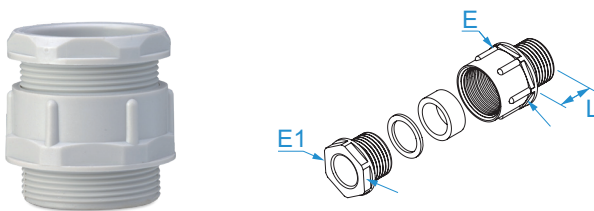
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

Code	Color	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	
4007S	Grey RAL 7035	PG 7	3 - 6,5	15	16	25/25
4007SN	Black RAL 9005		3 - 6,5	15	16	25/25
4009S	Grey RAL 7035	PG 9	4 - 8	15	19	25/25
4009SN	Black RAL 9005		4 - 8	15	19	25/25
4011S	Grey RAL 7035	PG 11	5 - 10	15	22	10/10
4011SN	Black RAL 9005		5 - 10	15	22	10/10
4013S	Grey RAL 7035	PG 13,5	6 - 11	15	24	10/10
4013SN	Black RAL 9005		6 - 11	15	24	10/10
4016S	Grey RAL 7035	PG 16	10 - 13	15	27	10/10
4016SN	Black RAL 9005		10 - 13	15	27	10/10
4021S	Grey RAL 7035	PG 21	13 - 16	15	33	10/10
4021SN	Black RAL 9005		13 - 16	15	33	10/10



**NYLON CABLE GLANDS - PG THREAD - IP54 - REINFORCED WITH FIBERGLASS**



**MATERIAL:** polyamide reinforced with fiberglass

**SELF-EXTINGUISHING:** UL 94 HB

**OPERATING TEMPERATURE:** from -20 °C to +80 °C

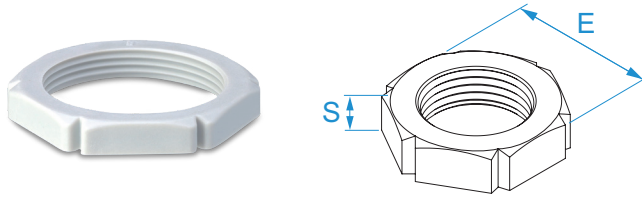
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** tighten on a flat and smooth surface

Code	Color	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
3596	Grey RAL 7035	PG 7	3,5 - 6	8	15	13	50/50
3597	Grey RAL 7035	PG 9	4,5 - 7	8	19	16	50/50
3598	Grey RAL 7035	PG 11	6 - 9	8	22	19	50/50
3599	Grey RAL 7035	PG 13,5	9 - 12	9	24	21	50/50
3600	Grey RAL 7035	PG 16	11 - 14	10	27	23	50/50
3601	Grey RAL 7035	PG 21	14 - 18	11	33	30	25/25
3602	Grey RAL 7035	PG 29	18 - 25	11	42	40	20/20
3603	Grey RAL 7035	PG 36	25 - 32	13	53	50	10/10
3604	Grey RAL 7035	PG 42	30 - 38	13	60	55	10/10
3605	Grey RAL 7035	PG 48	38 - 44	15	65	60	5/5



**ACCESSORIES FOR NYLON CABLE GLANDS: PG THREAD - HEXAGONAL LOCKNUTS**
**MATERIAL:** polyamide reinforced with fiberglass

**OPERATING TEMPERATURE:** from -20 °C to +90 °C


Code	Color	PG thread size (DIN40430)	E wrench (nut)	S (mm)	
3696	Grey RAL 7035	PG 7	19	5	100/100
3697	Grey RAL 7035	PG 9	22	5	100/100
3698	Grey RAL 7035	PG 11	24	4	100/100
3699	Grey RAL 7035	PG 13.5	27	6	100/100
3700	Grey RAL 7035	PG 16	30	6	100/100
3701	Grey RAL 7035	PG 21	36	7	100/100
3702	Grey RAL 7035	PG 29	46	7	50/50
3703	Grey RAL 7035	PG 36	60	8	25/25
3704	Grey RAL 7035	PG 42	65	8	25/25
3705	Grey RAL 7035	PG 48	70	8	10/10

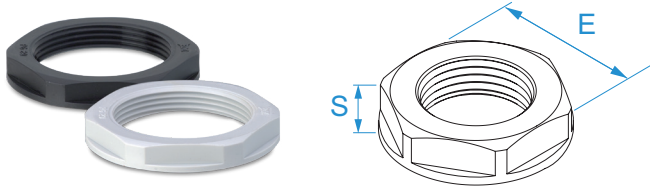
**HALOGEN  
FREE**

**ACCESSORIES FOR NYLON CABLE GLANDS: PG THREAD - HEXAGONAL LOCKNUTS WITH FLANGE**

**MATERIAL:** polyamide (PA 6.6)

**SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -20 °C to +90 °C



CABLE-GLANDS

Code	Color	PG thread size (DIN40430)	E wrench (nut)	S (mm)	
4807**	Grey RAL 7035	PG 7	19	5	100/500
4807N**	Black RAL 9005		19	5	100/500
4809**	Grey RAL 7035	PG 9	22	5	100/500
4809N**	Black RAL 9005		22	5	100/500
4811**	Grey RAL 7035	PG 11	24	5	100/500
4811N**	Black RAL 9005		24	5	100/500
4813*	Grey RAL 7035	PG 13.5	27	6	100/500
4813N*	Black RAL 9005		27	6	100/500
4816*	Grey RAL 7035	PG 16	30	6	100/500
4816N*	Black RAL 9005		30	6	100/500
4821*	Grey RAL 7035	PG 21	36	7	100/500
4821N*	Black RAL 9005		36	7	100/500
4829	Grey RAL 7035	PG 29	46	7	50/50
4829N	Black RAL 9005		46	7	50/50
4836*	Grey RAL 7035	PG 36	60	8	25/25
4836N*	Black RAL 9005		60	8	25/25
4842	Grey RAL 7035	PG 42	65	8	25/25
4842N	Black RAL 9005		65	8	25/25
4848	Grey RAL 7035	PG 48	70	8	10/10
4848N	Black RAL 9005		70	8	10/10



\* file n° E171361



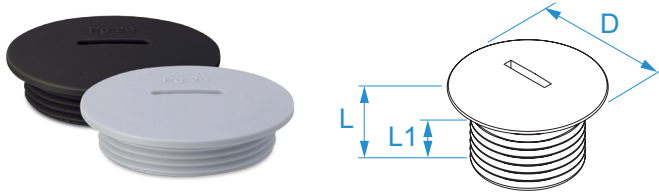
\*\* file n° E171361



**ACCESSORIES FOR NYLON CABLE GLANDS: PG THREAD · IP56 · STOP-ENDS**
**MATERIAL:** polystyrene

**OPERATING TEMPERATURE:** from -25 °C to +60 °C

**OPERATING TEMPERATURE FOR SHORT PERIODS:** 80

**ASSEMBLY:** tighten on a flat and smooth surface


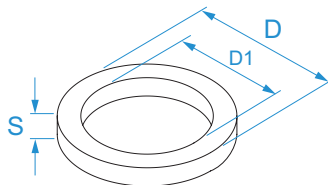
Code	Color	PG thread size (DIN40430)	D (mm)	L (mm)	L1 (mm)	
4596	Grey RAL 7035	PG 7	15	8	6	100/100
4596N	Black RAL 9005		15	8	6	100/100
4597	Grey RAL 7035	PG 9	19	9	6	100/100
4597N	Black RAL 9005		19	9	6	100/100
4598	Grey RAL 7035	PG 11	22	9	6	100/100
4598N	Black RAL 9005		22	9	6	100/100
4599	Grey RAL 7035	PG 13.5	25	9,5	6	100/100
4599N	Black RAL 9005		25	9,5	6	100/100
4600	Grey RAL 7035	PG 16	27	9,5	6	100/100
4600N	Black RAL 9005		27	9,5	6	100/100
4601	Grey RAL 7035	PG 21	33	11	8	100/100
4601N	Black RAL 9005		33	11	8	100/100
4602	Grey RAL 7035	PG 29	44	12	8	50/50
4602N	Black RAL 9005		44	12	8	50/50
4603	Grey RAL 7035	PG 36	55	15	10	25/25
4603N	Black RAL 9005		55	15	10	25/25
4604	Grey RAL 7035	PG 42	62	16	10	25/25
4604N	Black RAL 9005		62	16	10	25/25
4605	Grey RAL 7035	PG 48	69	16	12	25/25
4605N	Black RAL 9005		69	16	12	25/25

**IP56**

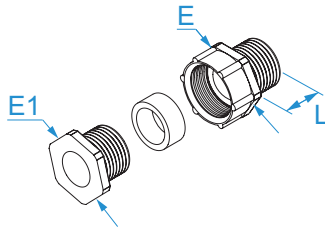
## ACCESSORIES FOR NYLON CABLE GLANDS: PG THREAD - FLAT GASKETS

**MATERIAL:** EPDM, 60 Shore A

**OPERATING TEMPERATURE:** from -40 °C to +140 °C



Code	For thread	D (mm)	D1 (mm)	S (mm)	
<a href="#">4907G</a>	PG 7	16,5	12,5	2	100/500
<a href="#">4909G</a>	PG 9	19	15,2	2	100/500
<a href="#">4911G</a>	PG 11	22,5	18,6	2	100/500
<a href="#">4913G</a>	PG 13.5	25	20,4	2	100/500
<a href="#">4916G</a>	PG 16	27	22,5	2	100/500
<a href="#">4921G</a>	PG 21	33,5	28,3	3	100/500
<a href="#">4929G</a>	PG 29	43,5	37	3	100/500
<a href="#">4936G</a>	PG 36	55	47	3	100/500
<a href="#">4942G</a>	PG 42	63	54	3	100/100
<a href="#">4948G</a>	PG 48	69	59,3	3	100/100

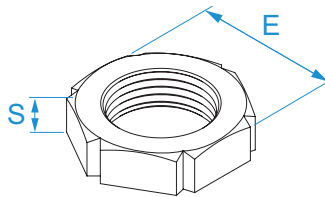
**NYLON CABLE GLANDS · GAS THREAD · IP54 · STANDARD**

**MATERIAL:** polyamide (PA 6)

**SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

**ASSEMBLY:** tighten on a flat and smooth surface

Code	Color	Gas thread (ISO228/1) (")	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
3451	Grey RAL 7035	G 3/8"	7 - 10	7,5	21	19	100/100
3452	Grey RAL 7035	G 1/2"	11 - 13	9	25	23	100/100
3453	Grey RAL 7035	G 5/8"	13,5 - 15	10	27	25	100/100
3454	Grey RAL 7035	G 3/4"	16 - 18	10,5	30	29	100/100
3455	Grey RAL 7035	G 1"	19 - 22	12	38	36	50/50

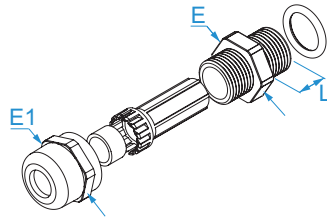
**IP54**
**ACCESSORIES FOR NYLON CABLE GLANDS: GAS THREAD · HEXAGONAL LOCKNUTS**

**MATERIAL:** polyamide (PA 6)

**SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -20 °C to +90 °C

Code	Color	Gas thread (ISO228/1) (")	E wrench (nut)	S (mm)	
3461	Grey RAL 7035	G 3/8"	22	5,5	100/100
3462	Grey RAL 7035	G 1/2"	27	5,5	100/100
3463	Grey RAL 7035	G 5/8"	30	6	100/100
3464	Grey RAL 7035	G 3/4"	32	6,5	100/100
3465	Grey RAL 7035	G 1"	39	7,5	50/50

## BRASS CABLE GLANDS · METRIC THREAD · IP68 · STANDARD



**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -40 °C to +100 °C

**INNER GASKET AND O-RING:** NBR (nitrile rubber), 70 Shore A

**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

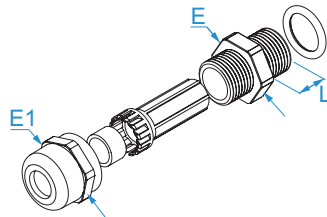
**CAGE IN:** polyamide (PA 6.6)

Code	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2512	M 12 x 1.5	3 - 6,5	6	14	14	100/100
2517	M 16 x 1.5	4 - 8	7	18	18	100/100
2520	M 20 x 1.5	6 - 12	9	22	22	100/100
2525	M 25 x 1.5	10 - 14	9	27	24	100/100
2532	M 32 x 1.5	15 - 22	10	34	34	40/40
2540	M 40 x 1.5	18 - 25	10	45	45	20/20
2550	M 50 x 1.5	32 - 38	10	58	58	12/12
2563	M 63 x 1.5	37 - 44	12	68	64	7/7



IP68

## BRASS CABLE GLANDS · METRIC THREAD · IP68 · WITH LONG THREAD



**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -40 °C to +100 °C

**INNER GASKET AND O-RING:** NBR (nitrile rubber), 70 Shore A

**ACCORDING TO STD.:** EN 62444:2013

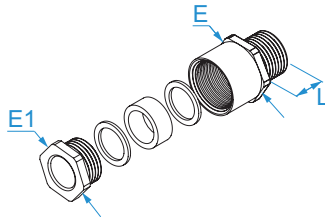
**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

**CAGE IN:** polyamide (PA 6.6)

Code	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2512L	M 12 x 1.5	3 - 6,5	10	14	14	25/25
2517L	M 16 x 1.5	4 - 8	10	18	18	25/25
2520L	M 20 x 1.5	6 - 12	10	22	22	25/25
2525L	M 25 x 1.5	10 - 14	12	27	24	25/25
2532L	M 32 x 1.5	15 - 22	14	34	34	10/10
2540L	M 40 x 1.5	18 - 25	15	45	45	5/5
2550L	M 50 x 1.5	32 - 38	15	58	58	5/5
2563L	M 63 x 1.5	37 - 44	15	68	64	5/5



IP68

**BRASS CABLE GLANDS · METRIC THREAD · IP54 · STANDARD**


**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -20 °C to +70 °C

**INNER GASKET:** NBR (nitrile rubber), 70 Shore A

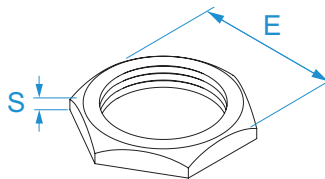
**ASSEMBLY:** tighten on a flat and smooth surface

Code	Metric thread size (EN60423)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2812	M 12 x 1.5	4 - 6	5	14	13	100/100
2816	M 16 x 1.5	8 - 10	6	17	15	100/100
2820	M 20 x 1.5	10 - 12	7	22	20	50/50
2825	M 25 x 1.5	17 - 19	8,5	30	28	50/50
2832	M 32 x 1.5	19 - 22	9	35	33	50/50
2840	M 40 x 1.5	26 - 30	10,2	45	42	25/25
2850	M 50 x 1.5	39 - 41	10	57	54	10/10
2863	M 63 x 1.5	43 - 45	12	64	60	10/10

**ACCESSORIES FOR BRASS CABLE GLANDS: METRIC THREAD · HEXAGONAL LOCKNUTS**

**MATERIAL:** nickel-plated brass

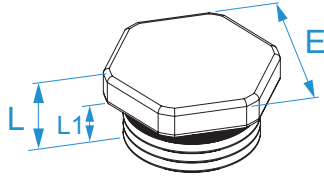
**OPERATING TEMPERATURE:** from -40 °C to +100 °C



Code	Metric thread size (EN60423)	E wrench (nut)	S (mm)	
2712	M 12 x 1.5	15	2,8	100/100
2716	M 16 x 1.5	19	3	100/100
2720	M 20 x 1.5	24	3,2	100/100
2725	M 25 x 1.5	30	3,5	100/100
2732	M 32 x 1.5	37	4	50/50
2740	M 40 x 1.5	46	5	25/25
2750	M 50 x 1.5	60	5,5	25/25
2763	M 63 x 1.5	70	5,7	10/10



## ACCESSORIES FOR BRASS CABLE GLANDS: METRIC THREAD · IP68 · STOP-ENDS




**MATERIAL:** nickel-plated brass

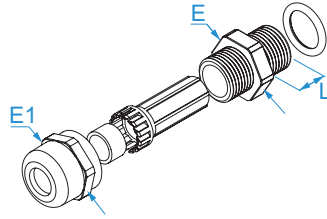
**OPERATING TEMPERATURE:** from -40 °C to +100 °C

**O-RING:** NBR (nitrile rubber), 70 Shore A

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

Code	Metric thread size (EN60423)	L (mm)	L1 (mm)	E wrench (nut)	
2612	M 12 x 1.5	8	5	14	100/3500
2616	M 16 x 1.5	9	6	18	100/2500
2620	M 20 x 1.5	10	7	22	100/1200
2625	M 25 x 1.5	10	7	28	100/800
2632	M 32 x 1.5	12	8	36	100/400
2640	M 40 x 1.5	14	9	45	100/300
2650	M 50 x 1.5	15	9	55	50/150
2663	M 63 x 1.5	16	10	70	50/100

# IP68

**BRASS CABLE GLANDS · PG THREAD · IP68 · STANDARD**


**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -40 °C to +100 °C

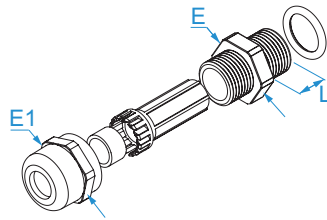
**INNER GASKET AND O-RING:** NBR (nitrile rubber), 70 Shore A

**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

**CAGE IN:** polyamide (PA 6.6)

Code	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2507	PG 7	3 - 6,5	6	14	14	100/100
2509	PG 9	4 - 8	7	18	18	100/100
2511	PG 11	5 - 10	7	20	20	100/100
2513	PG 13.5	6 - 12	8	22	22	100/100
2516	PG 16	10 - 14	8	24	24	100/100
2521	PG 21	13 - 18	9	30	30	50/50
2529	PG 29	18 - 25	10	40	40	25/25
2536	PG 36	25 - 32	10	50	50	12/12
2542	PG 42	32 - 38	12	58	58	10/10
2548	PG 48	37 - 44	12	64	64	7/7


**IP68**
**BRASS CABLE GLANDS · PG THREAD · IP68 · WITH LONG THREAD**


**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -40 °C to +100 °C

**INNER GASKET AND O-RING:** NBR (nitrile rubber), 70 Shore A

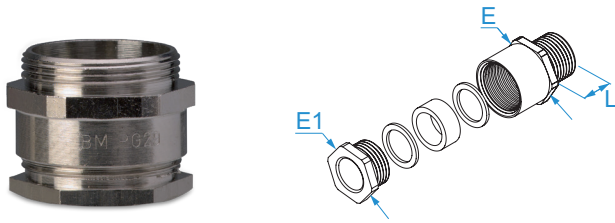
**ACCORDING TO STD.:** EN 62444:2013

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

**CAGE IN:** polyamide (PA 6.6)

Code	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2507L	PG 7	3 - 6,5	10	14	14	25/25
2509L	PG 9	4 - 8	10	18	18	25/25
2511L	PG 11	5 - 10	10	20	20	25/25
2513L	PG 13.5	6 - 12	10	22	22	25/25
2516L	PG 16	10 - 14	10	24	24	25/25
2521L	PG 21	13 - 18	12	30	30	25/25
2529L	PG 29	18 - 25	12	40	40	10/10
2536L	PG 36	25 - 32	15	50	50	5/5
2542L	PG 42	32 - 38	15	58	58	5/5
2548L	PG 48	37 - 44	15	64	64	5/5


**IP68**

**BRASS CABLE GLANDS · PG THREAD · IP54 · STANDARD**

**MATERIAL:** nickel-plated brass

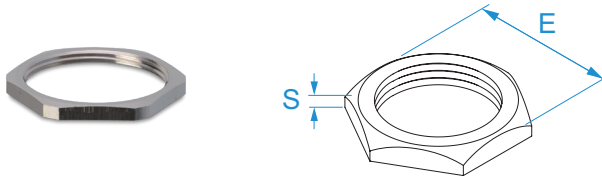
**OPERATING TEMPERATURE:** from -20 °C to +70 °C

**INNER GASKET:** NBR (nitrile rubber), 70 Shore A

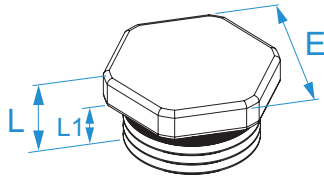
**ASSEMBLY:** tighten on a flat and smooth surface

Code	PG thread size (DIN40430)	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2596	PG 7	4 - 6	5	14	13	100/100
2597	PG 9	8 - 10	6	17	15	100/100
2598	PG 11	8 - 10	6	20	18	100/100
2599	PG 13.5	10 - 12	6,5	22	20	50/50
2600	PG 16	12 - 14	6,5	24	22	50/50
2601	PG 21	17 - 19	7	30	28	50/50
2602	PG 29	26 - 28	8	40	37	50/50
2603	PG 36	33 - 35	9	50	47	20/20
2604	PG 42	39 - 41	10	57	54	5/5
2605	PG 48	43 - 45	10	64	60	5/5

**ACCESSORIES FOR BRASS CABLE GLANDS: PG THREAD · HEXAGONAL LOCKNUTS**
**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -40 °C to +100 °C


Code	PG thread size (DIN40430)	E wrench (nut)	S (mm)	
2696	PG 7	15	2,8	100/100
2697	PG 9	18	3	100/100
2698	PG 11	21	3	100/100
2699	PG 13.5	23	3	100/100
2700	PG 16	26	3,25	100/100
2701	PG 21	32	3,5	100/100
2702	PG 29	42	4	100/100
2703	PG 36	51	5	50/50
2704	PG 42	60	5	10/10
2705	PG 48	65	5,5	10/10


**ACCESSORIES FOR BRASS CABLE GLANDS: PG THREAD · IP68 · STOP-ENDS**


**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -40 °C to +100 °C

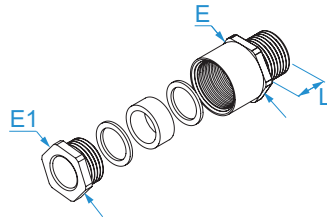
**O-RING:** NBR (nitrile rubber), 70 Shore A

**ASSEMBLY:** do not remove or move the gasket; tighten on a flat and smooth surface.

Code	PG thread size (DIN40430)	L (mm)	L1 (mm)	E wrench (nut)	
2796	PG 7	8	5	14	100/3500
2797	PG 9	9	6	17	100/2500
2798	PG 11	9	6	20	100/2000
2799	PG 13.5	10	7	22	100/1200
2800	PG 16	10	7	24	100/1000
2801	PG 21	11	7	30	100/500
2802	PG 29	12	8	40	100/300
2803	PG 36	15	9	50	50/150
2804	PG 42	16	10	60	50/100
2805	PG 48	16	10	65	25/100

# IP68

## BRASS CABLE GLANDS · GAS THREAD · IP54 · STANDARD



**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -20 °C to +70 °C

**INNER GASKET:** NBR (nitrile rubber), 70 Shore A

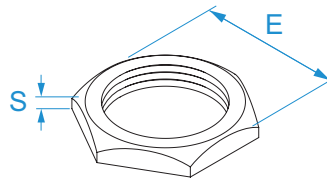
**ASSEMBLY:** tighten on a flat and smooth surface

Code	Gas thread (ISO228/1) (")	Ø cable (mm)	L (mm)	E wrench (nut)	E1 wrench (locknut)	
2450	G 1/4"	4 - 6	5	14	13	100/100
2451	G 3/8"	8 - 10	6	17	15	100/100
2452	G 1/2"	10 - 12	7	22	20	100/100
2453	G 5/8"	12 - 14	7,5	24	22	100/100
2454	G 3/4"	17 - 19	8,5	30	28	100/100
2455	G 1"	19 - 22	9	35	33	50/50
2456	G 1 1/8"	26 - 28	10,5	40	37	50/50
2457	G 1" 1/4"	26 - 30	10,2	45	42	25/25
2458	G 1" 1/2"	33 - 35	12	50	47	20/20
2459	G 2"	43 - 45	12	64	60	20/20
24592	G 2 1/2"	55 - 57	12	80	80	3/3
24593	G 3"	67 - 69	20	95	95	3/3

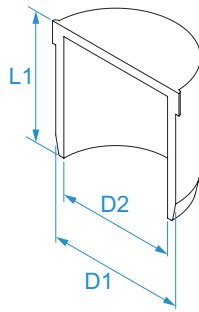
## ACCESSORIES FOR BRASS CABLE GLANDS: GAS THREAD · HEXAGONAL LOCKNUTS

**MATERIAL:** nickel-plated brass

**OPERATING TEMPERATURE:** from -20 °C to +70 °C



Code	Gas thread (ISO228/1) (")	E wrench (nut)	S (mm)	
2460	G 1/4"	15	2,8	100/100
2461	G 3/8"	19	3,2	100/100
2462	G 1/2"	24	3,75	100/100
2463	G 5/8"	26	3,75	100/100
2464	G 3/4"	30	4	100/100
2465	G 1"	37	4,5	50/50
2466	G 1 1/8"	42	5	50/50
2467	G 1" 1/4"	46	5	25/25
2468	G 1" 1/2"	54	5,5	20/20
2469	G 2"	65	5,7	20/20
24692	G 2 1/2"	80	7	5/5
24693	G 3"	95	8	10/10

**ACCESSORIES FOR NYLON CABLE GLANDS: IP68 STOP-ENDS**

**MATERIAL:** red polyamide

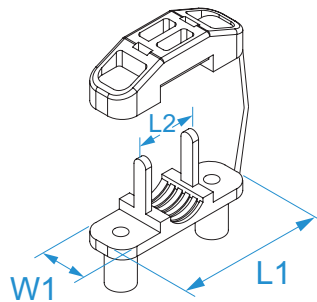
**OPERATING TEMPERATURE:** from -40 °C to +100 °C

**APPLICATIONS:** suitable to close IP68 nylon and brass cable gland holes

**ASSEMBLY:** insert the plug with the end-stop wings on the cable gland gasket and tighten

**TIGHTENING TORQUE:** 1N/m

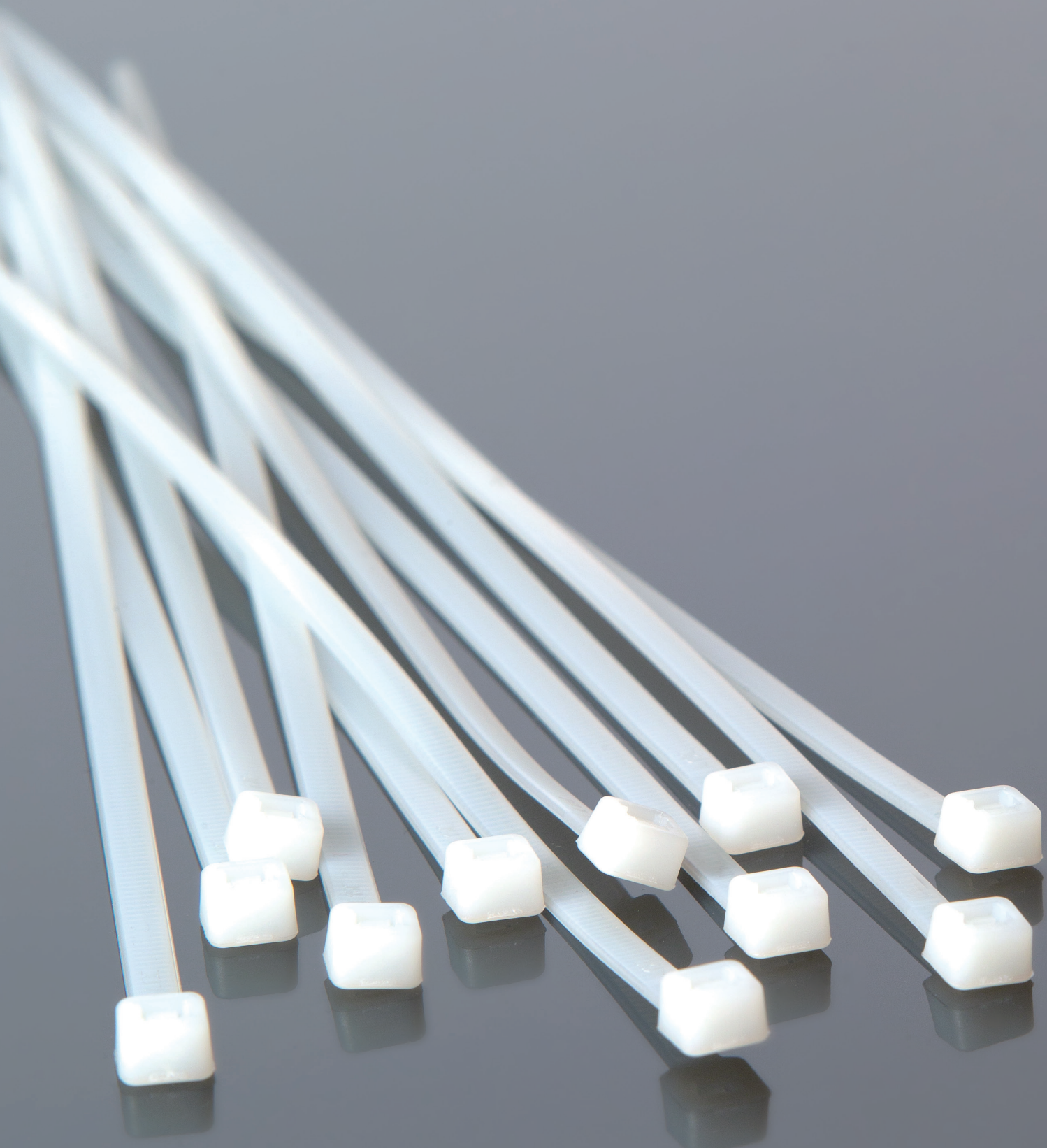
Code	D1 (mm)	D2 (mm)	L1 (mm)	Suitable for cable glands with thread Metric	Suitable for cable glands with thread PG	
4206	6	2,8	16	M12 M16 M20	PG7 PG9 PG11 PG13.5	50/50
4213	13	8,5	22	M25	PG16 PG21	50/50
4220	20	14,5	22	M32 M40	PG29	25/25
4228	28	22	30		PG36	25/25
4238	38	32	35	M50 M63	PG42 PG48	10/10

**IP68**
**CABLE CLAMPS**

**MATERIAL:** black UL 94 V2 polyamide (PA 6.6)

**OPERATING TEMPERATURE:** 125 °C

Code	L1 (mm)	L2 (mm)	W1 (mm)	
M932	44,3	14,6	14,5	100/100

**HALOGEN  
FREE**



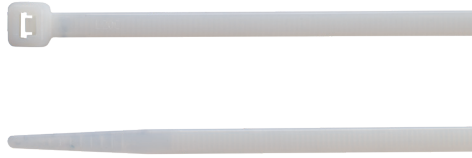


# CABLE-TIES

NYLON CABLE-TIES	pag. 192
VELCRO CABLE-TIES	pag. 203
STAINLESS STEEL CABLE-TIES	pag. 204



## NYLON CABLE-TIES - STANDARD



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
B0824	2,5	80	14	3	80	100/5000
B1025		100	20,5	3		100/5000
B1025M		100	20,5	3		1000/5000
B1225		120	27	3		100/4000
B1225M		120	27	3		1000/5000
B1625		160	40	3		100/4000
B1625M		160	40	3		1000/4000
B2025		200	52,5	3		100/3000
B2025M		200	52,5	3		1000/3000
B1436		3,6	140	33		3
B1436M	140		33	3	1000/2500	
B2036	200		52,5	3	100/2000	
B2036M	200		52,5	3	1000/2000	
B2936	300		106	3	100/1500	
B2936M	300		106	3	1000/1500	
B3736	370	105	3	100/4000		
B1248	4,6	120	24	3	220	100/2000
B1648		160	36	3		100/1500
B1648M		160	36	3		1000/1500
B1948		188	46	3		100/1500
B1948M		188	46	3		1000/1500
B2048		200	50	3		100/1500
B2048M		200	50	3		1000/1500
B2548		250	65	3		100/1300
B2548M		250	65	3		1000/1300
B3048		300	81	3		100/1000
B3048M	300	81	3	1000/1000		
B3748	370	103,5	3	100/3000		
B3948	390	110	3	100/2500		
B4348	430	122,5	3	100/2000		
B5348	530	160	3	100/1000		
B1576	7,6	150	24	6	550	100/1000
B2076		200	51	6		100/800
B2976		300	83	6		100/600
B3776		370	103,5	6		100/1500
B4576		450	130,5	6		100/2500
B5476		540	159	6		100/500
B7576		750	226	6		100/100
B4390	9	430	130,5	9	100/100	
B5390	550	163,5	9	100/100		
B7190	8,8	710	195	9	800	100/100
B7890		780	235,5	9		100/100
B8190		810	245	9		100/100
B1090	9	1020	295	9	800	100/100
B1290		1220	375,5	9		100/100
B1590		1530	460	9		100/100



file n° E 223175



## NYLON CABLE-TIES · UV-RESISTANT STANDARD



**MATERIAL:** polyamide (PA 6.6) + carbon black

**COLOR:** black

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
N0824	2,5	80	14	3	80	100/8000
N0824M		80	14	3		1000/8000
N1025		100	20,5	3		100/5000
N1025M		100	20,5	3		1000/5000
N1225		120	27	3		100/5000
N1625		160	40	3		100/4000
N1625M		160	40	3		1000/4000
N2025		200	52,5	3		100/3000
N1436	3,6	140	33	3	180	100/2500
N1436M		140	33	3		1000/2500
N2036		200	52,5	3		100/2000
N2936		300	106	3		100/1500
N2936M		300	106	3		1000/1500
N3736		370	105	3		100/4000
N1248	4,6	120	24	3	220	100/2000
N1648		160	36	3		100/1500
N1948	4,8	188	46	3	220	100/1500
N2048		200	50	3		100/1500
N2048M		200	50	3		1000/1500
N2548		250	65	3		100/1300
N3048		300	81	3		100/1000
N3048M		300	81	3		1000/1000
N3748		370	103,5	3		100/3000
N3948		390	110	3		100/2500
N4348	430	122,5	3	100/1500		
N5348	530	160	3	100/100		
N1576	7,6	150	24	6	550	100/1000
N2076		200	51	6		100/800
N2976		300	83	6		100/600
N3776		370	103,5	6		100/1000
N4576		450	130,5	6		100/100
N5476		540	159	6		100/100
N7576		750	226	6		100/100
N4390	9	430	130,5	9	800	100/100
N5390	550	163,5	9	100/100		
N7190	8,8	710	195	9		100/100
N7890		780	235,5	9		100/100
N8190	810	245	9	100/100		
N1090	9	1020	295	9		100/100
N1290		1220	375,5	9		100/100
N1590		1530	460	9		100/100



file n° E 223175



### NYLON CABLE-TIES · SELF-EXTINGUISHING UL94-V0



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** white

**INSULATION SELF-EXTINGUISHING:** UL 94 V0

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
B1025V0	2,5	100	20,5	3	80	100/5000
B1536V0	3,6	150	36	3,5	180	100/2500
B2036V0		200	52,5	3,5		100/2000
B2048V0	4,8	200	49,5	3,5	230	100/1500
B3048V0		300	81	3,5		100/1000
B3848V0	7,6	370	106,7	3,5	540	100/2500
B3876V0		370	106,7	8,5		100/1000



### NYLON CABLE-TIES · DETECTABLE



**MATERIAL:** polyamide (PA 6.6) + metal particles

**COLOR:** blue

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BX1025	2,5	100	20,5	3	80	100/5000
BX1536	3,6	150	36	3,5	180	100/2500
BX2036		200	52,5	3,5		100/2000
BX2048	4,8	200	49,5	3,5	230	100/1500
BX3048		300	81	3,5		100/1000
BX3848	7,6	370	106,7	3,5	540	100/2500
BX3876		370	106,7	8,5		100/1000



**NYLON CABLE-TIES - WITH STEEL LOCKING PAW**


**MATERIAL:** polyamide (PA 6.6) + steel

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
<a href="#">BL1025</a>	2,5	100	20,5	3	180	100/5000
<a href="#">BL2025</a>		200	52,5	3		100/3000
<a href="#">BL1436</a>	3,6	140	33	3,5	250	100/2500
<a href="#">BL2048</a>		200	49,5	3,5		100/1500
<a href="#">BL3048</a>	4,8	300	81	3,5	360	100/1000
<a href="#">BL3748</a>		370	103,5	3,5		100/3000
<a href="#">BL3776</a>	7,6	370	103,5	8,5	780	100/1000


**UV-RESISTANT NYLON CABLE-TIES - WITH STEEL LOCKING PAW**


**MATERIAL:** polyamide (PA 6.6) + carbon black + steel

**COLOR:** black

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
<a href="#">NL1025</a>	2,5	100	20,5	3	180	100/5000
<a href="#">NL2025</a>		200	52,5	3		100/3000
<a href="#">NL1436</a>	3,6	140	33	3,5	250	100/2500
<a href="#">NL2048</a>		200	49,5	3,5		100/1500
<a href="#">NL3048</a>	4,8	300	81	3,5	360	100/1000
<a href="#">NL3748</a>		370	103,5	3,5		100/3000
<a href="#">NL3776</a>	7,6	370	103,5	8,5	780	100/1000



### NYLON CABLE-TIES · REUSABLE



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BR1576	7,6	150	40	10	230	100/1000
BR2076		200	55	10		100/500
BR3076		300	82	10		100/500



file n° E 223175



### NYLON CABLE-TIES · WITH MOUNTING HOLE



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Fixing hole Ø (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BH1125	2,5	110	3	19	3	80	100/3000
BH2048*	4,8	200	4,8	49,8	3	230	100/1000
BH3076*	7,6	305	6,1	78,7	8	550	100/1500



\* file n° E 223175



**NYLON CABLE-TIES · PUSH MOUNT**


**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Fixing hole Ø (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BP1536	3,6	155	6	37,9	3,5	180	100/2500
BP2048*	4,8	200	8	50,8	3,5	230	100/1500



\* file n° E 223175

**HALOGEN FREE**

**NYLON CABLE-TIES · WITH CROSSWISE MARKING PLATE**


**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Plate size (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BT21025*	2,5	100	25,4 x 8	22	5,5	80	100/1500
BT22025		200	25,4 x 8	53,5	5,5		100/2000



\* file n° E 223175

**HALOGEN FREE**

### NYLON CABLE-TIES · WITH LENGTHWISE MARKING PLATE



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

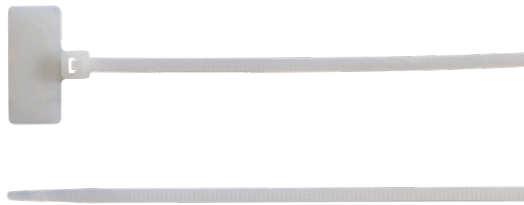
**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Plate size (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BT12248	4,8	190	13 x 27	51	3,5	230	100/1300



### NYLON CABLE-TIES · WITH EXTERNAL MARKING PLATE



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Plate size (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
BT11125	2,5	110	20 x 9	22	3	80	100/2500



**UV-RESISTANT NYLON CABLE-TIES - FOR HEAVY LOADS**


**MATERIAL:** polyamide (PA 6.6) + carbon black

**COLOR:** black

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

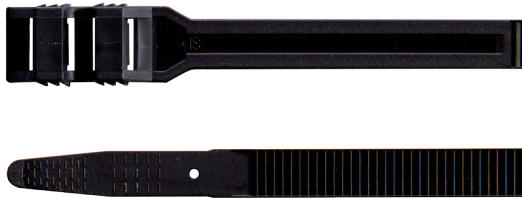
**CLASSIFICATION:** type 1 (EN), type 21 (UL)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
N2412	12,4	230	57	9	1200	100/100
N4912		480	136,5	9		100/100
N7412		730	216,1	9		100/100
N8912		880	263,9	9		100/100
N1012		1000	305	9		100/100



file n° E 223175


**NYLON CABLE TIES UV RESISTANT - IMPACT RESISTANT**


**MATERIAL:** polyamide (PA 6.6) + carbon black

**COLOR:** black

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 1 (EN)

**ASSEMBLY:** open the package just before use

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
N1890	9	180	40	20	400	100/2000
N2690	9	265	62	20	540	100/1400
N3690		360	93	20		100/500





**ACCESSORIES FOR NYLON CABLE-TIES - ONE WAY CABLE TIE MOUNTS**



**MATERIAL:** polyamide (PA 6.6)

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

Code	For cable ties with max width (mm)	Dimensions (mm)	Height (mm)	Fixing hole Ø (mm)	Fixing screw Ø (mm)	
<b>B0905</b>	3,6	15,2 x 9,4	6,8	3,3	3	100/3000
<b>B0906</b>	9	22 x 16,2	10,8	5,2	5	100/1000

**HALOGEN FREE**

**ACCESSORIES FOR NYLON CABLE-TIES - ONE WAY CABLE TIE MOUNTS - UV RESISTANT**



**MATERIAL:** polyamide (PA 6.6) + carbon black

**COLOR:** black

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

Code	For cable ties with max width (mm)	Dimensions (mm)	Height (mm)	Fixing hole Ø (mm)	Fixing screw Ø (mm)	
<b>N0905</b>	3,6	15,2 x 9,4	6,8	3,3	3	100/3000
<b>N0906</b>	9	22 x 16,2	10,8	5,2	5	100/1000

**HALOGEN FREE**

**UV RESISTANT**

**ACCESSORIES FOR NYLON CABLE-TIES - 2-WAY CABLE TIE MOUNTS**


**MATERIAL:** polyamide (PA 6.6) + adhesive

**COLOR:** natural

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

Code	For cable ties with max width (mm)	Dimensions (mm)	Height (mm)	Fixing hole Ø (mm)	Fixing screw Ø (mm)	Type of mount	
B0901	3,6	19 x 19	5,4	3,3	3	adhesive	100/1500
B0902*	4,8	28 x 28	7	5,5	5	adhesive	100/800
B0903*			5,8			screw	100/1000



\* file n° E 223175


**ACCESSORIES FOR NYLON CABLE-TIES - 2-WAY CABLE TIE MOUNTS - UV RESISTANT**


**MATERIAL:** polyamide (PA 6.6) + adhesive

**COLOR:** black

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

Code	For cable ties with max width (mm)	Dimensions (mm)	Height (mm)	Fixing hole Ø (mm)	Fixing screw Ø (mm)	Type of mount	
N0901	3,6	19 x 19	5,4	3,3	3	adhesive	100/1500
N0902*	4,8	28 x 28	7	5,5	5	adhesive	100/800
N0903*			5,8			screw	100/1000



\* file n° E 223175



**ACCESSORIES FOR NYLON CABLE-TIES - WALL PLUG FIXING BRACKET - UV RESISTANT**



**MATERIAL:** polyamide (PA 6.6) + carbon black

**COLOR:** black

**INSULATION SELF-EXTINGUISHING:** UL 94 V2

**OPERATING TEMPERATURE:** from -40 °C to +85 °C

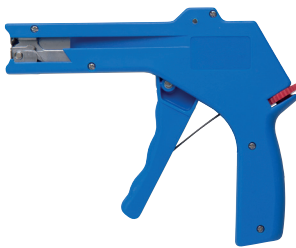
**MINIMUM INSTALLATION TEMPERATURE:** -10 °C

**CHEMICAL RESISTANCE:** good resistance to bases, oils, grease, chloride solvents. Limited resistance to acids. Not resistant to phenols.

Code	For cable ties with max width (mm)	Dimensions (mm)	Fixing hole Ø (mm)	
B0904	9	8,1 x 38,1	6	100/600

**HALOGEN FREE**

**AUTOMATIC CLAMP FOR NYLON CABLE TIES**



**MATERIAL:** structure in polymer and fiberglass, internal parts in metal

**FOR CABLE TIES IN:** nylon

Code	Description
1100	For cable ties with width ranging from 2.5 to 4.8 mm. Automatic tension and cut control. Equipped with tightening adjustment.

**AUTOMATIC CLAMP FOR NYLON CABLE TIES**



**MATERIAL:** metal

**FOR CABLE TIES IN:** nylon

Code	Description
1101	For cable ties with width ranging from 7.6 to 9 mm. Automatic tension and cut control.

**VELCRO CABLE-TIES · WRAP STRAP**

**MATERIAL:** polyethylene-polyamide (PE-PA)

**COLOR:** white

**OPERATING TEMPERATURE:** from -20 °C to +60 °C

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Tensile minimum resistance (N)	
<a href="#">BV2312</a>	12,7	229	55	180	10/100
<a href="#">BV2319</a>	19	229	55	220	10/100

**VELCRO BANDS · WRAP STRAP**

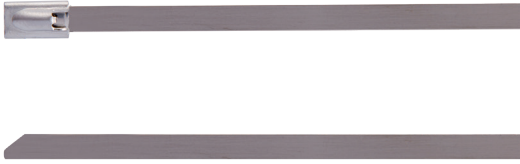
**MATERIAL:** polyethylene-polyamide (PE-PA)

**COLOR:** black

**OPERATING TEMPERATURE:** from -20 °C to +60 °C

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Tensile minimum resistance (N)	
<a href="#">NV2312</a>	12,7	229	55	180	10/100

## STAINLESS STEEL CABLE-TIES · SELF-LOCKING



**MATERIAL:** AISI 304 stainless steel

**THICKNESS:** 0,25 ± 0,05 mm

**INSULATION SELF-EXTINGUISHING:** not flammable

**LOCKING MECHANISM:** ball

**OPERATING TEMPERATURE:** from -60 °C to +300 °C

**MINIMUM INSTALLATION TEMPERATURE:** -60 °C


**PLENUM RATING:** AH-1

**UV RAYS RESISTANCE:** excellent

**CHEMICAL RESISTANCE:** excellent

**ACCORDING TO STD.:** EN 62275:2015-02

**CLASSIFICATION:** type 2 (EN), type 2 (UL)

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
S1345	4,6	125	38	15	890	100/100
S2045		200	61,9	15		100/100
S3045		290	90,6	15		100/100
S3745		360	112,8	15		100/100
S5245		520	163,8	15		100/100
S6845		680	214,8	15		100/100
S8445		840	265,7	15		100/100
S2079		7,9	200	61,9		15
S3079	300		90,6	15	100/100	
S3779	360		112,8	15	100/100	
S5079	520		163,8	15	100/100	
S6879	680		214,8	15	100/100	
S8479	840		265,7	15	100/100	
S1079	1010		319	15	100/100	



file n° E 223175

**STAINLESS STEEL CABLE-TIES · SELF-LOCKING · WITH POLYESTER COATING**


**MATERIAL:** AISI 304 stainless steel  
**THICKNESS:** 0,35 ± 0,05 mm  
**COLOR:** black  
**INSULATION SELF-EXTINGUISHING:** not flammable  
**COATING:** polyester  
**LOCKING MECHANISM:** ball  
**OPERATING TEMPERATURE:** from -40 °C to +150 °C  
**MINIMUM INSTALLATION TEMPERATURE:** -40 °C  
**PLENUM RATING:** AH-1  
**UV RAYS RESISTANCE:** excellent  
**CHEMICAL RESISTANCE:** excellent  
**ACCORDING TO STD.:** EN 62275:2015-02  
**CLASSIFICATION:** type 2 (EN), type 2 (UL)

Code	Width (mm)	Length (mm)	Max bundle Ø (mm)	Min bundle Ø (mm)	Tensile minimum resistance (N)	
SC1345	4,6	125	38	15	450	100/100
SC2045		200	61,9	15		100/100
SC3045		290	90,6	15		100/100
SC3745		360	112,8	15		100/100
SC5245		520	163,8	15		100/100
SC6845		680	214,8	15		100/100
SC8445		840	265,7	15		100/100
SC2079		7,9	200	61,9		15
SC3079	290		90,6	15	100/100	
SC3779	360		112,8	15	100/100	
SC5079	520		163,8	15	100/100	
SC6879	680		214,8	15	100/100	
SC8479	840		265,7	15	100/100	


**AUTOMATIC CLAMP FOR STAINLESS STEEL CABLE TIES**


**MATERIAL:** metal with aluminum frame  
**FOR CABLE TIES IN:** stainless steel

Code	Description
1105	For cable ties with width up to 7.9 mm and thickness up to 0.35 mm. Automatic cut-off once required tension is achieved. Adjustable tension dial for four levels bunding pressure.





# CABLE PROTECTION

THIN WALL 2:1	pag. 208
THIN WALL 3:1	pag. 212
ACCESSORIES	pag. 213



## CABLE PROTECTION - THERMO SHRINKING - THIN WALL 2:1 - REEL



**TYPE:** single wall

**SHRINKAGE RATIO:** 2:1

**MATERIAL:** polyethylene

**OPERATING TEMPERATURE:** from -55°C to +125°C max (+105 °C max for transparent)

**SHRINKAGE TEMPERATURE:** from +70°C to +110°C

**VRMS MAX:** 600 V








































**SHEATH SELF-EXTINGUISHING GRADE:** flame retardant VW-1 UL1581 (except transparent color)

**HALOGEN FREE:** all colours except for yellow-green and transparent

**APPLICATIONS:** economic and efficient insulation and protection of connections and terminals in various industries, including electronics, automotive, railway and marine. The availability of many colours makes cable identification easy.

CABLE PROTECTION

Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	S1 (mm)	Ⓜ (m)
GBS012BBI*	1,2	200	White	1,5 ± 0,2	0,65	0,36 ± 0,10	200/200
GBS012BBL*		200	Blue				
GBS012BNE*		200	Black				
GBS012BRO*		200	Red				
GBS012BTR		200	Transparent				
GBS016BBI*	1,6	200	White	2,0 ± 0,3	0,85	0,36 ± 0,10	200/200
GBS016BBL*		200	Blue				
GBS016BNE*		200	Black				
GBS016BRO*		200	Red				
GBS016BTR		200	Transparent				
GBS024BBI*	2,4	200	White	3,0 ± 0,3	1,25	0,40 ± 0,10	200/200
GBS024BBL*		200	Blue				
GBS024BNE*		200	Black				
GBS024BRO*		200	Red				
GBS024BTR		200	Transparent				
GBS032BBI*	3,2	200	White	3,5 ± 0,4	1,5	0,40 ± 0,10	200/200
GBS032BBL*		200	Blue				
GBS032BGV		200	YellowGreen				
GBS032BNE*		200	Black				
GBS032BRO*		200	Red				
GBS032BTR	200	Transparent					
GBS048BBI*	4,8	100	White	5,5 ± 0,4	2,5	0,55 ± 0,10	100/100
GBS048BBL*		100	Blue				
GBS048BGV		100	YellowGreen				
GBS048BNE*		100	Black				
GBS048BRO*		100	Red				
GBS048BTR	100	Transparent					
GBS064BBI*	6,4	100	White	6,5 ± 0,4	3	0,55 ± 0,10	100/100
GBS064BBL*		100	Blue				
GBS064BGV		100	YellowGreen				
GBS064BNE*		100	Black				
GBS064BRO*		100	Red				
GBS064BTR	100	Transparent					
GBS095BBI*	9,5	100	White	9,5 ± 0,5	4,5	0,60 ± 0,10	100/100
GBS095BBL*		100	Blue				
GBS095BGV		100	YellowGreen				
GBS095BNE*		100	Black				
GBS095BRO*		100	Red				
GBS095BTR	100	Transparent					
GBS127BBI*	12,7	100	White	13,7 ± 0,5	6,5	0,65 ± 0,10	100/100
GBS127BBL*		100	Blue				
GBS127BGV		100	YellowGreen				
GBS127BNE*		100	Black				
GBS127BRO*		100	Red				
GBS127BTR	100	Transparent					

Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	S1 (mm)	 (m)
GBS1908BI*	19	100	 White	21,0 ± 0,5	10	0,75 ± 0,15	100/100
GBS1908BL*		100	 Blue			0,75 ± 0,15	100/100
GBS1908GV		100	 YellowGreen			0,75 ± 0,15	100/100
GBS1908NE*		100	 Black			0,75 ± 0,15	100/100
GBS1908RO*		100	 Red			0,75 ± 0,15	100/100
GBS1908TR		100	 Transparent			0,75 ± 0,15	100/100
GBS2548BI*	25,4	50	 White	26,0 ± 0,5	12,5	0,90 ± 0,15	50/50
GBS2548BL*		50	 Blue			0,90 ± 0,15	50/50
GBS2548GV		50	 YellowGreen			0,90 ± 0,15	50/50
GBS2548NE*		50	 Black			0,90 ± 0,15	50/50
GBS2548RO*		50	 Red			0,90 ± 0,15	50/50
GBS2548TR		50	 Transparent			0,90 ± 0,15	50/50
GBS3188BI*	31,8	50	 White	31,5 ± 1,0	15	0,95 ± 0,15	50/50
GBS3188BL*		50	 Blue			0,95 ± 0,15	50/50
GBS3188NE		50	 Black			0,95 ± 0,15	50/50
GBS3188RO*		50	 Red			0,95 ± 0,15	50/50
GBS3188TR		50	 Transparent			0,95 ± 0,15	50/50
GBS3808BI*	38	50	 White	41,5 ± 1,0	20	1,0 ± 0,15	50/50
GBS3808BL*		50	 Blue			1,0 ± 0,15	50/50
GBS3808GV		50	 YellowGreen			1,0 ± 0,15	50/50
GBS3808NE*		50	 Black			1,0 ± 0,15	50/50
GBS3808RO*		50	 Red			1,0 ± 0,15	50/50
GBS3808TR		50	 Transparent			1,0 ± 0,15	50/50
GBS5108BI	51	25	 White	>50	25	1,0 ± 0,15	25/25
GBS5108BL		25	 Blue			1,0 ± 0,15	25/25
GBS5108NE		25	 Black			1,0 ± 0,15	25/25
GBS5108RO		25	 Red			1,0 ± 0,15	25/25
GBS5108TR		25	 Transparent			1,0 ± 0,15	25/25
GBS7608BI	76	25	 White	>80	41	1,46 ± 0,20	25/25
GBS7608BL		25	 Blue			1,46 ± 0,20	25/25
GBS7608NE		25	 Black			1,46 ± 0,20	25/25
GBS7608RO		25	 Red			1,46 ± 0,20	25/25
GBS7608TR		25	 Transparent			1,46 ± 0,20	25/25
GBS1028BI	102	25	 White	>100	51	1,46 ± 0,20	25/25
GBS1028BL		25	 Blue			1,46 ± 0,20	25/25
GBS1028NE		25	 Black			1,46 ± 0,20	25/25
GBS1028RO		25	 Red			1,46 ± 0,20	25/25
GBS1028TR		25	 Transparent			1,46 ± 0,20	25/25

## THERMO SHRINKING CABLE PROTECTION - THIN WALL 2:1 - IN MINIBOX



**SHRINKAGE RATIO:** 2:1

**MATERIAL:** polyethylene

**OPERATING TEMPERATURE:** from -55°C to +125°C max

**SHRINKAGE TEMPERATURE:** from +70°C to +110°C

**VRMS MAX:** 600 V

**SHEATH SELF-EXTINGUISHING GRADE:** flame retardant (VW-1 UL1581)

**HALOGEN FREE:** yellow-green

**APPLICATIONS:** economic and efficient insulation and protection of connections and terminals in various industries, including electronics, automotive, railway and marine. The availability of many colours makes cable identification easy.

CABLE PROTECTION

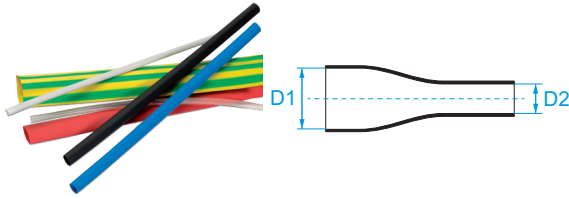
Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	S1 (mm)	
GBS016MBL*	1,6	12	Blue	2,0 ± 0,3	0,85	0,36 ± 0,10	1/1
GBS016MNE*		12	Black			0,36 ± 0,10	1/1
GBS016MRO*		12	Red			0,36 ± 0,10	1/1
GBS024MBL*	2,4	11	Blue	3,0 ± 0,3	1,25	0,40 ± 0,10	1/1
GBS024MNE*		11	Black			0,40 ± 0,10	1/1
GBS024MRO*		11	Red			0,40 ± 0,10	1/1
GBS032MBL*	3,2	11	Blue	3,5 ± 0,4	1,5	0,40 ± 0,10	1/1
GBS032MGV		11	YellowGreen			0,40 ± 0,10	1/1
GBS032MNE*		11	Black			0,40 ± 0,10	1/1
GBS032MRO*		11	Red			0,40 ± 0,10	1/1
GBS048MBL*	4,8	10	Blue	5,5 ± 0,4	2,5	0,55 ± 0,10	1/1
GBS048MGV		10	YellowGreen			0,55 ± 0,10	1/1
GBS048MNE*		10	Black			0,55 ± 0,10	1/1
GBS048MRO*		10	Red			0,55 ± 0,10	1/1
GBS064MBL*	6,4	9	Blue	6,5 ± 0,4	3	0,55 ± 0,10	1/1
GBS064MGV		9	YellowGreen			0,55 ± 0,10	1/1
GBS064MNE*		9	Black			0,55 ± 0,10	1/1
GBS064MRO*		9	Red			0,55 ± 0,10	1/1
GBS095MBL*	9,5	7	Blue	9,5 ± 0,5	4,5	0,60 ± 0,10	1/1
GBS095MGV		7	YellowGreen			0,60 ± 0,10	1/1
GBS095MNE*		7	Black			0,60 ± 0,10	1/1
GBS095MRO*		7	Red			0,60 ± 0,10	1/1
GBS127MBL*	12,7	6	Blue	13,7 ± 0,5	6,5	0,65 ± 0,10	1/1
GBS127MGV		6	YellowGreen			0,65 ± 0,10	1/1
GBS127MNE*		6	Black			0,65 ± 0,10	1/1
GBS127MRO*		6	Red			0,65 ± 0,10	1/1
GBS190MBL*	19	5	Blue	21,0 ± 0,5	10	0,75 ± 0,15	1/1
GBS190MGV		5	YellowGreen			0,75 ± 0,15	1/1
GBS190MNE*		5	Black			0,75 ± 0,15	1/1
GBS190MRO*		5	Red			0,75 ± 0,15	1/1
GBS254MBL*	25,4	3,5	Blue	26,0 ± 0,5	12,5	0,90 ± 0,15	1/1
GBS254MGV		3,5	YellowGreen			0,90 ± 0,15	1/1
GBS254MNE*		3,5	Black			0,90 ± 0,15	1/1
GBS254MRO*		3,5	Red			0,90 ± 0,15	1/1

\* file n° E245489

**HALOGEN FREE**

**FLAME RETARDANT**

**2:1**

**THERMO SHRINKING CABLE PROTECTION - THIN WALL 2:1 - BAR**

**TYPE:** single wall

**SHRINKAGE RATIO:** 2:1

**MATERIAL:** polyethylene

**OPERATING TEMPERATURE:** from -55°C to +125°C max (+105 °C max for transparent)

**SHRINKAGE TEMPERATURE:** from +70°C to +110°C

**VRMS MAX:** 600 V

**SHEATH SELF-EXTINGUISHING GRADE:** flame retardant VW-1 UL1581 (except transparent color)

**HALOGEN FREE:** all colours except for yellow-green and transparent

**APPLICATIONS:** economic and efficient insulation and protection of connections and terminals in various industries, including electronics, automotive, railway and marine. The availability of many colours makes cable identification easy.

Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	S1 (mm)	
GBS024SBI*	2,4	1	<input type="checkbox"/> White	3,0 ± 0,3	1,25	0,40 ± 0,10	25/25
GBS024SBL*		1	<input checked="" type="checkbox"/> Blue			0,40 ± 0,10	25/25
GBS024SNE*		1	<input checked="" type="checkbox"/> Black			0,40 ± 0,10	25/25
GBS024SRO*		1	<input checked="" type="checkbox"/> Red			0,40 ± 0,10	25/25
GBS024STR		1	<input checked="" type="checkbox"/> Transparent			0,40 ± 0,10	25/25
GBS032SBI*	3,2	1	<input type="checkbox"/> White	3,5 ± 0,4	1,5	0,40 ± 0,10	25/25
GBS032SBL*		1	<input checked="" type="checkbox"/> Blue			0,40 ± 0,10	25/25
GBS032SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,40 ± 0,10	25/25
GBS032SNE*		1	<input checked="" type="checkbox"/> Black			0,40 ± 0,10	25/25
GBS032SRO*		1	<input checked="" type="checkbox"/> Red			0,40 ± 0,10	25/25
GBS032STR	1	<input checked="" type="checkbox"/> Transparent	0,40 ± 0,10	25/25			
GBS048SBI*	4,8	1	<input type="checkbox"/> White	5,5 ± 0,4	2,5	0,55 ± 0,10	10/10
GBS048SBL*		1	<input checked="" type="checkbox"/> Blue			0,55 ± 0,10	10/10
GBS048SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,55 ± 0,10	10/10
GBS048SNE*		1	<input checked="" type="checkbox"/> Black			0,55 ± 0,10	10/10
GBS048SRO*		1	<input checked="" type="checkbox"/> Red			0,55 ± 0,10	10/10
GBS048STR	1	<input checked="" type="checkbox"/> Transparent	0,55 ± 0,10	10/10			
GBS064SBI*	6,4	1	<input type="checkbox"/> White	6,5 ± 0,4	3	0,55 ± 0,10	10/10
GBS064SBL*		1	<input checked="" type="checkbox"/> Blue			0,55 ± 0,10	10/10
GBS064SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,55 ± 0,10	10/10
GBS064SNE*		1	<input checked="" type="checkbox"/> Black			0,55 ± 0,10	10/10
GBS064SRO*		1	<input checked="" type="checkbox"/> Red			0,55 ± 0,10	10/10
GBS064STR	1	<input checked="" type="checkbox"/> Transparent	0,55 ± 0,10	10/10			
GBS095SBI*	9,5	1	<input type="checkbox"/> White	9,5 ± 0,5	4,5	0,60 ± 0,10	10/10
GBS095SBL*		1	<input checked="" type="checkbox"/> Blue			0,60 ± 0,10	10/10
GBS095SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,60 ± 0,10	10/10
GBS095SNE*		1	<input checked="" type="checkbox"/> Black			0,60 ± 0,10	10/10
GBS095SRO*		1	<input checked="" type="checkbox"/> Red			0,60 ± 0,10	10/10
GBS095STR	1	<input checked="" type="checkbox"/> Transparent	0,60 ± 0,10	10/10			
GBS127SBI*	12,7	1	<input type="checkbox"/> White	13,7 ± 0,5	6,5	0,65 ± 0,10	10/10
GBS127SBL*		1	<input checked="" type="checkbox"/> Blue			0,65 ± 0,10	10/10
GBS127SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,65 ± 0,10	10/10
GBS127SNE*		1	<input checked="" type="checkbox"/> Black			0,65 ± 0,10	10/10
GBS127SRO*		1	<input checked="" type="checkbox"/> Red			0,65 ± 0,10	10/10
GBS127STR	1	<input checked="" type="checkbox"/> Transparent	0,65 ± 0,10	10/10			
GBS190SBI*	19	1	<input type="checkbox"/> White	21,0 ± 0,5	10	0,75 ± 0,15	10/10
GBS190SBL*		1	<input checked="" type="checkbox"/> Blue			0,75 ± 0,15	10/10
GBS190SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,75 ± 0,15	10/10
GBS190SNE*		1	<input checked="" type="checkbox"/> Black			0,75 ± 0,15	10/10
GBS190SRO*		1	<input checked="" type="checkbox"/> Red			0,75 ± 0,15	10/10
GBS190STR	1	<input checked="" type="checkbox"/> Transparent	0,75 ± 0,15	10/10			
GBS254SBI*	25,4	1	<input type="checkbox"/> White	26,0 ± 0,5	12,5	0,90 ± 0,15	10/10
GBS254SBL*		1	<input checked="" type="checkbox"/> Blue			0,90 ± 0,15	10/10
GBS254SGV		1	<input checked="" type="checkbox"/> YellowGreen			0,90 ± 0,15	10/10
GBS254SNE*		1	<input checked="" type="checkbox"/> Black			0,90 ± 0,15	10/10
GBS254SRO*		1	<input checked="" type="checkbox"/> Red			0,90 ± 0,15	10/10
GBS254STR	1	<input checked="" type="checkbox"/> Transparent	0,90 ± 0,15	10/10			

Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	S1 (mm)	
GBS380SBI*	38	1	<input type="checkbox"/> White	41,5 ± 1,0	20	1,0 ± 0,15	10/10
GBS380SBL*		1	<input checked="" type="checkbox"/> Blue			1,0 ± 0,15	
GBS380SGV		1	<input checked="" type="checkbox"/> YellowGreen			1,0 ± 0,15	
GBS380SNE*		1	<input checked="" type="checkbox"/> Black			1,0 ± 0,15	
GBS380SRO*		1	<input checked="" type="checkbox"/> Red			1,0 ± 0,15	
GBS380STR		1	<input checked="" type="checkbox"/> Transparent			1,0 ± 0,15	
GBS510SBI	51	1	<input type="checkbox"/> White	>50	25	1,0 ± 0,15	5/5
GBS510SBL		1	<input checked="" type="checkbox"/> Blue			1,0 ± 0,15	
GBS510SGV		1	<input checked="" type="checkbox"/> YellowGreen			1,0 ± 0,15	
GBS510SNE		1	<input checked="" type="checkbox"/> Black			1,0 ± 0,15	
GBS510SRO		1	<input checked="" type="checkbox"/> Red			1,0 ± 0,15	
GBS510STR		1	<input checked="" type="checkbox"/> Transparent			1,0 ± 0,15	

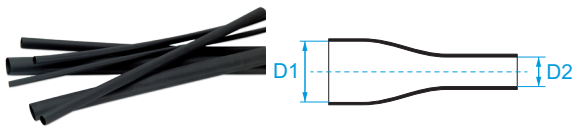


HALOGEN FREE

FLAME RETARDANT

2:1

**THERMO SHRINKING CABLE PROTECTION - THIN WALL 3:1 WITH ADHESIVE - BAR**



**TYPE:** double wall with adhesive

**SHRINKAGE RATIO:** 3:1

**MATERIAL:** polyethylene

**OPERATING TEMPERATURE:** from -45°C to +125°C max

**SHRINKAGE TEMPERATURE:** from +70°C to +125°C

**VRMS MAX:** 600 V

**SHEATH SELF-EXTINGUISHING GRADE:** flame retardant (VW-1 UL1581)

**APPLICATIONS:** superior insulation, watertightness and protection of connections and terminals in various industries, including electronics, automotive, railway and marine.

Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	S1 (mm)	
GBA030SNE	3	1	<input checked="" type="checkbox"/> Black	3,2	1	1,0	25/25
GBA060SNE	6	1	<input checked="" type="checkbox"/> Black	6,4	2	1,2	10/10
GBA090SNE	9	1	<input checked="" type="checkbox"/> Black	9,5	3,2	1,4	10/10
GBA120SNE	12	1	<input checked="" type="checkbox"/> Black	12,7	4,2	1,7	10/10
GBA190SNE	19	1	<input checked="" type="checkbox"/> Black	19,1	6,3	1,8	10/10
GBA240SNE	24	1	<input checked="" type="checkbox"/> Black	25,4	8,5	2,0	10/10



FLAME RETARDANT

3:1

## HEAT GUN



Heat gun with three-position supply selector and electronic continuous temperature control from 50 °C to 600 °C.  
Double protection against over-heating: thermostat and thermic stop.

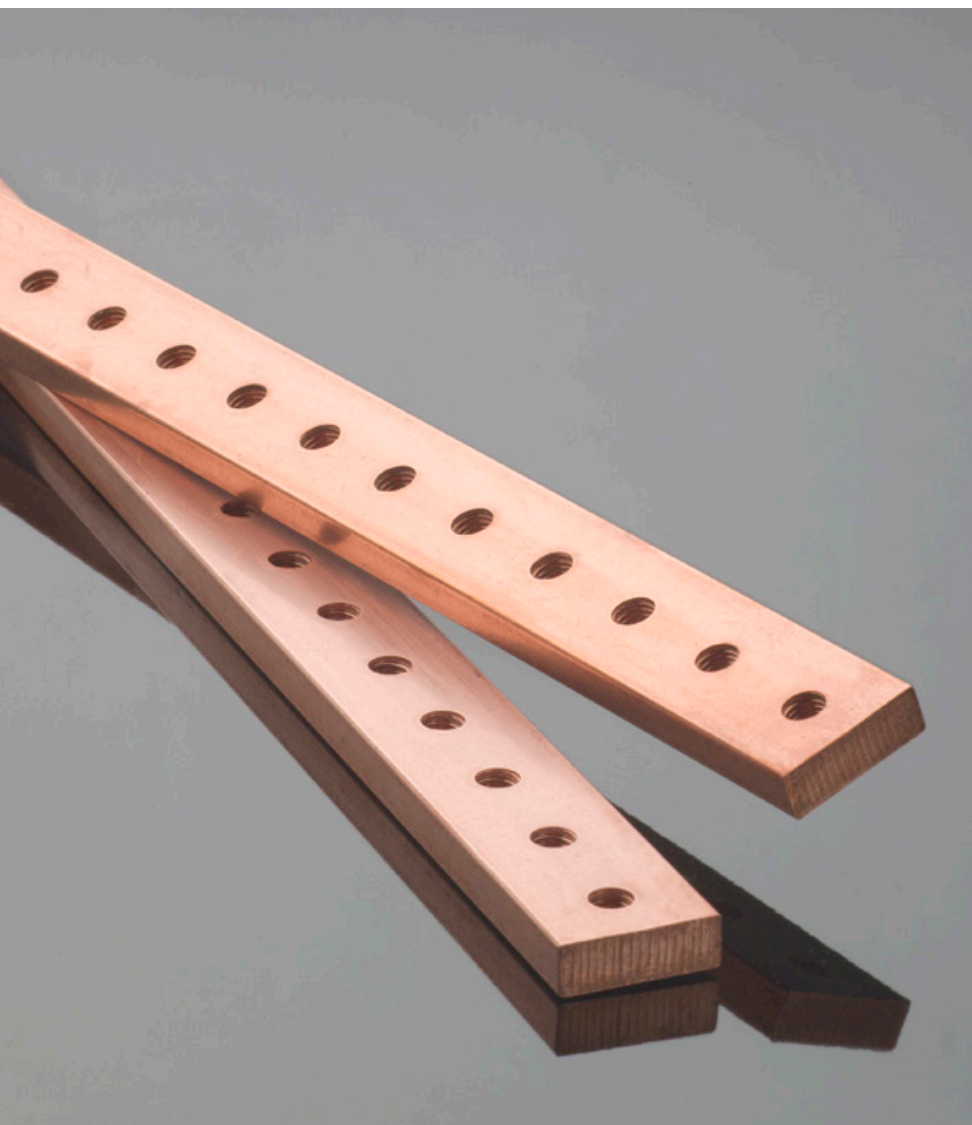
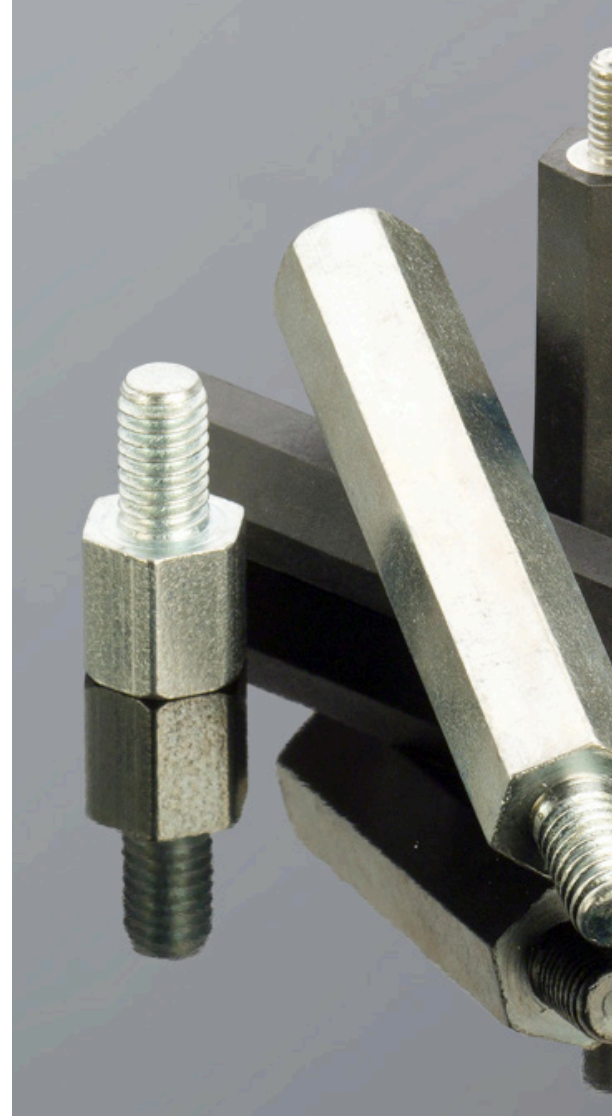
Code	Power (W)	Voltage	Weight (g)	Selector	Temperature (°C)	Air output (l/min)	
1108	2000	220-240 V, 50 Hz	650	Pos. I Pos. II Pos. III	50 50-600 50-600	150 300 500	1/1

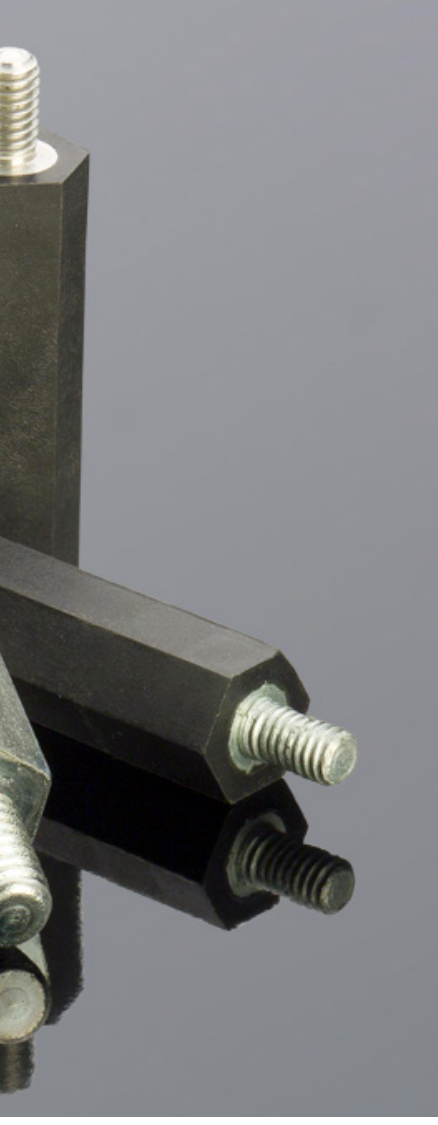
## REFLECTING NOZZLES



The reflecting nozzles channel the 1108 heat gun's hot air output, speeding up the thermo-shrinking process.

Code	Fig.	Description	Width (mm)	
11081	1	narrow nozzle	31	1/1
11082	2	wide nozzle	80	1/1





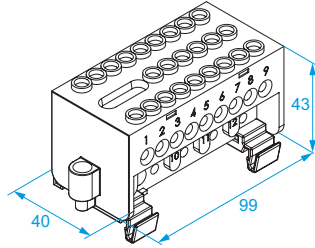
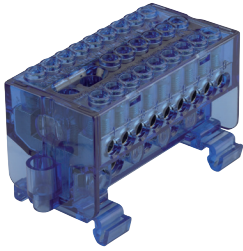
# PANEL BOARDS COMPONENTS

MODULAR DISTRIBUTION BLOCKS	216
BRAIDS	219
THREADED BARS	221
INSULATORS AND SPACERS	222
SHEATHS FOR CABLE PROTECTION	225
CUTTING AND DRILLING DIN BARS	226





## DISTRIBUTION BLOCK FOR GROUND CONNECTIONS



One-way distribution block with 26 inputs that can be installed by means of screws or DIN 46277/3 (EN 50022) rails.

The small size allows installation inside the small boxes usually found in buildings with existing piping. The two-level cabling system allows the wires to be easily inserted. The use of this distribution block is recommended both for connecting the conductors as an equipotential earth node and for connection to extraneous masses (metal structures, piping etc.) in the electrical facilities of medical premises.

**INSULATING HOUSING:** transparent polycarbonate (PC) UL 94 V0

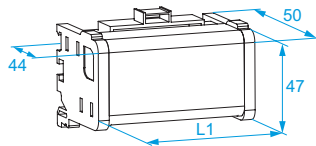
**CONDUCTIVE BODY:** nickel-plated brass

**CAPTIVE SCREW IN:** galvanized steel

**MAX OPERATING TEMPERATURE:** 85 °C

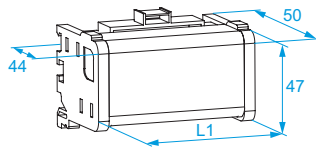
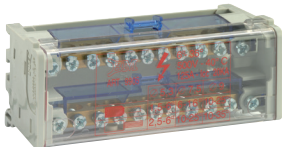
Code	Overall inputs	Inputs	Conductor section (mm <sup>2</sup> )	Type of connection	
9926	26	2 24	16 ÷ 35 2,5 ÷ 10	↓	1/5



**DISTRIBUTION BLOCKS - 2-WAYS 100 A**


**INSULATING HOUSING:** polycarbonate (PC)  
**CONNECTION BARS IN:** brass  
**SCREW IN:** galvanized steel  
**INSULATION SELF-EXTINGUISHING:** IEC 69522, UL 94 V0 IEC 69521 at/up to 960 °C  
**RATED INSULATION VOLTAGE:** 500 V  
**TEST VOLTAGE:** 3000 V  
**TIGHTENING TORQUE ON THE SCREW:** 2 Nm  
**TYPE OF MOUNT:** on EN 50022 rail, via screws  
**ACCORDING TO STD.:** EN 60947-1, EN 60998-1, EN 60998-2-1

Code	N. of 17.5 mm modules	Peak current	Inputs/ways	Conductor section flexible (mm <sup>2</sup> )	Conductor section rigid (mm <sup>2</sup> )	L1 (mm)	
9904	4	Icc 20	5 2	1,5 - 6 6 - 16	2,5 - 6 10 - 25	70	1/5

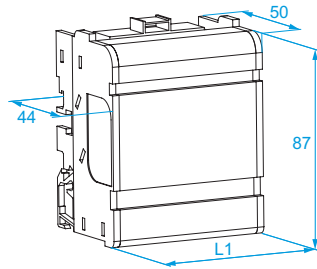

**DISTRIBUTION BLOCKS - 2-WAYS 125 A**


**INSULATING HOUSING:** polycarbonate (PC)  
**CONNECTION BARS IN:** brass  
**SCREW IN:** galvanized steel  
**INSULATION SELF-EXTINGUISHING:** IEC 69522, UL 94 V0 IEC 69521 at/up to 960 °C  
**RATED INSULATION VOLTAGE:** 500 V  
**TEST VOLTAGE:** 3000 V  
**TIGHTENING TORQUE ON THE SCREW:** 2 Nm  
**TYPE OF MOUNT:** on EN 50022 rail, via screws  
**ACCORDING TO STD.:** EN 60947-1, EN 60998-1, EN 60998-2-1

Code	N. of 17.5 mm modules	Peak current	Inputs/ways	Conductor section flexible (mm <sup>2</sup> )	Conductor section rigid (mm <sup>2</sup> )	L1 (mm)	
9905	6	Icc 20	7 2 2	1,5 - 6 6 - 16 10 - 25	2,5 - 6 10 - 25 10 - 35	105	1/5
9906	8	Icc 18	11 2 2	1,5 - 6 6 - 16 10 - 25	2,5 - 6 10 - 25 10 - 35	140	1/5



### DISTRIBUTION BLOCKS - 4-WAYS 100 A

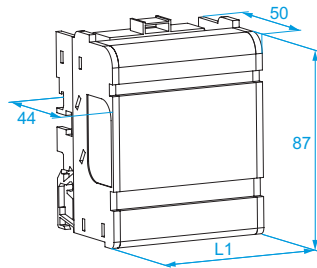


**INSULATING HOUSING:** polycarbonate (PC)  
**CONNECTION BARS IN:** brass  
**SCREW IN:** galvanized steel  
**INSULATION SELF-EXTINGUISHING:** IEC 69522, UL 94 V0 IEC 69521 at/up to 960 °C  
**RATED INSULATION VOLTAGE:** 500 V  
**TEST VOLTAGE:** 3000 V  
**TIGHTENING TORQUE ON THE SCREW:** 2 Nm  
**TYPE OF MOUNT:** on EN 50022 rail, via screws  
**ACCORDING TO STD.:** EN 60947-1, EN 60998-1, EN 60998-2-1

Code	N. of 17.5 mm modules	Peak current	Inputs/ways	Conductor section flexible (mm <sup>2</sup> )	Conductor section rigid (mm <sup>2</sup> )	L1 (mm)	
9907	4	Icc 20	5 2	1,5 - 6 6 - 16	2,5 - 6 10 - 25	70	1/5



### DISTRIBUTION BLOCKS - 4-WAYS 125 A



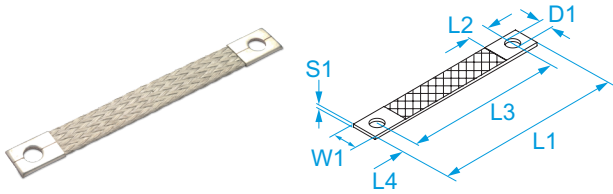
**INSULATING HOUSING:** polycarbonate (PC)  
**CONNECTION BARS IN:** brass  
**SCREW IN:** galvanized steel  
**INSULATION SELF-EXTINGUISHING:** IEC 69522, UL 94 V0 IEC 69521 at/up to 960 °C  
**RATED INSULATION VOLTAGE:** 500 V  
**TEST VOLTAGE:** 3000 V  
**TIGHTENING TORQUE ON THE SCREW:** 2 Nm  
**TYPE OF MOUNT:** on EN 50022 rail, via screws  
**ACCORDING TO STD.:** EN 60947-1, EN 60998-1, EN 60998-2-1

Code	N. of 17.5 mm modules	Peak current	Inputs/ways	Conductor section flexible (mm <sup>2</sup> )	Conductor section rigid (mm <sup>2</sup> )	L1 (mm)	
9911	6	Icc 20	7 2 2	1,5 - 6 6 - 16 10 - 25	2,5 - 6 10 - 25 10 - 35	105	1/5
9915	8	Icc 18	11 2 2	1,5 - 6 6 - 16 10 - 25	2,5 - 6 10 - 25 10 - 35	140	1/5



## FLEXIBLE COPPER TWISTED PAIRS FOR EARTHING CONNECTIONS

**MATERIAL:** tinned copper  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C  
**SINGLE WIRE:** Cu-ETP EN13602

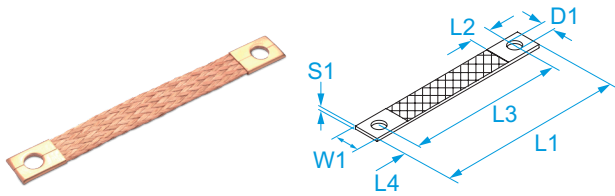


Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	S1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	Rated current (ΔT = 30 °C) (A)	
61015	10	(8)	17	2	150	12	130	10	9	90	25/25
61017			17	2	170	12	150	10	9	90	25/25
61020			17	2	200	12	180	10	9	90	25/25
61025			17	2	250	12	230	10	9	90	25/25
61115	16	(6)	17	2,5	150	12	130	10	9	120	25/25
61120			17	2,5	200	12	180	10	9	120	25/25
61125			17	2,5	250	12	230	10	9	120	25/25
61130			17	2,5	320	12	300	10	9	120	25/25
61135			17	2,5	350	12	330	10	9	120	25/25
61142			17	2,5	420	12	400	10	9	120	25/25
61157			17	2,5	570	12	550	10	9	120	25/25
61166	17	2,5	660	12	640	10	9	120	25/25		
61215	25	(4)	22	3	150	12	130	10	9	150	25/25
61220			22	3	200	12	180	10	9	150	25/25
61225			22	3	250	12	230	10	9	150	25/25
61230			22	3	300	12	280	10	9	150	25/25

Different sizes are available on demand.

### FLEXIBLE COPPER TWISTED PAIRS FOR EARTHING CONNECTIONS

**MATERIAL:** copper  
**OPERATING TEMPERATURE:** from -50 °C to +150 °C  
**SINGLE WIRE:** Cu-ETP EN13602

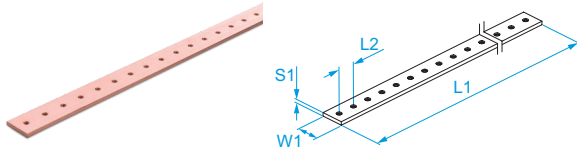


PANEL BOARDS COMPONENTS

Code	Section (mm <sup>2</sup> )	Section (AWG/MCM)	W1 (mm)	S1 (mm)	L1 (mm)	L2 (mm)	L3 (mm)	L4 (mm)	D1 (mm)	Rated current (ΔT = 30 °C) (A)	
60015	10	(8)	17	2	150	12	130	10	9	90	25/25
60020			17	2	200	12	180	10	9	90	25/25
60025			17	2	250	12	230	10	9	90	25/25
60115	16	(6)	17	2,5	150	12	130	10	9	120	25/25
60120			17	2,5	200	12	180	10	9	120	25/25
60125			17	2,5	250	12	230	10	9	120	25/25
60130			17	2,5	320	12	300	10	9	120	25/25
60135			17	2,5	350	12	330	10	9	120	25/25
60142			17	2,5	420	12	400	10	9	120	25/25
60157			17	2,5	570	12	550	10	9	120	25/25
60166	17	2,5	660	12	640	10	9	120	25/25		
60215	25	(4)	22	3	150	12	130	10	9	120	25/25
60220			22	3	200	12	180	10	9	150	25/25
60225			22	3	250	12	230	10	9	150	25/25
60230			22	3	300	12	280	10	9	150	25/25

Different sizes are available on demand.

## THREADED COPPER BUSBARS



**MATERIAL:** electrolytic copper

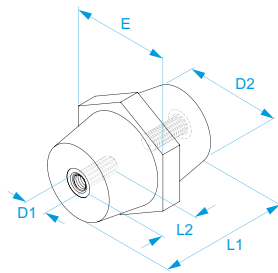
**PROFILE:** round edges

**APPLICATIONS:** power distribution, heavy duty power connections, earth/ground connections, circuit breaker, generator and power network conductors

Code	W1 (mm)	S1 (mm)	L1 (mm)	L2 (mm)	Thread	N. holes	Rated current ( $\Delta T = 30\text{ }^{\circ}\text{C}$ ) (A)	Rated current ( $\Delta T = 50\text{ }^{\circ}\text{C}$ ) (A)	
<a href="#">QB1221518</a>	12	2	1000	18	M5	55	108	142	10/10
<a href="#">QB1241518</a>		4	1000	18	M5	55	160	210	10/10
<a href="#">QB1242518</a>		4	2000	18	M5	111	160	210	10/10
<a href="#">QB1251518</a>		5	1000	18	M5	55	183	240	4/4
<a href="#">QB1551625</a>	15	5	1000	25	M6	40	218	286	4/4
<a href="#">QB1552617</a>		5	2000	17,5	M6	113	218	286	4/4
<a href="#">QB2051625</a>	20	5	1000	25	M6	40	274	362	4/4
<a href="#">QB2052625</a>		5	2000	25	M6	80	274	362	4/4
<a href="#">QB2052517</a>		5	2000	17,5	M5	113	274	362	4/4
<a href="#">QB2011825</a>		10	1000	25	M8	40	427	595	4/4
<a href="#">QB2541620</a>	25	4	1000	20	M6	50	288	380	4/4
<a href="#">QB3052625</a>	30	5	2000	25	M6	80	379	502	4/4
<a href="#">QB3011825</a>		10	1000	25	M8	40	573	754	4/4
<a href="#">QB3012825</a>		10	2000	25	M8	80	573	754	2/2
<a href="#">QB3251625</a>	32	5	1000	25	M6	40	400	530	4/4

AVAILABLE ON REQUEST: make to order (dimensions and surface treatments)

## POLYESTER INSULATORS (L.V.)



**INSULATION MATERIAL:** red polyester and fiberglass

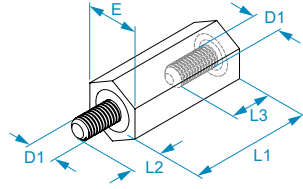
**INSERT MATERIAL:** galvanized steel threaded according to ISO standards

**INSULATION SELF-EXTINGUISHING:** UL 94 V0

**OPERATING TEMPERATURE:** from -40 °C to +135 °C

**APPLICATIONS:** support of threaded and drilled copper bars

Code	L1 (mm)	D1	L2 (mm)	E wrench (mm)	D2 (mm)	Tightening torque (Nm)	AC Voltage (kV)	DC Voltage (kV)	Tensile strength (daN)	Bending strength (daN)	
QHEP01604	16	M4	3,5	14	11	1,5	0,6	0,8	80	25	50/50
QHEP02004	20	M4	5	18	14	2,5	0,8	1,1	182	65	25/25
QHEP02006		M6	5	18	14	5	0,8	1,1	195	75	25/25
QHEP02505	25	M5	7	21	16	5	1	1,4	350	92	20/20
QHEP02506		M6	7	25	22	6	1	1,4	540	190	20/20
QHEP03006	30	M6	9	32	24	6	1,2	1,6	532	154	10/10
QHEP03008		M8	9	32	25	15	1,2	1,6	796	240	10/10
QHEP03506	35	M6	12	32	26	6	1,4	1,9	620	244	10/10
QHEP03508		M8	12	32	26	15	1,4	1,9	670	250	10/10
QHEP03510	40	M10	12	32	26	20	1,4	1,9	805	190	10/10
QHEP04006		M6	12	38	30	6	1,6	2,2	870	280	10/10
QHEP04008	40	M8	12	39	31	20	1,6	2,2	860	340	10/10
QHEP04010		M10	12	38	30	25	1,6	2,2	1054	345	10/10
QHEP04506	45	M6	12	40	32	10	1,8	2,5	990	310	10/10
QHEP04508		M8	12	40	32	20	1,8	2,5	1100	345	10/10
QHEP04510	50	M10	12	40	32	30	1,8	2,5	1220	300	10/10
QHEP05006		M6	12	46	35	10	2	2,8	1120	300	10/10
QHEP05008	50	M8	17	46	35	20	2	2,8	1500	420	10/10
QHEP05010		M10	17	46	35	30	2	2,8	1550	500	10/10
QHEP05012	60	M12	17	46	35	50	2	2,8	1511	472	10/10
QHEP06008		M8	17	50	38	20	2,4	3,3	1200	253	4/4
QHEP06010	60	M10	17	50	38	30	2,4	3,3	1570	410	4/4
QHEP06012		M12	17	50	38	50	2,4	3,3	1640	520	4/4
QHEP07010	70	M10	22	55	41	30	2,8	3,9	1720	490	4/4
QHEP07012		M12	22	55	41	50	2,8	3,9	1800	500	4/4
QHEP07512	75	M12	22	53	42	50	3	4,2	1840	540	4/4

**INSULATED SPACERS (L.V.)**

**INSULATION MATERIAL:** PBT black polyester

**INSERT MATERIAL:** galvanized steel male and female threaded according to ISO standards

**INSULATION SELF-EXTINGUISHING:** UL 94 V0

**OPERATING TEMPERATURE:** from -40 °C to +135 °C

**APPLICATIONS:** support for different applications such as electronic board protections

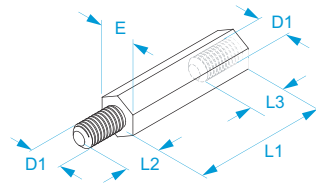
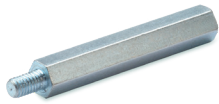
Code	L1 (mm)	D1	L2 (mm)	L3 (mm)	E wrench (mm)	Tightening torque (Nm)	AC Voltage (kV)	DC Voltage (kV)	
QSCP015M4	15	M4	7	8,5	9	1	0,5	0,7	100/100
QSCP020M4	20		7	8,5	9	1,5	0,6	0,8	100/100
QSCP025M4	25		7	8,5	9	1,5	0,8	1,1	50/50
QSCP030M4	30		9	8,5	9	1,5	1	1,4	50/50
QSCP040M4	40		9	7	9	1,5	1,4	1,9	50/50
QSCP055M4	55		9	7	9	1,5	1,8	2,5	50/50
QSCP060M4	60		9	7	9	1,5	1,8	2,5	50/50
QSCP090M4	90		9	7	9	1,5	1,8	2,5	50/50
QSCP015M5	15		M5	7	8,5	13	3,5	0,5	0,7
QSCP020M5	20	7		8,5	13	3,5	0,6	0,8	100/100
QSCP025M5	25	7		8,5	13	3,5	0,8	1,1	50/50
QSCP030M5	30	7		8,5	13	3,5	1	1,4	50/50
QSCP045M5	45	7		8,5	13	3,5	1,6	2,2	50/50
QSCP055M5	55	7		8,5	13	3,5	1,8	2,5	50/50
QSCP070M5	70	7		8,5	13	3,5	1,8	2,5	50/50
QSCP085M5	85	7		8,5	13	3,5	1,8	2,5	50/50
QSCP120M5	120	7		8,5	13	3,5	1,8	2,5	50/50
QSCP015M6	15	M6	7	8,5	13	4	0,5	0,7	100/100
QSCP020M6	20		7	8,5	13	4	0,6	0,8	100/100
QSCP025M6	25		7	8,5	13	4	0,8	1,1	50/50
QSCP030M6	30		7	8,5	13	4	1	1,4	50/50
QSCP045M6	45		7	8,5	13	4	1,6	2,2	50/50
QSCP060M6	60		7	8,5	13	4	2	2,5	50/50
QSCP070M6	70		7	8,5	13	4	1,8	2,5	50/50
QSCP120M6	120		7	8,5	13	4	1,8	2,5	50/50




## UNINSULATED SPACERS

**MATERIAL:** galvanized steel male and female threaded

**APPLICATIONS:** support for plates, screens and profiles



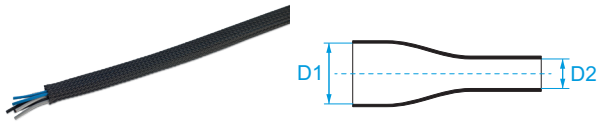
Code	L1 (mm)	D1	L2 (mm)	L3 (mm)	E wrench (mm)	Tightening torque (Nm)	
QSMS015M4	15	M4	8	10	7	2,5	100/100
QSMS020M4	20		8	10	7	2,5	100/100
QSMS025M4	25		10	10	7	2,5	50/50
QSMS030M4	30		10	10	7	2,5	50/50
QSMS040M4	40		10	10	7	2,5	50/50
QSMS050M4	50		10	10	7	2,5	50/50
QSMS060M4	60	10	10	7	2,5	50/50	
QSMS015M5	15	M5	8	10	8	5	100/100
QSMS020M5	20		8	10	8	5	100/100
QSMS025M5	25		10	10	8	5	50/50
QSMS030M5	30		10	10	8	5	50/50
QSMS040M5	40		10	10	8	5	50/50
QSMS050M5	50		10	10	8	5	50/50
QSMS060M5	60	10	10	8	5	50/50	
QSMS080M5	80	10	10	8	5	25/25	
QSMS015M6	15	M6	10	10	10	8	100/100
QSMS020M6	20		10	10	10	8	100/100
QSMS025M6	25		10	10	10	8	50/50
QSMS030M6	30		10	10	10	8	50/50
QSMS040M6	40		10	10	10	8	50/50
QSMS050M6	50		10	10	10	8	50/50
QSMS060M6	60	10	10	10	8	50/50	
QSMS080M6	80	10	10	10	8	25/25	

**CABLE PROTECTION - EXPANDABLE CABLING SLEEVES - POLYESTER**
**MATERIAL:** polyester

**OPERATING TEMPERATURE:** da -50°C a +125°C max

**MELTING POINT:** 240 ± 10°C

**SHEATH SELF-EXTINGUISHING GRADE:** VW-1 (UL 1581)

**MATERIAL SELF-EXTINGUISHING GRADE:** UL 94 V2


Code	Size (mm)	Length (m)	Color	D1 (Ø mm)	D2 (Ø mm)	
<a href="#">GCP006MGR</a>	6	100	Grey	9	3	1/1
<a href="#">GCP006MNE</a>	6	100	Black	9	3	1/1
<a href="#">GCP008MGR</a>	8	100	Grey	12	5	1/1
<a href="#">GCP008MNE</a>	8	100	Black	12	5	1/1
<a href="#">GCP010MGR</a>	10	100	Grey	17	7	1/1
<a href="#">GCP010MNE</a>	10	100	Black	17	7	1/1
<a href="#">GCP015MGR</a>	15	50	Grey	27	10	1/1
<a href="#">GCP015MNE</a>	15	50	Black	27	10	1/1
<a href="#">GCP020MGR</a>	20	50	Grey	30	14	1/1
<a href="#">GCP020MNE</a>	20	50	Black	30	14	1/1
<a href="#">GCP030MGR</a>	30	50	Grey	50	20	1/1
<a href="#">GCP030MNE</a>	30	50	Black	50	20	1/1
<a href="#">GCP040MGR</a>	40	50	Grey	60	30	1/1
<a href="#">GCP040MNE</a>	40	50	Black	60	30	1/1

file n° E515258

**FLAME**  
RETARDANT

**HALOGEN**  
FREE

## CUTTER AND PUNCHER - FOR DIN RAILS

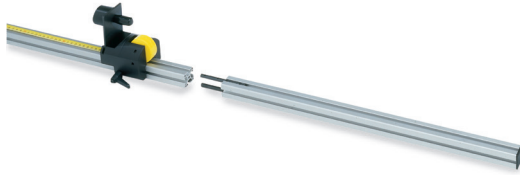


Cutter and puncher for EN 50035, EN 50022, and EN 50045 rails. The tool is designed for extremely rapid, precise and safe cutting and punching of standardized support metal rails. It makes neat cuts without scraping or deforming the bar.

Punching is done by means of a separate operation and enables to make  $\varnothing 6.5$  mm holes. The tool is supplied with a bar lock to set the cutting and punching length. This makes repeat operations easier. Specific dies and guides for the standardised metal rails are available. Additionally, a complete hydraulic kit is available; it allows the connection to a hydraulic pump.

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
2691	Cutter and puncher for DIN rails	1060	150	150	6	1225x220x220	SC

## ACCESSORIES FOR CUTTER AND PUNCHER DIN RAILS: EXTENSION KIT



Bar holder extension kit for BM 2691.


The modular unit allows the increase of the cutting and punching length by multiples of 600 mm. Adjustment scale in mm.

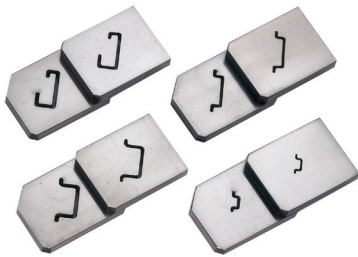
Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
26913	Bar holder extension kit for BM 2691.	50	70	50	1	60x80x60	SC

## ACCESSORIES FOR CUTTER AND PUNCHER DIN RAILS: HYDRAULIC KIT

Complete hydraulic kit for BM 2691



Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
26914	Complete hydraulic kit for BM 2691. It replaces the hand lever and allows the connection to a hydraulic pump.	600	30	30	1	630x30x30	SC

**ACCESSORIES FOR CUTTER AND PUNCHER DIN RAILS: DIES**


Cod. 269111

Cod. 269112



Cod. 269113



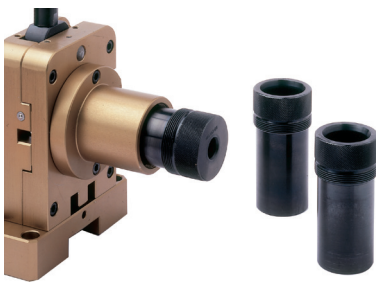
Cod. 269114

Die pair for BM 2691.

**SERIES:** G1

**COMPATIBILITY:** BM 2691

Code	Rail type height (mm)	Terminal type
269111		for EN 50035 rails
269112	7.5	for EN 50022 rails
269113	15	for EN 50022 rails
269114		for EN 50045 rails

**ACCESSORIES FOR CUTTER AND PUNCHER DIN RAILS: GUIDES**


Code	Description
26912	Guide support
269121	Guide for EN 50035 rail
269122	Guide for EN 50022 rails
269123	Guide for EN 50045 rail





# EQUIPMENT

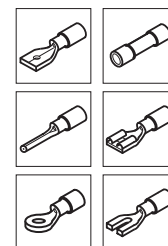
CRIMPING TOOLS	pag. 230
CABLE CUTTERS AND WIRE ROPE CUTTERS	pag. 273
DRILLERS	pag. 280
MULTIHEAD	pag. 286
PUMPS AND HEADSTOCKS	pag. 289

## CRIMPING TOOL - SERIES HB

EQUIPMENT

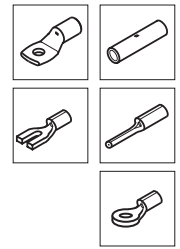
Essentiality and simplicity are the key words of the HB pliers that allow to crimp terminals whenever you need. The structure is molded in tempered carbon steel with a burnishing surface treatment and the handles are insulated in plastic material.

### CRIMPING TOOL - STANDARD - FOR INSULATED TERMINALS - 0.5÷6



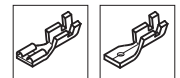
Crimping tool for hobbies in carbon steel tempered with burnishing surface treatment, equipped with cable cutters, strippers, crew cutters and insulated handles in plastic material.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
536	for insulated terminals and terminals with heat shrinkable insulation	0.5 ÷ 6	(20-10)	220	60	15	0,25	350x100x20	SC

**CRIMPING TOOL · STANDARD · FOR UNINSULATED TERMINALS · 0.25÷6**


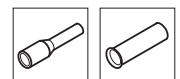
Crimping tool for hobbies in carbon steel tempered with burnishing surface treatment, equipped with cable cutters, strippers, crew cutters and insulated handles in plastic material.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
522	for uninsulated terminals	0.25 ÷ 6	(22-10)	220	60	15	0,25	350x100x20	SC

**HB**
**CRIMPING TOOL · STANDARD · FOR BRASS OPEN TERMINALS · 0.5÷6**


Crimping tool for hobbies in carbon steel tempered with burnishing surface treatment, equipped with cable cutters, strippers, crew cutters and insulated handles in plastic material.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
530	for uninsulated open barrel brass terminals	0.5 ÷ 6	(20-10)	220	60	15	0,3	350x100x20	SC

**HB**
**CRIMPING TOOL · STANDARD · FOR END-SLEEVES · 0.25÷6**


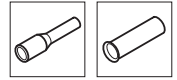
Crimping tool in carbon steel tempered with burnishing surface treatment. Insulated handles in plastic material.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
540	for end-sleeve terminals	0.25 ÷ 2.5	(22-14)	170	70	15	0,22	255x95x20	SC

**HB**



**CRIMPING TOOL · STANDARD · FOR END-SLEEVES · 0.75÷16**

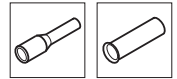


Crimping tool in carbon steel tempered with burnishing surface treatment. Insulated handles in plastic material.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
541	for end-sleeve terminals	0.75 ÷ 16	(18-6)	190	70	15	0,35	290x95x20	SC

**HB**

**CRIMPING TOOL · STANDARD · FOR END-SLEEVES · 10÷35**



Crimping tool in carbon steel tempered with burnishing surface treatment. Insulated handles in plastic material.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
542	for end-sleeve terminals	10 ÷ 35	(8-2)	225	65	18	0,4	290x95x20	SC

**HB**

## CRIMPING TOOL - SERIES CRIM

Tempered steel dies with a mechanical strength of 1000 N/mm<sup>2</sup> that guarantee a high degree of resistance to wear and a very high precision in couplings.

Ergonomic handles in bi-component plastic.

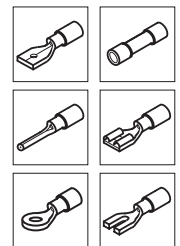
Cold-pressed steel body with electrophoresis coating.

Pin for adjusting the crimping force.

Automatic end-of-work release device to guarantee the crimping quality and to open the tool in case of a wrong manoeuvre.

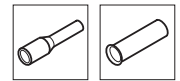
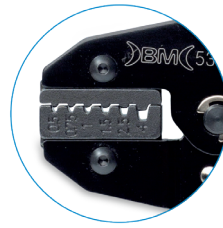


### CRIMPING TOOL - AUTOMATIC - FOR INSULATED TERMINALS - 0.5÷6



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
534	for insulated terminals	0.5 ÷ 6	(20-10)	220	80	20	0,6	250x85x25	SC

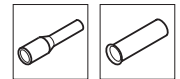
**CRIMPING TOOL · AUTOMATIC · FOR END-SLEEVES · 0.5÷4**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
537	for end-sleeve terminals	0.5 ÷ 4	(20-12)	220	80	20	0,6	250x85x25	SC

**CRIM**

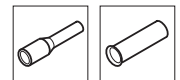
**CRIMPING TOOL · AUTOMATIC · FOR END-SLEEVES · 6÷16**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
539	for end-sleeve terminals	6 ÷ 16	(10-6)	220	80	20	0,6	250x85x25	SC

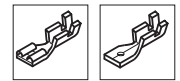
**CRIM**

**CRIMPING TOOL · AUTOMATIC · FOR END-SLEEVES · 10÷35**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
533	for end-sleeve terminals	10 ÷ 35	(8-2)	220	80	20	0,6	250x85x25	SC

**CRIM**

**CRIMPING TOOL · AUTOMATIC · FOR BRASS OPEN TERMINALS · 0.5÷6**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
531	for uninsulated open barrel brass terminals	0.5 ÷ 6	(20-10)	220	80	20	0,6	250x85x25	SC

# CRIM

**CRIMPING TOOL · AUTOMATIC · FOR QUICK CONNECT FEMALE FLAG TERMINALS · 0.5÷1**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5311	for quick-connect female flag uninsulated terminals	0.5 ÷ 1	(20-18)	220	80	20	0,6	250x85x25	SC

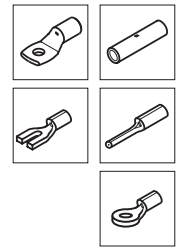
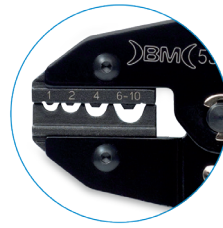
# CRIM

**CRIMPING TOOL · AUTOMATIC · FOR QUICK CONNECT FEMALE FLAG TERMINALS · 1÷2.5**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5312	for quick-connect female flag uninsulated terminals	1 ÷ 2.5	(18-14)	220	80	20	0,6	250x85x25	SC

# CRIM

**CRIMPING TOOL · AUTOMATIC · FOR UNINSULATED TERMINALS · 0.5÷10**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
535	for uninsulated copper terminals	0.5 ÷ 10	(20-8)	220	80	20	0,6	250x85x25	SC

**CRIM**

**CRIMPING TOOL · AUTOMATIC · FOR COAXIAL CONNECTORS RG 58-59**



Code	Field of use	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
543	for coaxial connectors RG 58-59	220	80	20	0,6	250x85x25	SC

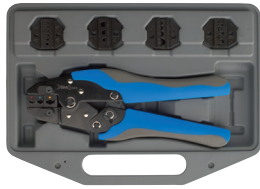
**CRIM**

**CRIMPING TOOL · AUTOMATIC · FOR QUICK CONNECT INSULATED FEMALE FLAG TERMINALS · 0.5÷2.5**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
532	for quick-connect female flag insulated terminals	0.5 ÷ 2.5	(20-14)	220	80	20	0,6	250x85x25	SC

**CRIM**

**KIT - AUTOMATIC CRIMPING TOOL + 5 DIES**


Assortment kit in a plastic case complete with BM 5340 crimping tool and 5 interchangeable dies.

Code	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5305	220	80	20	0,6	290x210x50	VA

Componente	Description
5340	Crimping tool with interchangeable dies
534D	Die for insulated terminal from 0.5 to 6 mm <sup>2</sup> (AWG 22-10)
537D	Die for end-sleeve terminals from 0.5 to 4 mm <sup>2</sup> (AWG 22-12)
539D	Die for end-sleeve terminals from 6 to 16 mm <sup>2</sup> (AWG 10-6)
531D	Die for open barrel brass terminals from 0.5 to 6 mm <sup>2</sup> (AWG 20-10)
535D	Die for uninsulated copper terminals from 0.5 to 10 mm <sup>2</sup> (AWG 20-8)

# CRIM

Devices that automatically locks the dies without the need of any tool.

Easy and tool-less insertion of the dies.



# CRIMPING TOOLS - SERIES CRIMDEM

# CRIMDEM

EQUIPMENT

Pin for adjusting the crimping force.

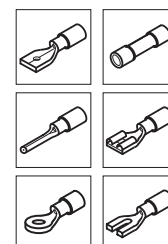
Ergonomically shaped handles which allow users to perform the crimping operations with extreme ease as well as to kip the tool in one hand even with fully open clamp.



Automatic end-of-work release device to guarantee the crimping quality and to open the tool in case of a wrong manoeuvre.

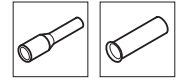
High reduction coefficient to achieve maximum crimping pressure with minimal effort.

## CRIMPING TOOL · WITH REDUCTION · FOR INSULATED TERMINALS · 0.5÷6

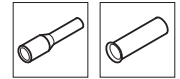


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5341	for insulated terminals	0.5 ÷ 6	(20-10)	225	80	20	0,54	245x85x25	SC

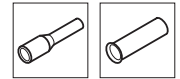
# CRIMDEM

**CRIMPING TOOL · WITH REDUCTION · FOR END-SLEEVES · 0.5÷4**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5371	for end-sleeve terminals	0.5 ÷ 4	(20-12)	225	80	20	0,54	245x85x25	SC

**CRIMDEM**
**CRIMPING TOOL · WITH REDUCTION · FOR END-SLEEVES · 6÷16**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5391	for end-sleeve terminals	6 ÷ 16	(10-6)	225	80	20	0,54	245x85x25	SC

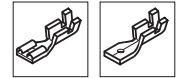
**CRIMDEM**
**CRIMPING TOOL · WITH REDUCTION · FOR END-SLEEVES · 25÷50**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5331	for end-sleeve terminals	25 ÷ 50	(4-1/0)	225	80	20	0,54	245x85x25	SC

**CRIMDEM**



**CRIMPING TOOL · WITH REDUCTION · FOR BRASS OPEN TERMINALS · 0.5÷6**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5313	for uninsulated open barrel brass terminals	0.5 ÷ 6	(20-10)	225	80	20	0,54	245x85x25	SC

**CRIMDEM**

**CRIMPING TOOL · WITH REDUCTION · FOR QUICK CONNECT FEMALE FLAG TERMINALS · 0.5÷1**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5314	for quick-connect female flag uninsulated terminals	0.5 ÷ 1	(20-18)	225	80	20	0,54	245x85x25	SC

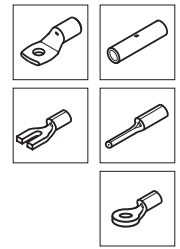
**CRIMDEM**

**CRIMPING TOOL · WITH REDUCTION · FOR QUICK CONNECT FEMALE FLAG TERMINALS · 1÷2.5**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5315	for quick-connect female flag uninsulated terminals	1 ÷ 2.5	(18-14)	225	80	20	0,54	245x85x25	SC

**CRIMDEM**

**CRIMPING TOOL · WITH REDUCTION · FOR UNINSULATED TERMINALS · 0.5÷10**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5351	for uninsulated terminals	0.5 ÷ 10	(20-8)	225	80	20	0,54	245x85x25	SC

# CRIMDEM

**CRIMPING TOOL · WITH REDUCTION · FOR COAXIAL CONNECTORS RG 58-59**


Code	Field of use	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5431	for coaxial connectors RG 58-59	225	80	20	0,54	245x85x25	SC


# CRIMDEM

## KIT - CRIMPING TOOL WITH REDUCTION + 5 DIES



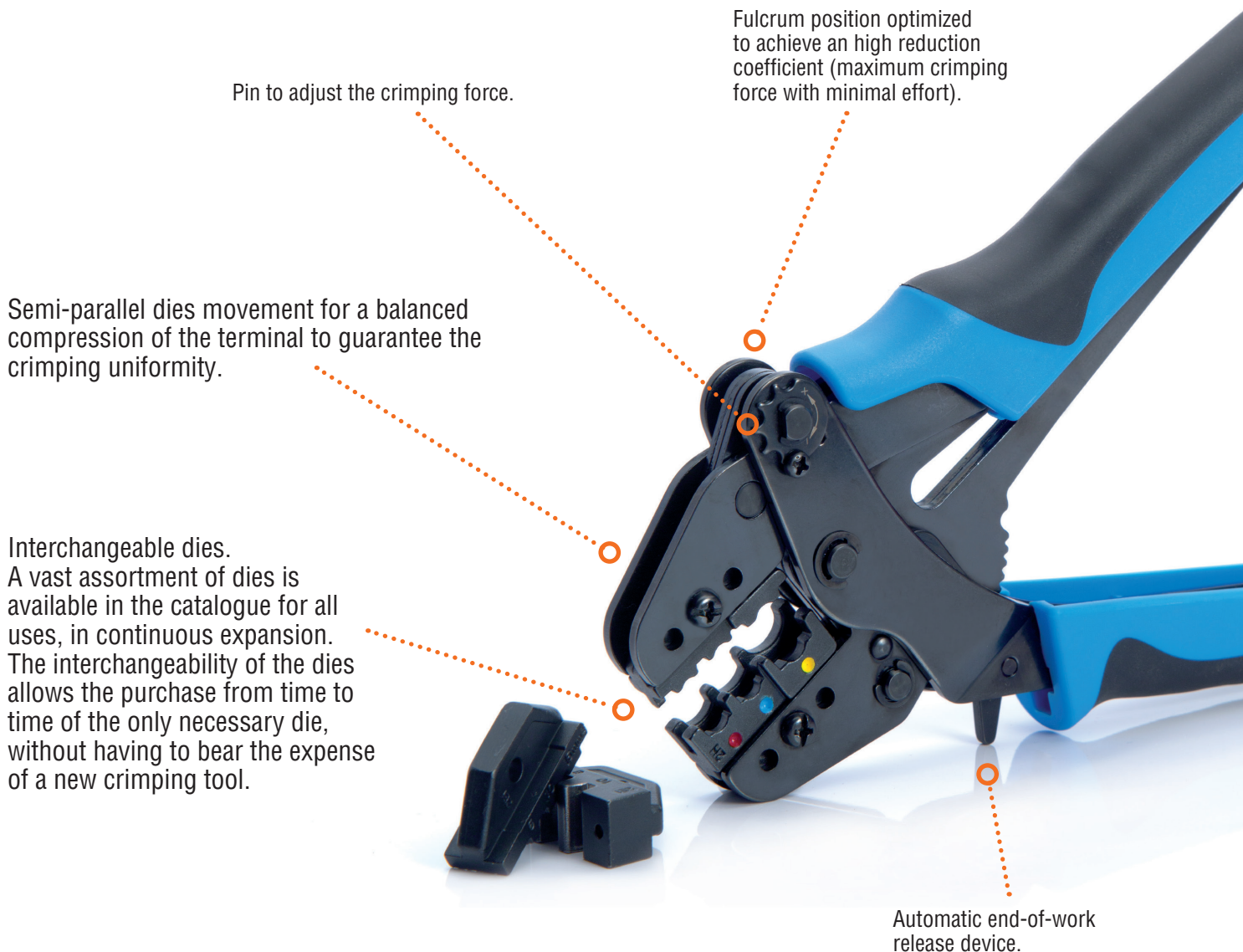
Assortment kit in a plastic case complete with BM 5341 crimping tool and 5 dies.

A variety of high precision crimping dies are available: for insulated and uninsulated terminals, for open brass barrel terminals, and for end-sleeve terminals.

Code	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5345	220	80	20	0,6	290x210x50	VA

Componente	Description
5341	Crimping tool with reduction for insulated terminals from 0.5 to 6 mm <sup>2</sup> (AWG 20-10)
537D	Die for end-sleeve terminals from 0.5 to 4 mm <sup>2</sup> (AWG 22-12)
539D	Die for end-sleeve terminals from 6 to 16 mm <sup>2</sup> (AWG 10-6)
531D	Die for open barrel brass terminals from 0.5 to 6 mm <sup>2</sup> (AWG 20-10)
535D	Die for uninsulated copper terminals from 0.5 to 10 mm <sup>2</sup> (AWG 20-8)

# CRIMDEM



Pin to adjust the crimping force.

Fulcrum position optimized to achieve an high reduction coefficient (maximum crimping force with minimal effort).

Semi-parallel dies movement for a balanced compression of the terminal to guarantee the crimping uniformity.

Interchangeable dies.  
A vast assortment of dies is available in the catalogue for all uses, in continuous expansion. The interchangeability of the dies allows the purchase from time to time of the only necessary die, without having to bear the expense of a new crimping tool.

Automatic end-of-work release device.

## ONE CRIMPING TOOL

## FOR ALL DIES YOU NEED!

**100% FLEXIBILITY, 100% FUNCTIONALITY, 100% EFFICIENCY**

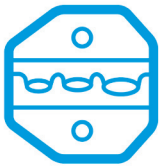
**CRIMPING TOOL · CRIMPAR · WITHOUT DIES**



Code	Field of use	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
53P000	crimping tool for interchangeable dies	220	75	27	0,6	240x85x28	SC

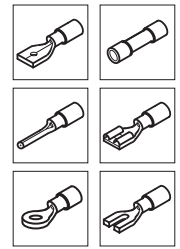
# CRIMPAR

**DIES · SERIES 53 · FOR CRIMPAR 53P000**



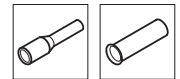
Code	Compatible positioner	Terminal type	Section (mm <sup>2</sup> )	Section (AWG/MCM)
53M02H		dies for insulated terminals	0.5 ÷ 6	(20-10)
53M02E		die for end-sleeve terminals	0.5 ÷ 4	(20-12)
53M2E1		die for end-sleeve terminals	6 ÷ 16	(10-6)
53M5D2		die for end-sleeve terminals	16 ÷ 35	(6-2)
53M5D1		die for end-sleeve terminals die for end-sleeve terminals	25 50	(4) (1/0)
53M2E4		die for end-sleeve double cable terminals	2x 0,5 ÷ 6	2x (20-10)
53M2E5		die for end-sleeve double cable terminals	2x 10 ÷ 16	2x (7-5)
53M5N2		die for uninsulated copper terminals	0.75 ÷ 10	(8)
53M5N1		die for uninsulated copper terminals	10 ÷ 25	(8-4)
53M03C		die for coaxial connectors RG 58-59-62-6		
53M2C2		die for connectors M620 series and positioner	0.5 ÷ 2.5	(20-14)
53M02F		die for quick-connect female flag insulated terminals	0.5 ÷ 2.5	(20-14)
53MMC4		die for MC4 solar connectors	2.5 ÷ 6	(14-10)
53M02C	53L02C	die for uninsulated open barrel brass terminals	0.5 ÷ 6	(20-10)
53L02C		Positioners for 53M02C die (for uninsulated male and female quick connectors)		
53M13C		die for close end connectors	0,25 ÷ 6	(22-10)

# CRIMPAR SERIE53

**CRIMPING TOOL · CRIMPAR · FOR INSULATED TERMINALS · 0.25÷6**


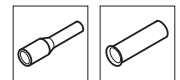
Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>53P02H</b>	for insulated terminals	0.5 ÷ 6	(20-10)	220	75	27	0,6	240x85x28	SC

# CRIMPAR

**CRIMPING TOOL · CRIMPAR · FOR END-SLEEVES · 0.5÷4**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Pack size LxWxH (mm)	
<b>53P02E</b>	for end-sleeve terminals	0.5 ÷ 4	(20-12)	220	75	27	240x85x28	SC

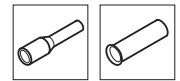
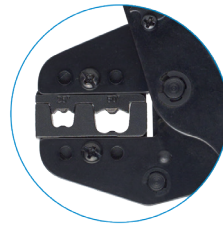
# CRIMPAR

**CRIMPING TOOL · CRIMPAR · FOR END-SLEEVES · 6÷16**


Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>53P2E1</b>	for end-sleeve terminals	6 ÷ 16	(10-6)	220	75	27	0,6	240x85x28	SC

# CRIMPAR

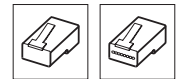
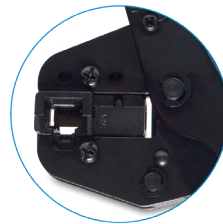
**CRIMPING TOOL · CRIMPAR · FOR END-SLEEVES · 25-50**



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>53P5D1</b>	for end-sleeve terminals	25 - 50	4-1	220	75	27	0,6	240x85x28	SC

**CRIMPAR**

**CRIMPING TOOL · CRIMPAR · FOR RJ45 CONNECTORS**



Code	Field of use	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>53P5YA</b>	for pass-through and standard 8P8C modular connectors RJ45	220	75	27	0,6	240x85x28	SC

**CRIMPAR**

**KIT · CRIMPAR CRIMPING TOOL + 5 DIES**



Code	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>53KPBF</b>	220	75	27	0,6	305x220x70	VA

Componente	Description
53P000	Crimping tool with interchangeable dies
53M02H	Die for insulated terminal from 0.5 to 6 mm <sup>2</sup> (AW 20-10)
53M02E	Die for end-sleeve terminals from 0.5 to 4 mm <sup>2</sup> (AWG 22-12)
53M2E1	Die for end-sleeve terminals from 6 to 16 mm <sup>2</sup> (AWG 10-6)
53M5N2	Die for uninsulated copper terminals from 0.75 to 10 mm <sup>2</sup> (AWG 18-8)
53M02C	Die for open barrel brass terminals from 0.5 to 6 mm <sup>2</sup> (AWG 20-10)

**CRIMPAR**

**ACCESSORIES FOR CRIMPAR CRIMPING TOOL - EMPTY CASE + SCREWS**


Empty case for CRIMPAR crimping tool and 5 dies + screws for quick replacement of dies

Code	Length (mm)	Width (mm)	Thickness (mm)	Pack size LxWxH (mm)	
53K000	300	215	65	305x220x70	VA

# CRIMPAR



## CRIMPING TOOLS - SERIES RJ

EQUIPMENT

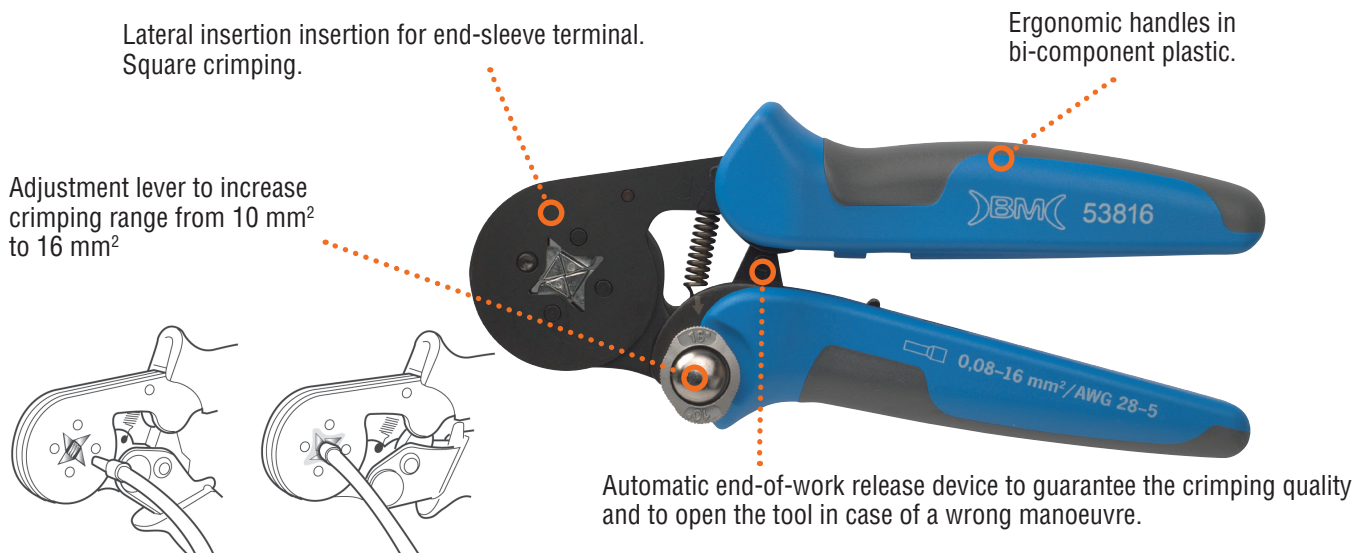
### CRIMPING TOOL - FOR RJ CONNECTORS



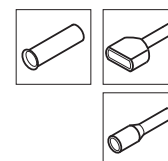
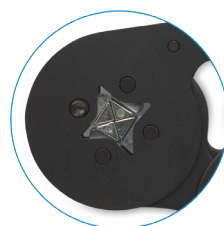
Safety device with mechanical end-of-work release ensuring correct crimping.  
Possibility of cutting and stripping the cable.  
Ergonomic handle in bi-component material.

Code	Field of use	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
549	for RJ 11-12-14-22-45 connectors	230	100	20	1	250x85x25	SC

## CRIMPING TOOLS - SERIES CRIMQ



### CRIMPING TOOL · SQUARE CRIMPING · LATERAL INSERTION



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
53816	for single and double cable end-sleeve terminals	1x(0.08÷16), 2x(0.5÷6)	1x(28÷5), 2x(20÷10)	200	70	20	0,5	210x75x25	SC

# CRIMPING TOOLS - SERIES CRIMQ

# CRIMQ

EQUIPMENT

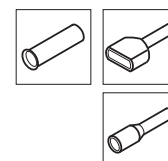
Adjustment lever to increase crimping range from 10 mm<sup>2</sup> to 16 mm<sup>2</sup>

Ergonomic handles in bi-component plastic.

Front insertion for end-sleeve terminals, useful in narrow places such as electric panels. Square crimping.

Automatic end-of-work release device to guarantee the crimping quality and to open the tool in case of a wrong manoeuvre.

## CRIMPING TOOL · SQUARE CRIMPING · FRONT INSERTION



Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5382	for single and double cable end-sleeve terminals	1x(0.08÷16), 2x(0.5÷6)	1x(28÷5), 2x(20÷10)	200	70	20	0,5	210x75x25	SC


# CRIMQ

## CRIMPING TOOL FOR END-SLEEVE TERMINALS IN A STRAP

### CRIMPING TOOL - FOR END-SLEEVE TERMINALS IN A STRAP

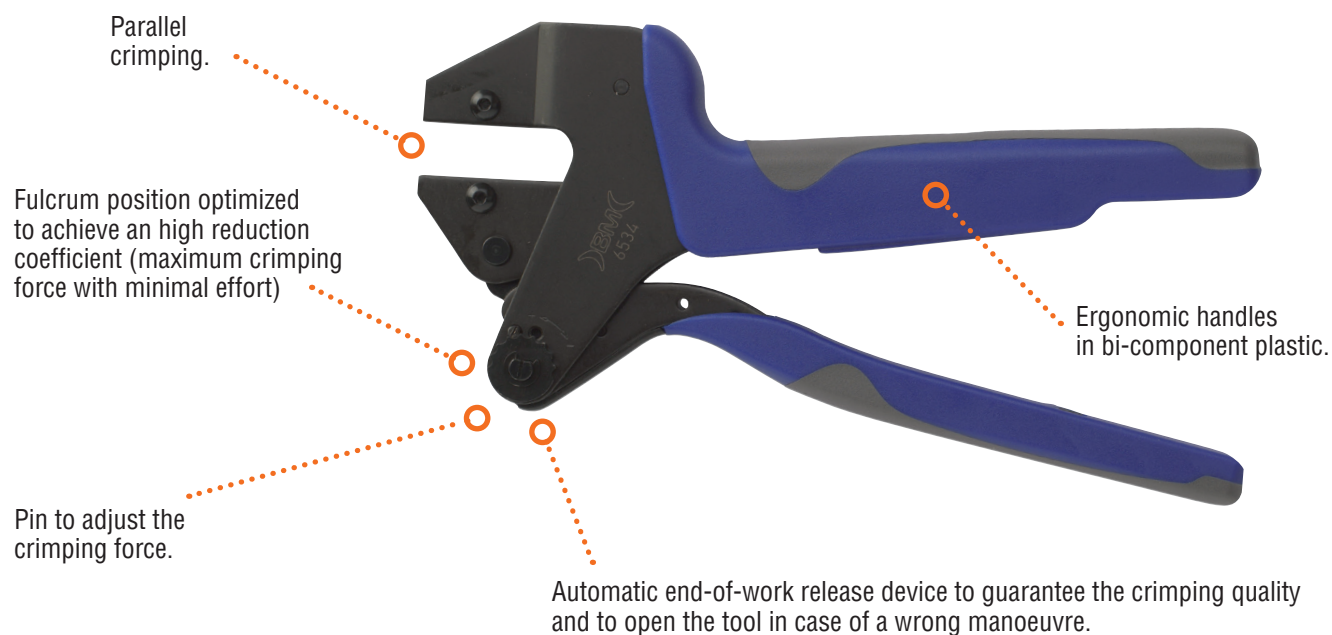


A perfect synthesis of functionality and ergonomics for a quick and precise clamping of end-sleeve terminals in a strap. Complete with four loaders for sections from 0.5 to 2.5 mm<sup>2</sup> for easy and fast swap. Multifunctional crimping tool which enables users to cut, strip, roll the flexible cable and crimp the terminal.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5375	for end-sleeve terminals	0.5 ÷ 2.5	(20-14)	220	80	20	0,7	290x210x50	SC

## PARALLEL CRIMPING TOOLS

EQUIPMENT



### CRIMPING TOOL - PARALLEL CRIMPING



With plastic case

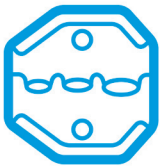
Code	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
6534	200	100	20	1	260x230x50	VA

# SERIE6

**DIES · SERIES 6 · FOR BM 6534**


Code	Compatible positioner	Terminal type	Section (mm <sup>2</sup> )	Section (AWG/MCM)
634D		dies for insulated terminals	0.5 ÷ 6	(20-10)
635D		die for uninsulated copper terminals	0.5 ÷ 10	(20-8)
636D		dies for insulated terminals	10 ÷ 16	(8-6)
631D	65341	die for uninsulated open barrel brass terminals	0.1 ÷ 2.5	(27-14)
65341		positioner for die 631D for quick-connect terminals female		
6311D	65342	die for uninsulated open barrel brass terminals	0.5 ÷ 6	(20-10)
65342		positioner for die 6311D for quick-connect terminals female		
6321D		die for uninsulated open barrel brass terminals for uninsulated open flag brass terminals	0.5 ÷ 2.5 0.5 ÷ 1	(20-14) (20-18)
6322D		die for uninsulated open barrel brass terminals for uninsulated open flag brass terminals	1.5 ÷ 6 1.5 ÷ 2.5	(16-10) (16-14)

# SERIE6

**DIES · SERIES 6 · FOR BM 6534 · PHOTOVOLTAIC CONNECTORS**


Code	Compatible positioner	Terminal type
6313D		die for MC3 connectors and positioner
6314D	6315D	die for MC4 connectors
6315D		positioner for die 6314D for MC4 connectors
6316D	6317D	die for Tyco connectors
6317D		positioner for die 6316D for Tyco connectors

# SERIE6

## CRIMPING TOOLS WITH LONG HANDLES

### CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED DIN TERMINALS · 1÷10



Dies made of micro-casted steel.  
Cold-pressed steel levers.  
Handles insulated with anti-slip plastic.  
Equipped with safety device and end-of-work release.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
524	for uninsulated DIN 46235, 46234, 46267/1 terminals	1 ÷ 10	(18-8)	250	90	20	0,5	330x110x25	SC

### CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED DIN TERMINALS · 1÷16



Dies made of micro-casted steel.  
Cold-pressed steel levers.  
Handles insulated with anti-slip plastic.  
Equipped with safety device and end-of-work release.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
525	for uninsulated DIN 46235, 46234, 46267/1 terminals	1 ÷ 16	(18-6)	280	90	20	0,52	330x110x25	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR END CONNECTORS AND THERMO-SHRINKABLE INSULATED BUTT CONNECTORS**


Dies made of micro-casted steel.  
Cold-pressed steel levers.  
Handles insulated with anti-slip plastic.  
Equipped with safety device and end-of-work release.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
528	for end connectors and thermo-shrinkable insulated butt connectors	0.5 ÷ 6	(20-10)	270	95	20	0,52	280x100x25	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR C SHUNTS · 6÷10**


Dies made of micro-casted steel.  
Cold-pressed steel levers.  
Handles insulated with anti-slip plastic.  
Equipped with safety device and end-of-work release.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
529	for C shunts	6 ÷ 10	(10-8)	290	95	20	0,55	300x100x25	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED TERMINALS · 10÷35**


Dies made of micro-casted steel.  
Cold-pressed steel levers.  
Handles insulated with anti-slip plastic.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
526	for uninsulated terminals	10 ÷ 35	(8-2)	350	110	25	0,86	395x135x30	SC



**CRIMPING TOOL · WITH LONG HANDLES · FOR END-SLEEVES · 25÷50**



Dies made of micro-casted steel.  
Cold-pressed steel levers.  
Handles insulated with anti-slip plastic.  
Equipped with safety device and end-of-work release.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
527	for end-sleeve terminals	25 ÷ 50	(4-1/0)	320	95	20	0,7	300x100x25	SC

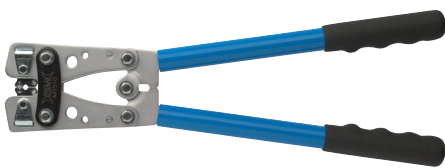
**CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED TERMINALS · 10÷120**



Entirely made of steel with epoxy powder surface coating, which guarantees a high degree of corrosion resistance. Handles insulated by means of a bath in plastic material. Easy to use, with adjustable die for deep crimping of uninsulated terminals.

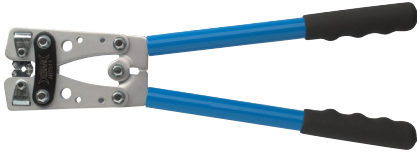
Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
523	for uninsulated terminals	10 ÷ 120	(8-4/0)	570	100	35	3,2	575x120x40	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED TERMINALS · 6÷50**



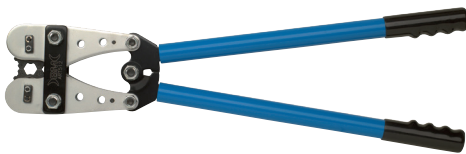
Made of cold pressed steel.  
Handles insulated with anti-slip plastic material.  
Revolving dies with positioning lock.  
Hexagonal and MW crimping.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Crimping type	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
510	for uninsulated terminals	6 ÷ 50	(10-1/0)	hexagonal	390	130	35	1,6	400x140x140	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED DIN TERMINALS · 6÷50**


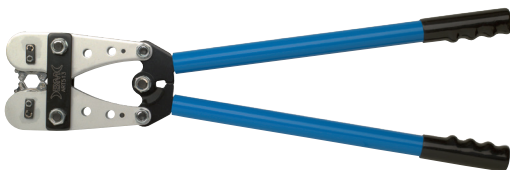
Made of cold pressed steel.  
 Handles insulated with anti-slip plastic material.  
 Revolving dies with positioning lock.  
 Hexagonal and MW crimping.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Crimping type	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
511	for uninsulated DIN 46235, 46234, 46267/1 terminals	6 ÷ 50	(10-1/0)	hexagonal	390	130	35	1,6	400x140x140	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED TERMINALS · 10÷120**


Made of cold pressed steel.  
 Handles insulated with anti-slip plastic material.  
 Revolving dies with positioning lock.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Crimping type	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
512	for uninsulated terminals	10 ÷ 120	(8-4/0)	hexagonal	610	200	30	4	630x200x30	SC

**CRIMPING TOOL · WITH LONG HANDLES · FOR INSULATED DIN TERMINALS · 10÷120**


Made of cold pressed steel.  
 Handles insulated with anti-slip plastic material.  
 Revolving dies with positioning lock.  
 Hexagonal and MW crimping.

Code	Field of use	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Crimping type	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
513	for uninsulated DIN 46235, 46234, 46267/1 terminals	10 ÷ 120	(8-4/0)	hexagonal	610	190	30	4,5	640x200x60	SC

## CRIMPING TOOL - WITH LONG HANDLES - SERIES 82




**DIES:** 82 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 150 mm<sup>2</sup> (180 mm<sup>2</sup> for DIN)
- uninsulated class 5 and DIN from 10 to 120 mm<sup>2</sup>
- medium voltage from 25 to 35 mm<sup>2</sup>
- aluminum from 16 to 150 mm<sup>2</sup>
- bimetallic from 16 to 150 mm<sup>2</sup>
- bimetallic DIN from 16 to 150 mm<sup>2</sup>
- insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 35 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

with metallic carrying case (dies not included)

Code	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
582	780	170	50	5	805x22x100 (V)	VA

# SERIE82

# HAND HYDRAULIC CRIMPING TOOLS

## CRIMPING TOOL · HYDRAULIC · MANUAL · 50KN · DIES SERIES 82



**CRIMPING FORCE AT DIE LEVEL:** 50 kN

**DIES:** 82 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 240 mm<sup>2</sup> (185 mm<sup>2</sup> for DIN)
- uninsulated class 6 and DIN from 10 to 185 mm<sup>2</sup>
- medium voltage from 25 to 150 mm<sup>2</sup>
- aluminum from 16 to 150 mm<sup>2</sup>
- bimetallic from 16 to 150 mm<sup>2</sup>
- bimetallic DIN from 16 to 150 mm<sup>2</sup>
- insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 35 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

- lateral snap opening for quick and easy die positioning
- 180° swivel head for easy crimping in narrow places
- two pistons advancement speeds: one for quickly matching die terminal, the other for crimping
- automatic end-of-work release device to guarantee the crimping quality
- release lever device to open the tool at the end of operation and in case of a wrong maneuver

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
1823P	kit including: • 50 kN press • carrying case	380	140	70	2	450x280x80	VA
1823A1	• die set for uninsulated terminals from 10 to 150 mm <sup>2</sup> • die set for C shunts from 16 to 35 mm <sup>2</sup> • carrying case	380	140	70	2	450x280x80	VA
1823A2	• die set for uninsulated terminals from 10 to 185 mm <sup>2</sup> • carrying case	380	140	70	2	450x280x80	VA
1823A3	• die set for uninsulated terminals from 10 to 240 mm <sup>2</sup> • carrying case	380	140	70	2	450x280x80	VA
1823A4	• die set for uninsulated DIN terminals (DIN 46235, 46234, 46267/1) from 10 to 185 mm <sup>2</sup> • carrying case	380	140	70	2	450x280x80	VA

# SERIE82

### CRIMPING TOOL · HYDRAULIC · MANUAL · 60KN · DIES SERIES 83



**CRIMPING FORCE AT DIE LEVEL:** 60 kN

**DIES:** 83 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 300 mm<sup>2</sup>
- uninsulated class 6 from 10 to 185 mm<sup>2</sup>
- DIN standard from 10 to 240 mm<sup>2</sup>
- NFC standard from 4 to 240 mm<sup>2</sup>
- medium voltage from 25 to 300 mm<sup>2</sup>
- aluminum from 16 to 185 mm<sup>2</sup>
- bimetallic from 16 to 150 mm<sup>2</sup>
- bimetallic DIN from 16 to 185 mm<sup>2</sup>
- insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 95 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

- lateral snap opening for quick and easy die positioning
- 180° swivel head for easy crimping in narrow places
- two pistons advancement speeds: one for quickly matching die and terminal, the other for crimping
- automatic end-of-work release device to guarantee the crimping quality
- release lever device to open the tool at the end of operation and in case of a wrong maneuver

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
1833	60 kN hand hydraulic press with carrying case	410	140	70	3,1	450x280x80	VA
1833A1	kit including • 60 kN press • die set for uninsulated terminals from 10 to 240 mm <sup>2</sup> • die set for C shunts from 16 to 95 mm <sup>2</sup> • carrying case	410	140	70	3,1	450x280x80	VA

## SERIE83

### HYDRAULIC · MANUAL · 120 kN · DIES SERIES 84



**CRIMPING FORCE AT DIE LEVEL:** 120 kN

**DIES:** 84 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 400 mm<sup>2</sup> (300 mm<sup>2</sup> for DIN)
- uninsulated class 6 from 10 to 185 mm<sup>2</sup>
- medium voltage from 25 to 400 mm<sup>2</sup>
- aluminum from 16 to 240 mm<sup>2</sup>
- bimetallic from 16 to 300 mm<sup>2</sup>
- bimetallic DIN from 16 to 300 mm<sup>2</sup>
- insulated from 10 to 240 mm<sup>2</sup>
- C shunt from 10 to 150 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

- "C" opening for easy joint crimping (the maximum conductor section depends on cable insulation thickness)
- bigger "C" opening in 184PL version to crimp big section joints
- 180° swivel head for easy crimping in narrow places
- two piston advancement speeds: one for quickly matching die and terminal, the other for crimping
- automatic end-of-work release device to guarantee crimping quality
- release device activated by a rotation of the handle to open the tool at the end of operation and in case of a wrong manoeuvre

Code	Description	Max "C" opening (mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
184P	120 kN press with carrying case	25	580	210	72	6,3	730x250x110	VA
184PL	120 kN press with carrying case	42	640	210	77	8,2	730x250x110	VA

## SERIE84

**CRIMPING TOOL · HYDRAULIC · MANUAL · 130KN · DIES SERIES 86, SERIES 84**

**CRIMPING FORCE AT DIE LEVEL:** 130 kN

**DIES:** 84 series and 86 series

**FIELD OF USE:** 84 series for terminals

- uninsulated from 10 to 400 mm<sup>2</sup> (300 mm<sup>2</sup> for DIN)
- uninsulated class 6 from 10 to 185 mm<sup>2</sup>
- medium voltage from 25 to 400 mm<sup>2</sup>
- aluminum from 16 to 240 mm<sup>2</sup>
- bimetallic from 16 to 300 mm<sup>2</sup>
- bimetallic DIN from 16 to 300 mm<sup>2</sup>
- insulated from 10 to 240 mm<sup>2</sup>
- C shunt from 10 to 150 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

86 series for deep indent of terminals

- aluminum from 35 to 240 mm<sup>2</sup>

- with 86 series it allows the crimping of aluminum terminal of through deep indent
- 18694 adapter is required to use the 84 series dies
- 180° swivel head for easy crimping in narrow places
- two pistons advancement speeds: one for quickly matching die and terminal, the other for crimping
- automatic end-of-work release device to guarantee crimping quality
- release device activated by a rotation of the handle to open the tool at the end of operation and in case of a wrong maneuver

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
186	130 kN press with carrying case	620	160	80	6,3	690x200x90	VA

# SERIE86    SERIE84

## BATTERY POWERED TOOLS

A wide range of **18V Li-Ion** battery operated tools for **crimping** or **cutting cables / ropes**.  
Two types of tools: **in-line** for greater lightness and manageability, and **traditional pistol**,  
for more powerful engine to develop forces of **62kN** and **130kN**.

### RANGE:



**Crimping:** 37A055, 37A055A1  
**Cutting:** 37T055



**Crimping:** 38A062, 38A130, 38A130L  
**Cutting:** 38T130

## DISCOVER THE NEW GENERATION OF HYDRAULIC TOOLS OPERATED ON 18V LI-ION **BATTERY!**

### ERGONOMIC

Body made of bi-component material

### POWERFUL

Stanley high performance  
rechargeable 18V Li-Ion battery

### INTELLIGENT

LED display to provide crimp feedback  
and maintenance

**CRIMPING OR CUTTING:  
DIFFERENT SOLUTIONS FOR ANY JOBSITE!**



**DISCOVER  
MORE!**



## BATTERY CRIMPING TOOLS

### CRIMPING TOOL · BATTERY POWERED · IN-LINE · 55KN · DIES SERIES 83



**CRIMPING FORCE AT DIE LEVEL:** 55 kN

**BAT:** 9 mm

**CRIMPING TIME:** from 3 to 5 s

**DIES:** 83 series

**BATTERY:** Stanley, Lithium, 18V 2.0Ah

**BATTERY CAPACITY:** about 220 crimps (CU 185 mm<sup>2</sup>)

**USB SOCKET:** Mini

**FIELD OF USE:** terminals

- Class 1,2,5 conductors from 10 to 300 mm<sup>2</sup>
- Class 6 conductors from 10 to 185 mm<sup>2</sup>
- DIN standard from 10 to 240 mm<sup>2</sup>
- NFC standard from 4 to 240 mm<sup>2</sup>
- Medium voltage from 25 to 300 mm<sup>2</sup>
- Aluminum and bimetallic from 16 to 185 mm<sup>2</sup>
- Insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 25 mm<sup>2</sup>

- LED lighting of the workplace
- working trigger with motor stop function at the stroke
- release trigger
- ergonomic handles in bi-component plastic
- handling ring for transportation (strap) or safety cable
- USB connection for data analysis & preventive maintenance
- on/off button with emergency saving function
- LED display panel for battery charge level, cycle conformity, maintenance
- electronic protection in case of overpressure
- quick motor stop function at crimping or cutting end for high user safety
- energy saving function for switching off the tool
- crimping speed improved by a high performance motor
- possibility to use 5.0Ah battery for an extended use
- quick opening & closing head
- dies retention spheres
- hexagonal crimping up to 300 mm<sup>2</sup>
- interchangeable die set
- rotative head 180°

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
37A055	Kit including: • crimping tool 55 kN • Rechargeable battery Stanley 18V li-Ion 2.0Ah • Stanley battery charger 220V AC powered • carrying case	128	75	390	2,9	471x415x116 (V)	VA
37A055A1	Kit including: • crimping tool 55 kN • die set for uninsulated terminals from 10 to 240 mm <sup>2</sup> • Rechargeable battery Stanley 18V li-Ion 2.0Ah • Stanley battery charger 220V AC powered • carrying case	128	75	390	2,9	471x415x116 (V)	VA



**CRIMPING TOOL - BATTERY POWERED - 62KN - DIES SERIES 85**



**CRIMPING FORCE AT DIE LEVEL:** 62 kN

**BAT:** 13 mm

**CRIMPING TIME:** from 3 to 5 s

**DIES:** 85 series

**BATTERY:** Stanley, Lithium, 18V 5.0Ah

**BATTERY CAPACITY:** about 340 crimps (CU 185 mm<sup>2</sup>)

**USB SOCKET:** Micro

**FIELD OF USE:** terminals

- Class 1,2,5 conductors from 10 to 300 mm<sup>2</sup>
- Class 6 conductors from 10 to 185 mm<sup>2</sup>
- DIN standard from 10 to 240 mm<sup>2</sup>
- NFC standard from 6 to 300 mm<sup>2</sup>
- Medium voltage from 25 to 300 mm<sup>2</sup>
- Aluminum and bimetallic from 16 to 240 mm<sup>2</sup>
- Insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 50 mm<sup>2</sup>
- End-sleeves from 50 to 95 mm<sup>2</sup>

- ring LED to provide crimping cycle information and to lighten the workplace
- working trigger with motor stop function at the stroke
- release trigger
- ergonomic handles in bi-component plastic
- handling ring for transportation (strap) or safety cable
- USB connection for data analysis & preventive maintenance
- safety locking trigger
- protection membrane to ventilate the electronics keeping it safe from moisture and dust
- LED display panel for battery charge level, cycle conformity, maintenance
- electronic protection in case of overpressure
- quick motor stop function at crimping or cutting end for high user safety
- energy saving function for switching off the tool
- crimping speed improved by a high performance motor
- 2 hydraulic pump stages for improved fast advance
- quick opening & closing head
- dies retention spheres
- hexagonal crimping up to 300 mm<sup>2</sup>
- excellent ratio weight/capacity
- interchangeable die set
- rotative head 270°

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
38A062	Kit including: • crimping tool 62 kN • Rechargeable battery Stanley 18V li-Ion 5.0Ah • Stanley battery charger 220V AC powered • carrying case	375	75	325	5,1	594x494x149	VA



**SERIE85**

**CRIMPING TOOL · BATTERY POWERED · 130KN · DIES SERIES 84**

**CRIMPING FORCE AT DIE LEVEL:** 130 kN

**DIES:** 84 series

**BATTERY:** Stanley, Lithium, 18V, 5.0Ah

**USB SOCKET:** Micro

**FIELD OF USE:** terminals

- Class 1,2,5 conductors from 10 to 400 mm<sup>2</sup>
- Class 6 conductors from 10 to 185 mm<sup>2</sup>
- DIN standard from 10 to 300 mm<sup>2</sup>
- NFC standard from 6 to 300/400 mm<sup>2</sup> (38A130/38A130L)
- Medium voltage from 25 to 400 mm<sup>2</sup>
- Aluminum and bimetallic from 16 to 300 mm<sup>2</sup>
- Insulated from 10 to 240 mm<sup>2</sup>
- C shunt from 10 to 150 mm<sup>2</sup>
- End-sleeves from 50 to 150 mm<sup>2</sup>

- ring LED to provide crimping cycle information and to lighten the workplace
- working trigger with motor stop function at the stroke
- release trigger
- ergonomic handles in bi-component plastic
- handling ring for transportation (strap) or safety cable
- USB connection for data analysis & preventive maintenance
- safety locking trigger
- protection membrane to ventilate the electronics keeping it safe from moisture and dust
- LED display panel for battery charge level, cycle conformity, maintenance
- electronic protection in case of overpressure
- quick motor stop function at crimping or cutting end for high user safety
- energy saving function for switching off the tool
- crimping speed improved by a high performance motor
- 2 hydraulic pump stages for improved fast advance
- "C" opening
- dies retention spheres
- hexagonal crimping up to 400 mm<sup>2</sup>
- interchangeable die set

Code	Description	Max "C" opening (mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>38A130</b>	Kit including: <ul style="list-style-type: none"> <li>• crimping tool 130 kN</li> <li>• Rechargeable battery Stanley 18V li-Ion 5.0Ah</li> <li>• Stanley battery charger 220V AC powered</li> <li>• carrying case</li> </ul>	27	400	75	310	7	594x494x149	VA
<b>38A130L</b>	Kit including: <ul style="list-style-type: none"> <li>• crimping tool 130 kN</li> <li>• Rechargeable battery Stanley 18V li-Ion 5.0Ah</li> <li>• Stanley battery charger 220V AC powered</li> <li>• carrying case</li> </ul>	45	430	75	310	7,4	594x494x149	VA


**SERIE84**

**ACCESSORIES • FOR BATTERY POWERED TOOL**


Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)
<b>39B2AH</b>	Rechargeable battery Stanley 18V Li-ion 2.0 Ah Charge time: 40 min Compatibility: 37A055, 37T055	115	75	45	0,36
<b>39B5AH</b>	Rechargeable battery Stanley 18V Li-ion 5.0 Ah Charge time: 80 min Compatibility: 37A055, 37T055, 38A062, 38A130, 38A130L, 38T130	115	75	65	0,62
<b>39C220</b>	Stanley battery charger for Stanley batteries, 220V AC powered	180	120	80	0,54



# DIES SELECTION GUIDE

## MECHANICAL

Code	Dies
582	<b>SERIE82</b>



## BATTERY POWERED

Code	Dies
37A055 / 37A055A1 383 *phase-out	<b>SERIE83</b>

38A062	<b>SERIE85</b>
--------	----------------

38A130 / 38A130L 384 *phase-out	<b>SERIE84</b>
------------------------------------	----------------



## HAND HYDRAULIC

Code	Dies
1823P / 1823A1 / 1823A2 / 1823A3 / 1823A4 182 / 182P / 1823 / 1824 *phase-out 200 / 200PA	<b>SERIE82</b>

1833 / 1833A1 183 / 183P *phase-out	<b>SERIE83</b>
--	----------------

184P / 184PL 184 *phase-out	<b>SERIE84</b>
--------------------------------	----------------

186	<b>SERIE84</b> <b>SERIE86</b>
-----	----------------------------------



## HEADSTOCKS

Code	Dies
200A	<b>SERIE82</b>

2833 283 *phase-out	<b>SERIE83</b>
------------------------	----------------

284 / 284L	<b>SERIE84</b>
------------	----------------

286	<b>SERIE84</b> <b>SERIE86</b>
-----	----------------------------------





# SERIE82

## DIES SERIES 82

### COMPATIBILITY

- 582 mechanical crimping tool (up to 150 mm<sup>2</sup> for uninsulated terminals and up to 120 mm<sup>2</sup> for DIN terminals)
- 200/200PA hydraulic manual multi-head

- 1823P/1823A1/1823A2/1823A3/1823A4 hydraulic manual
- 182/182P/1823/1824 hydraulic manual (out of print)
- 200A crimping head for multi-head manual hydraulic

**MATERIAL:** steel + heat treatment

**SURFACE TREATMENT:** burnished

mm <sup>2</sup>	For copper conductors								For all
	uninsulated cl 1, 2, 5 (terminal lug, butt connector)		uninsulated class 6 (terminal lug)		uninsulated DIN 46235, 46234, 46267/1 (terminal lug, butt connector)		uninsulated Medium Voltage (terminal lug, butt connector)		prerounding
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	Die Type
10	182010	7	182010	7	182310	6	---	-	---
16	182016	7.5	182016	7.5	182316	8	---	-	---
25	182025	9	182025	9	182325	10	182325	10	---
35	182035	11	182035	11	182335	12	---	-	---
50	182035	12	182435	13	182335	14	182035	12	182550
70	182025	14	182025	14	182325	16	182016	16	182570
95	182016	16	182010	18	182316	18	182015	20	182595
120	182010	18	182015	20	182310	20	182018	22	182512
150	182015	20	182018	22	182018	22	---	-	182515
185	182018	22	182024	25	182024	25	---	-	---
240	182024	25	---	-	---	-	---	-	---

mm <sup>2</sup>	For copper conductors			For aluminum conductors			
	insulated (terminal lug)	C shunts	End-sleeves	uninsulated (bimetallic)		uninsulated DIN 48201 (terminal lug, bimetallic, joint)	
	Die Type	Die Type	Die Type	Die Type	ID	Die Type	ID
10	182110	182210	---	---	-	---	-
16	182116	---	---	---	-	---	-
25	182125	182225	---	182450	15	182035	12
35	182135	182235	---	---	-	182435	13
50	182150	---	182650	182015	20	182450	15
70	182170	---	182670	---	-	182015	20
95	182195	---	182695	---	-	182495	21
120	---	---	182612	182024	25	182018	22
150	---	---	182615	---	-	182024	25
185	---	---	---	---	-	---	-
240	---	---	---	---	-	---	-

### KEY TO SYMBOLS

- hexagonal compression
- oval compression
- compression with radial containment
- trapezoidal compression

- hexagonal compression
- oval compression
- trapezoidal compression



# SERIE 83

## DIES SERIES 83

### COMPATIBILITY

- **1833/1833A1** hydraulic manual
- **183/183P** hydraulic manual (out of print)
- **37A055/37A055A1** hydraulic battery powered
- **383** hydraulic battery powered (out of print)
- **2833** head for pump
- **283** head for pump (out of print)

**MATERIAL:** steel + heat treatment  
**SURFACE TREATMENT:** burnished

mm <sup>2</sup>	For copper conductors										For all prerounding
	uninsulated cl 1, 2, 5 (terminal lug, butt connector)		uninsulated class 6 (terminal lug)		uninsulated DIN 46235, 46234, 46267/1 (terminal lug, butt connector)		uninsulated NFC (terminal lug, butt connector)		uninsulated Medium Voltage (terminal lug, butt connector)		
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	
4	---	-	---	-	---	-	<b>183704</b>	⊙	---	-	---
6	---	-	---	-	---	-	<b>183706</b>	⊙	---	-	---
10	<b>183010</b>	7	<b>183010</b>	7	<b>183310</b>	6	<b>183710</b>	⊙	---	-	---
16	<b>183016</b>	7.5	<b>183016</b>	7.5	<b>183316</b>	8	<b>183716</b>	⊙	---	-	---
25	<b>183025</b>	9	<b>183025</b>	9	<b>183325</b>	10	<b>183725</b>	⊙	<b>183325</b>	10	⊙
35	<b>183035</b>	11	<b>183035</b>	11	<b>183335</b>	12	<b>183706</b>	⊙	---	-	---
50	<b>183050</b>	12	<b>183435</b>	13	<b>183350</b>	14	<b>183710</b>	⊙	<b>183050</b>	12	⊙
70	<b>183050</b>	14	<b>183050</b>	14	<b>183350</b>	16	<b>183716</b>	⊙	<b>183035</b>	16	⊙
95	<b>183035</b>	16	<b>183025</b>	18	<b>183335</b>	18	<b>183725</b>	⊙	<b>183016</b>	20	⊙
120	<b>183025</b>	18	<b>183016</b>	20	<b>183325</b>	20	<b>183704</b>	⊙	---	-	---
150	<b>183016</b>	20	<b>183010</b>	22	<b>183316</b>	22	<b>183715</b>	⊙	<b>183010</b>	22	⊙
185	<b>183010</b>	22	<b>183024</b>	25	<b>183310</b>	25	<b>183718</b>	⊙	---	-	---
240	<b>183024</b>	25	---	-	<b>183324</b>	28	<b>183724</b>	⊙	<b>183324</b>	28	⊙
300	<b>183324</b>	28	---	-	---	-	---	-	---	-	---

mm <sup>2</sup>	For copper conductors				For aluminum conductors					
	insulated (terminal lug)		C shunts		End-sleeves		uninsulated (bimetallic)		uninsulated DIN 48201 (terminal lug, bimetallic, joint)	
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID
4	---	-	---	-	---	-	---	-	---	-
6	---	-	---	-	---	-	---	-	---	-
10	<b>183110</b>	⊙	<b>183210</b>	⊙	---	-	---	-	---	-
16	<b>183116</b>	⊙	---	-	---	-	<b>183450</b>	15	<b>183050</b>	12
25	<b>183125</b>	⊙	---	-	---	-	---	-	---	-
35	<b>183135</b>	⊙	<b>183235*</b>	⊙	---	-	---	-	<b>183435</b>	13
50	<b>183150</b>	⊙	---	-	<b>183650</b>	⊙	---	-	<b>183450</b>	15
70	<b>183170</b>	⊙	<b>183270*</b>	⊙	<b>183670*</b>	⊙	<b>183016</b>	20	<b>183016</b>	20
95	<b>183195</b>	⊙	<b>183295*</b>	⊙	<b>183695*</b>	⊙	---	-	<b>183495</b>	21
120	---	-	---	-	<b>183612*</b>	⊙	---	-	<b>183010</b>	22
150	---	-	---	-	<b>183615*</b>	⊙	<b>183024</b>	25	<b>183024</b>	25
185	---	-	---	-	---	-	---	-	<b>183324</b>	28
240	---	-	---	-	---	-	---	-	---	-
300	---	-	---	-	---	-	---	-	---	-

\* dies not usable with crimping tool 37A055

### KEY TO SYMBOLS

- ⊙ hexagonal compression
- ⊖ compression with radial containment

- oval compression
- ⊖ trapezoidal compression



# SERIE 84

## DIES SERIES 84

### COMPATIBILITY

- 184P/184PL/186 hydraulic manual
- 184 hydraulic manual (out of print)

- 38A130/38A130L hydraulic battery powered
- 384 hydraulic battery powered (out of print)
- 284/284L/286 head for pump

**MATERIAL:** steel + heat treatment  
**SURFACE TREATMENT:** burnished  
**THICKNESS:** 35 mm

mm <sup>2</sup>	For copper conductors										For all prerounding Die Type
	uninsulated cl 1, 2, 5 (terminal lug, butt connector)		uninsulated class 6 (terminal lug)		uninsulated DIN 46235, 46234, 46267/1 (terminal lug, butt connector)		uninsulated NFC (terminal lug, butt connector)		uninsulated Medium Voltage (terminal lug, butt connector)		
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	
6	---	-	---	-	---	-	184706	⬡	---	-	---
10	184010	7	184010	7	184310	6	184710	⬡	---	-	---
16	184016	7.5	184016	7.5	184316	8	184716	⬡	---	-	---
25	184025	9	184025	9	184325	10	184725	⬡	184325	10	---
35	184035	11	184035	11	184050	12	184735	⬡	---	-	---
50	184050	12	184435	13	184070	14	184750	⬡	184050	12	184550
70	184070	14	184070	14	184095	16	184770	⬡	184095	16	184570
95	184095	16	184012	18	184012	18	184795	⬡	184015	20	184595
120	184012	18	184015	20	184015	20	184712	⬡	---	-	---
150	184015	20	184018	22	184018	22	184715	⬡	184018	22	184512
185	184018	22	184024	25	184024	25	184718	⬡	---	-	---
240	184024	25	---	-	184030	28	184724	⬡	184030	28	184518
300	184030	28	---	-	184424	32	184730	⬡	---	-	---
400	184040	35	---	-	---	-	184740*	⬡	184040	35	184524
											184530
											184540

mm <sup>2</sup>	For copper conductors				For aluminum conductors					
	insulated (terminal lug)		C shunts		End-sleeves		uninsulated (bimetallic)		uninsulated DIN 48201 (terminal lug, bimetallic, joint)	
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID
6	---	-	---	-	---	-	---	-	---	-
10	184110	⬡	184210	⬡	---	-	---	-	---	-
16	184116	⬡	---	-	---	-	184450	15	184050	12
25	184125	⬡	184225	⬡	---	-	---	-	---	-
35	184135	⬡	184235	⬡	---	-	---	-	184435	13
50	184150	⬡	---	-	184650	⬡	184015	20	184450	15
70	184170	⬡	184270	⬡	184670	⬡	---	-	184015	20
95	184195	⬡	184295	⬡	184695	⬡	---	-	184495	21
120	184112	⬡	---	-	184612	⬡	184024	25	184018	22
150	184115	⬡	184212	⬡	184615	⬡	---	-	184024	25
185	184118	⬡	---	-	---	-	---	-	184030	28
240	184124	⬡	---	-	---	-	184424	32	184424	32
300	---	-	---	-	---	-	---	-	---	-
400	---	-	---	-	---	-	---	-	---	-

\* Dies usable only with 38A130L, 184PL and 284L crimping tools

### KEY TO SYMBOLS

- ⬡ hexagonal compression
- ⬢ compression with radial containment

- ⬡ oval compression
- ⬢ trapezoidal compression



## DIES SERIES 85

### COMPATIBILITY

• 38A062 hydraulic battery powered

**MATERIAL:** steel + heat treatment

**SURFACE TREATMENT:** burnished

**THICKNESS:** 22 mm

mm <sup>2</sup>	For copper conductors										For all	
	uninsulated cl 1, 2, 5 (terminal lug, butt connector)		uninsulated class 6 (terminal lug)		uninsulated DIN 46235, 46234, 46267/1 (terminal lug, butt connector)			uninsulated NFC (terminal lug, butt connector)		uninsulated Medium Voltage (terminal lug, butt connector)		prerounding Die Type
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID		
6	---	-	---	-	---	-	---	185706	⬡	---	-	---
10	185010	7	185010	7	185310	6	185710	⬡	⬡	---	-	---
16	185016	7.5	185016	7.5	185316	8	185716	⬡	⬡	---	-	---
25	185025	9	185025	9	185325	10	185725	⬡	⬡	185325	10	---
35	185035	11	185035	11	185050	12	185735	⬡	⬡	185050	12	---
50	185050	12	185435	13	185070	14	185750	⬡	⬡	---	-	185550
70	185070	14	185070	14	185095	16	185770	⬡	⬡	185095	16	185570
95	185095	16	185012	18	185012	18	185795	⬡	⬡	185015	20	185595
120	185012	18	185015	20	185015	20	185712	⬡	⬡	185018	22	185512
150	185015	20	185018	22	185018	22	185715	⬡	⬡	---	-	185515
185	185018	22	185024	25	185024	25	185718	⬡	⬡	---	-	---
240	185024	25	---	-	185030	28	185724	⬡	⬡	185030	28	---
300	185030	28	---	-	---	-	185730	⬡	⬡	---	-	---

mm <sup>2</sup>	For copper conductors					For aluminum conductors				
	insulated (terminal lug)		C shunts		End-sleeves	uninsulated (bimetallic)		uninsulated DIN 48201 (terminal lug, bimetallic, joint)		
	Die Type	ID	Die Type	ID	Die Type	ID	Die Type	ID		
6	---	-	---	-	---	-	---	-	---	
10	185110	⬡	185210	⬡	---	-	---	-	---	
16	185116	⬡	185225	⬡	---	-	185450	15	185050	
25	185125	⬡	---	-	---	-	185015	20	185015	
35	185135	⬡	185235	⬡	---	-			185435	13
50	185150	⬡	185250	⬡	185650	⬡			185450	15
70	185170	⬡	---	-	185670	⬡	185015	20	185015	
95	185195	⬡	---	-	185695	⬡	---	-	185495	
120	---	-	---	-	---	-	185024	25	185018	
150	---	-	---	-	---	-			185024	25
185	---	-	---	-	---	-	185424	32	185030	
240	---	-	---	-	---	-			185424	32
300	---	-	---	-	---	-	---	-	---	

### KEY TO SYMBOLS

- ⬡ hexagonal compression
- ⬢ compression with radial containment

- ⬡ oval compression
- ⬢ trapezoidal compression





# SERIE86

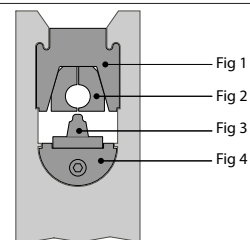
EQUIPMENT

## DIES SERIES 86

### COMPATIBILITY

- **BM 186** (hydraulic manual crimping tool)
- **BM 286** (crimping head)

For aluminium conductors DIN 48201					
	Die holder Fig. 1	Die Fig. 2		Indentor Fig. 3	Die support Fig. 4
	Code	for terminal lugs Code	for joints Code	Code	Code
mm <sup>2</sup>					
35	<b>18692</b>	<b>186750</b>	<b>186850</b>	<b>186450</b>	<b>18691</b>
50		<b>186770</b>	<b>186870</b>	<b>186470</b>	
70		<b>186715</b>	<b>186815</b>	<b>186415</b>	
95	<b>18693</b>				
120					
150					
185		<b>186724</b>	<b>186824</b>	<b>186424</b>	
240					



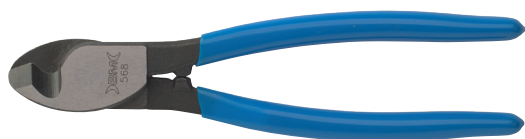
## ADAPTOR



Code	Description
<b>18694</b>	Series 84 die adapter for items 186 and 286

## CABLE CUTTERS AND WIRE ROPE CUTTERS

### CABLE CUTTER - UP TO 35 mm<sup>2</sup>



High-precision sharpened, hardened steel tool, that requires minimal effort thanks to the optimal leverage of the handles and the shape of the blades.

Code	Description	Cu/Al cable (mm <sup>2</sup> )	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
568	cable cutters	35	210	60	20	0,5	240x60x25	SC

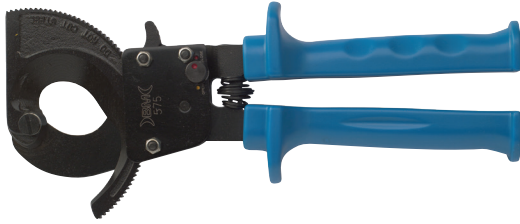
### CABLE CUTTER - UP TO 60 mm<sup>2</sup>



High-precision sharpened, hardened steel tool, that requires minimal effort thanks to the optimal leverage of the handles and the shape of the blades.

Code	Description	Cu/Al cable (mm <sup>2</sup> )	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
5681	cable cutters	60	230	50	20	0,5	240x60x25	SC

**CABLE CUTTER - RACHETING UP - UP TO 32 mm**



Entirely made of hardened steel, they come with plastic handles for a secure grip. They can be opened even during the cutting operation and have a locking mechanism for transport.

Code	Description	Cu/Al cable (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
575	cable cutters	32 max	240	100	40	0,7	250x110x50	SC

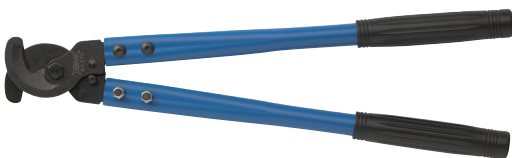
**CABLE CUTTER - RACHETING UP - UP TO 50 mm**



Entirely made of hardened steel, they come with plastic handles for a secure grip. They can be opened even during the cutting operation and have a locking mechanism for transport.

Code	Description	Cu/Al cable (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
576	cable cutters	50 max	280	110	40	1,1	290x120x50	SC

**CABLE CUTTER - WITH LONG HANDLES - UP TO 120 mm<sup>2</sup>**



Code	Description	Cu/Al cable (Ø mm)	Cu/Al cable (mm <sup>2</sup> )	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
570	cable cutters	18 max	120	370	100	20	0,7	380x130x25	SC

**CABLE CUTTER · WITH LONG HANDLES · UP TO 240 mm<sup>2</sup>**


Tempered carbon steel blades, alloy handles with plastic grip.  
High-precision sharpened, they require minimal effort thanks to the optimal leverage of the handles and the shape of the blades.

Code	Description	Cu/Al cable (Ø mm)	Cu/Al cable (mm <sup>2</sup> )	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
571	cable cutters	30 max	240	610	160	40	1,9	620x170x45	SC

**CABLE CUTTER · WITH LONG HANDLES · UP TO 400 mm<sup>2</sup>**


Tempered carbon steel blades, alloy handles with plastic grip.  
High-precision sharpened, they require minimal effort thanks to the optimal leverage of the handles and the shape of the blades.

Code	Description	Cu/Al cable (Ø mm)	Cu/Al cable (mm <sup>2</sup> )	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
572	cable cutters	37 max	400	810	170	45	3	820x180x50	SC

**CUTTING TOOL · HYDRAULIC · MANUAL · UP TO 20 mm**


- closed guillotine cut
- 180° adjustable head
- safety device to guarantee max working pressure
- release device to open the blades at the end of operation and in case of a wrong maneuver

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Steel cable (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
187	cable cutters / wire rope cutters	20 max	20 max	15 max	16 max	380	210	45	2,8	400x240x65	SA

**CUTTING TOOL - HYDRAULIC - MANUAL - UP TO 40 mm**



- closed guillotine cut
- 180° adjustable head
- safety device to guarantee max working pressure
- release device to open the blades at the end of operation and in case of a wrong maneuver

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Steel cable (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
188	cable cutters / wire rope cutters	40 max	25 max	15 max	16 max	580	160	50	5,3	630x170x60	SA

**CUTTING TOOL - HYDRAULIC - MANUAL - UP TO 85 mm**



- closed guillotine cut
- 180° adjustable head
- safety device to guarantee max working pressure
- release device to open the blades at the end of operation and in case of a wrong maneuver

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Al rod (Ø mm)	Steel cable (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
189	cable cutters	85 max	-	-	-	-	690	140	80	8	750x150x100	SA

**CUTTING TOOL - BATTERY POWERED - IN-LINE - 55 KN**

**FORCE:** 55 kN

**CUTTING TIME:** from 8 to 12 s

**MAX PASSAGE:** 25 mm

**BATTERY:** Stanley, Lítio, 18V 2.0Ah

**USB SOCKET:** Mini

- LED lighting of the workplace
- working trigger with motor stop function at the stroke
- release trigger
- ergonomic handles in bi-component plastic
- handling ring for transportation (strap) or safety cable
- USB connection for data analysis & preventive maintenance
- on/off button with emergency saving function
- LED display panel for battery charge level, cycle conformity, maintenance
- electronic protection in case of overpressure
- quick motor stop function at cutting end for high user safety
- energy saving function for switching off the tool
- crimping speed improved by a high performance motor
- possibility to use 5.0Ah battery for an extended use
- quick opening & closing head
- interchangeable blades
- rotative head 180°

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
37T055	cable cutters / wire rope cutters	128	75	400	3,3	471x415x116	VA



CUTTING CAPACITY	TYPE OF CABLES	MAX. HARDNESS	MAX. CUTTING Ø
Ropes	7x19 strands - steel	100 > 120 daN/mm <sup>2</sup>	ø 15 > 16 mm
	7x37 strands - steel	130 > 145 daN/mm <sup>2</sup>	ø 12 > 13 mm
Electrical conductors	Bare - copper/aluminum		300 mm <sup>2</sup>
	Rigid multi-strand - copper/aluminum		ø 20 > 22 mm
	Semi-rigid multi-strand - copper/aluminum		ø 20 > 22 mm
Round bars	Copper	< 20 daN/mm <sup>2</sup>	ø 20 > 22 mm
	Hard copper	20 > 28 daN/mm <sup>2</sup>	ø 15 > 18 mm
	Aluminum	< 20 daN/mm <sup>2</sup>	ø 20 > 25 mm
	Mild steel	42 > 45 daN/mm <sup>2</sup>	ø 12 > 14 mm
Insulated cables	Depends on the thickness of insulation		150 > 240 mm <sup>2</sup>
	Stainless steel	< 150 daN/mm <sup>2</sup>	ø 8 > 10 mm

**CUTTING TOOL - BATTERY POWERED - 130 kN**



**FORCE:** 130 kN  
**CUTTING TIME:** from 10 to 30 s  
**MAX PASSAGE:** 45 mm  
**BATTERY:** Stanley, Lithium, 18V 5.0Ah  
**USB SOCKET:** Micro

EQUIPMENT

- ring LED to provide crimping cycle information and to lighten the workplace
- working trigger with motor stop function at the stroke
- release trigger
- ergonomic handles in bi-component plastic
- handling ring for transportation (strap) or safety cable
- USB connection for data analysis & preventive maintenance
- safety locking trigger
- protection membrane to ventilate the electronics keeping it safe from moisture and dust
- LED display panel for battery charge level, cycle conformity, maintenance
- electronic protection in case of overpressure
- quick motor stop function at cutting end for high user safety
- energy saving function for switching off the tool
- rimping speed improved by a high performance motor
- 2 hydraulic pump stages for improved fast advance
- copper, aluminum and steel cables/ropes/rods
- max passage up to  $\varnothing$  45 mm
- cutting guillotine type
- locking pin
- interchangeable blades
- rotative heads 220°

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
38T130	cable cutters / wire rope cutters	505	75	330	8,65	594x494x149	VA



CUTTING CAPACITY	TYPE OF CABLES	MAX. HARDNESS	MAX. CUTTING $\varnothing$	
Conductors/Ropes	Copper	< 40 daN/mm <sup>2</sup>	$\varnothing$ 45 mm	
	Aluminum	< 20 daN/mm <sup>2</sup>	$\varnothing$ 45 mm	
	Almelec	< 34 daN/mm <sup>2</sup>	$\varnothing$ 45 mm	
	Steel		< 180 daN/mm <sup>2</sup>	7 x $\varnothing$ 3,0 (= $\varnothing$ 9,0)
				19 x $\varnothing$ 2,1 (= $\varnothing$ 10,5)
				19 x $\varnothing$ 2,3 (= $\varnothing$ 11,5)
	Multi-steel strands	< 180 daN/mm <sup>2</sup>	$\varnothing$ 18 (quantità di conduttori: 200)	
	ACSR (Aluminum conductor steel-reinforced cable)		< 180 daN/mm <sup>2</sup>	26 x $\varnothing$ 2,50 + 7 x $\varnothing$ 1,95 (= $\varnothing$ 15,85)
				26 x $\varnothing$ 3,06 + 7 x $\varnothing$ 2,38 (= $\varnothing$ 19,38)
				26 x $\varnothing$ 3,60 + 7 x $\varnothing$ 2,80 (= $\varnothing$ 22,80)
		54 x $\varnothing$ 3,50 + 19 x $\varnothing$ 2,10 (= $\varnothing$ 31,50)		
		54 x $\varnothing$ 4,36 + 19 x $\varnothing$ 2,62 (= $\varnothing$ 39,20)		
Bars	Steel	< 60 daN/mm <sup>2</sup>	$\varnothing$ 20	
		< 42 daN/mm <sup>2</sup>	$\varnothing$ 22	
	Copper	< 30 daN/mm <sup>2</sup>	$\varnothing$ 33	
		< 25 daN/mm <sup>2</sup>	$\varnothing$ 35	
Aluminum	< 16 daN/mm <sup>2</sup>	$\varnothing$ 45		

**ACCESSORIES • FOR BATTERY POWERED TOOL**


Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)
<b>39B2AH</b>	Rechargeable battery Stanley 18V Li-ion 2.0 Ah Charge time: 40 min Compatibility: 37A055, 37T055	115	75	45	0,36
<b>39B5AH</b>	Rechargeable battery Stanley 18V Li-ion 5.0 Ah Charge time: 80 min Compatibility: 37A055, 37T055, 38A062, 38A130, 38A130L, 38T130	115	75	65	0,62
<b>39C220</b>	Stanley battery charger for Stanley batteries, 220V AC powered	180	120	80	0,54



# DRILLERS

## PUNCHER - DIAMETER 6 mm



- tool with wide opening that allows for drilling in the corners, even if there are edges
  - cast aluminum body and handle make the device very light
  - regrindable and interchangeable hardened steel punch
- Applications: fastening and joining of cable ducts, drilling for rivets, etc.  
Not suitable for stainless steel.

Code	Description	Diameter (Ø mm)	For steel sheets with max thickness (mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
18506	puncher	6	1.2	230	120	25	0,36	265x140x50	SC
18516	spare punch	6							

## PUNCHER - DIAMETER 8 mm



- tool with wide opening that allows for drilling in the corners, even if there are edges
  - cast aluminum body and handle make the device very light
  - regrindable and interchangeable hardened steel punch
- Applications: fastening and joining of cable ducts, drilling for rivets, etc.  
Not suitable for stainless steel.

Code	Description	Diameter (Ø mm)	For steel sheets with max thickness (mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
18508	puncher	8	0.8	230	120	25	0,36	265x140x50	SA
18518	spare punch	8							

**PUNCHING TOOL · HYDRAULIC · MANUAL**


**FORCE:** 55 kN

**PUNCHER DIES:** T series, Q series and R series

**PUNCH CONNECTION THREAD:** M16

**MAXIMUM PUNCHING DIMENSIONS:** • round punching: 72 mm (48 mm for inox)

• square punching: 68 mm x 68 mm

• rectangular punching: 46 mm x 92 mm

**MAXIMUM PUNCHING THICKNESS:** • iron sheet: max 3 mm

• ASI inox 304 steel sheet: max 2 mm


• aluminum and plastic material: max 5 mm

**HOW TO USE:** • make the hole on the sheet with the drill

• pass the guide pin through the pre-drilled hole

• assembly the die and the punch on both sides of the sheet

• perform the punching

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
185	Hand hydraulic punching press complete with carrying case	360	120	50	2,7	450x300x100	VA
1856	Punching press kit complete with • BM 185 manual hydraulic punching press with carrying case • round punchers Ø 15.5 - Ø 19.5 - Ø 22.5 - Ø 26.5 - Ø 30.5 • guide pin Ø 11	360	120	50	2,7	450x300x100	VA

## PUNCHERS - ROUND (SERIES T)



**COMPATIBILITY:** • BM 185, BM 1856 (manual hydraulic punching tools) for Ø up to 92 mm  
• BM 200F (punching head for BM 200 manual hydraulic multi-head) for Ø up to 92 mm  
• BM 265 (punching head for pump)

**PUNCHER AND PIN MATERIAL:** cemented steel

**PIN THREAD:** M16

Code	Puncher Ø (mm)	Suitable for	Compatible pin	pin Ø (mm)	Pilot hole (mm)
T1550	15,5	PG 9	301	11	11,5
T1600	16,2	M 16	301	11	11,5
T1700	17	G 3/8"	301	11	11,5
T1950	19,5	PG 11	301	11	11,5
T2000	20,4	M 20	301	11	11,5
T2100	21	PG 13,5	301	11	11,5
T2250	22,5	PG 16	301	11	11,5
T2400	24	G 5/8"	301	11	11,5
T2550	25,4	M 25	301	11	11,5
T2650	26,5	G 3/4"	301	11	11,5
T2850	28,5	PG 21	301	11	11,5
T3050	30,5		301	11	11,5
T3250	32,5	M 32	302	16	17
T3500	35		302	16	17
T3850	38,5	PG 29	302	16	17
T4000	40,5	M 40	302	16	17
T4200	42		302	16	17
T4500	45		302	16	17
T4800	48	PG 36	302	16	17
T5050	50,5	M 50	302	16	17
T5400	54	PG 42	302	16	17
T5550	55,5		302	16	17
T5700	57		302	16	17
T6050	60,5	PG 48	302	16	17
T6200	62		302	16	17
T6500	65	M 63	302	16	17
T7050	70,5		302	16	17
T7200	72		302	16	17
T7500	75		303	22	22,5
T8050	80,5		303	22	22,5
T9100	91		303	22	22,5
T1050	105		304	27	28,5
T1150	115		304	27	28,5
T1200	120		304	27	28,5
T1300	130		304	27	28,5
T1400	140		304	27	28,5
T1530	153		304	27	28,5

## PINS FOR ROUND PUNCHERS (T SERIES)

**PUNCHER AND PIN MATERIAL:** cemented steel



Code	pin Ø (mm)	Pilot hole (mm)
301	11	11.5
302	16	17
303	22	22.5
304	27	28.5

## PUNCHERS - SQUARE (SERIES Q)

**COMPATIBILITY:** • BM 185, BM 1856 (manual hydraulic punching tools) for side up to 68 mm  
 • BM 200F (punching head for BM 200 manual hydraulic multi-head) for side up to 68 mm  
 • BM 265 (punching head for pump)

**PUNCHER AND PIN MATERIAL:** cemented steel

**PIN THREAD:** M16



Code	Side (mm)	Compatible pin	pin Ø (mm)	Pilot hole (mm)
Q20	20	310	8	17
Q24	24	310	8	17
Q30	30	311	12	19.5
Q40	40	312	14	19.5
Q46	46	312	14	19.5
Q50	50	313	20	28.5
Q57	57	313	20	28.5
Q68	68	313	20	28.5
Q92	92	313	20	28.5
Q104	104	314	22	28.5
Q138	138	314	22	28.5
Q143	143	314	22	28.5
Q175	175	314	22	28.5

### PINS FOR SQUARE PUNCHERS (Q SERIES)

**PUNCHER AND PIN MATERIAL:** cemented steel



Code	pin Ø (mm)	Pilot hole (mm)
310	8	17
311	12	19.5
312	14	19.5
313	20	28.5
314	22	28.5

### PUNCHERS - RECTANGULAR (SERIES R)

**COMPATIBILITY:** • BM 185, BM 1856 (manual hydraulic punching tools) up to 46 x 72 mm  
 • BM 200F (punching head for BM 200 manual hydraulic multi-head) up to 46 x 72 mm  
 • BM 265 (punching head for pump)

**PUNCHER AND PIN MATERIAL:** cemented steel

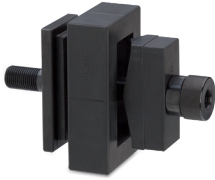
**PIN THREAD:** M16



Code	Side (mm)	Compatible pin	pin Ø (mm)	Pilot hole (mm)
R2036	20x36	321	12	19.5
R2226	22x26	320	8	17
R2230	22x30	321	12	19.5
R2236	22x36	321	12	19.5
R2242	22x42	321	12	19.5
R2249	22x49	321	12	19.5
R2345	23x45	321	12	19.5
R2445	24x45	321	12	19.5
R2658	26x58	322	14	19.5
R2951	29x51	322	14	19.5
R2971	29x71	322	14	19.5
R3046	30x46	322	14	19.5
R3251	32x51	322	14	19.5
R3276	32x76	323	20	28.5
R3646	36x46	322	14	19.5
R3752	37x52	322	14	19.5
R3757	37x57	322	14	19.5
R3797	37x97	323	20	28.5
R3865	38x65	322	14	19.5
R4011	40x115	323	20	28.5
R4672	46x72	323	20	28.5

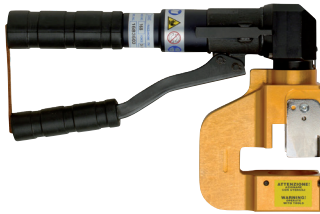
## PINS FOR RECTANGULAR PUNCHERS (R SERIES)

PUNCHER AND PIN MATERIAL: cemented steel



Code	pin Ø (mm)	Pilot hole (mm)
320	8	17
321	12	19.5
322	14	19.5
323	20	28.5
324	22	28.5

## DUCT PUNCHER · HYDRAULIC · MANUAL



**FORCE:** 27 kN

**MAXIMUM PUNCHING THICKNESS:** • iron sheet: max 1.2 mm  
• ASI inox 304 steel sheet: max 1 mm

**FIELD OF USE:** steel or plastic cable ducts

**HOW TO USE:** • pre-hole is not needed

• it allows the punching of ducts installed only 16 cm from the wall with diameters up to 40 mm

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
168	Manual hydraulic cable duct puncher. Complete with punchers Ø 16.2 - 20.4 - 25.5 - 32.5 - 40.5 mm and carrying box.	300	200	50	2,8	480x390x140	VA

# MULTI-HEAD

## MULTI-HEAD HYDRAULIC PRESS WITH CRIMPING, CUTTING AND PUNCHING HEADSTOCKS



**FORCE:** 50 kN

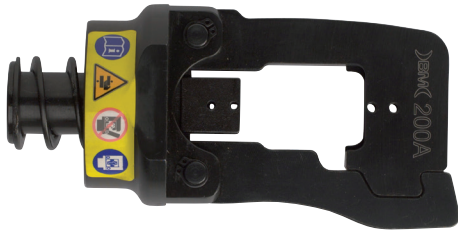
**CRIMPING HEAD:** see 200A head

**CABLE/WIRE ROPE CUTTERS TOOL HEAD:** see 200T head

**PUNCHING HEAD:** see 200F head

- interchangeable heads
- two pistons advancement speeds, one for quick approach, the other for operation
- automatic end-of-work release device to guarantee crimping/cutting/punching quality
- release device activated by a button to open the tool at the end of the operation and in case of a wrong maneuver

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>200</b>	Kit includes: - hydraulic press - 200A crimping head + dies-set for uninsulated terminals 10 ÷ 185 mm <sup>2</sup> - 200T cable/wire rope cutter head - 200F metal sheets driller - carrying case	370	125	50	8,3	480x380x180	VA
<b>200PA</b>	Kit includes: - hydraulic press - 200A crimping head + dies-set for uninsulated terminals 10 ÷ 185 mm <sup>2</sup> - carrying case	430	120	50	3,7	480x380x180	VA
<b>200PF</b>	Kit includes: - hydraulic press - 200F metal sheets driller - carrying case	400	120	60	3,8	480x380x180	VA
<b>200PT</b>	Kit includes: - hydraulic press - 200T cable/wire rope cutter head - carrying case	500	120	60	5	480x380x180	VA

**CRIMPING HEADSTOCK · FOR MULTI-HEAD PRESS · UP TO 185 mm<sup>2</sup> (SERIES 82)**

**CRIMPING FORCE AT DIE LEVEL:** 50 kN

**DIES:** 82 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 240 mm<sup>2</sup> (185 mm<sup>2</sup> for DIN)
- uninsulated class 6 and DIN from 10 to 185 mm<sup>2</sup>
- medium voltage from 25 to 150 mm<sup>2</sup>
- aluminum from 16 to 150 mm<sup>2</sup>
- bimetallic from 16 to 150 mm<sup>2</sup>
- bimetallic DIN from 16 to 150 mm<sup>2</sup>
- insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 35 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

- lateral snap opening for quick and easy die positioning
- the crimping head must be combined with BM 200 manual hydraulic multi-head tool
- it can be combined with a pump using a BM 200CC adapter

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>200A</b>	50 kN crimping head for BM 200 manual hydraulic multi-head tool including dies-set for uninsulated terminals 10 ÷ 185 mm <sup>2</sup>	130	70	60	1,5	NA	SC

# SERIE82

**CUTTING HEADSTOCK · FOR MULTI-HEAD PRESS · UP TO 32 mm**
**FORCE:** 50 kN


- closed guillotine cut
- for operation the multi-head press must be combined with BM 200 manual hydraulic multi-head tool
- it can be combined with a pump using BM 200CC adapter

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Al rod (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
<b>200T</b>	cable cutters / wire rope cutters tool head	32 max	25 max	22 max	16 max	190	100	40	2,8	NA	SC



## PUNCHING HEADSTOCK · FOR MULTI-HEAD PRESS



**PUNCHER DIES:** T series, Q series and R series

**MAXIMUM PUNCHING DIMENSIONS:**

- round punching: 60,5 mm
- square punching: 50 mm x 50 mm
- rectangular punching: 65 mm x 38 mm

**MAXIMUM PUNCHING THICKNESS:**

- iron sheet (max 3mm)
- steel sheet (max 1.5mm)

**HOW TO USE:**

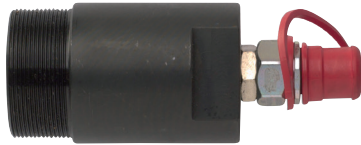
- insert the head into BM 200 manual hydraulic multi-head tool
- make the hole on the sheet with the drill
- pass the guide pin through the pre-drilled hole
- assembly the die and the punch on both sides of the sheet
- perform the punching

**FEATURES:**

- to use the crimping head it is necessary to combine BM 200 manual hydraulic multi-head tool
- with BM 200CC adaptor, it is possible to combine a pump

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
200F	Hydraulic punching head for manual multi-head hydraulic tool BM 200	90	60	60	1,6	NA	SC

## ACCESSORIES FOR BM 200 · ADAPTOR FOR PUMPS



**COMPATIBILITY:** usable heads

- 200A (crimping)
- 200T (cutting)
- 200F (punching)

- usable pumps
- 1600 (pedal hydraulic)
  - 162 (pneumatic-hydraulic)
  - 163 (electrohydraulic)

- it allows the heads of the BM 200 manual hydraulic multi-head press to be used with pumps

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
200CC	Adaptor	140	60	60	1	NA	SC

## PUMPS AND HEADSTOCKS

### CRIMPING TOOL - PNEUMATIC



**OPERATING PRESSURE:** 5-6 bar

**OUTPUT FORCE:** 1.3 kN at 5 bar

Pneumatic crimping tool with foot control complete with 534D die.

Crimping tool particularly suitable when a high degree of productivity in crimping is required. The dies are easy to change and work at a pressure of 6 bar. With foot control.

Code	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
1661	225	135	90	2,7	350x250x300	SC

## SERIE5

### DIES - SERIES 5 - FOR BM 1661



Code	Compatible positioner	Terminal type	Section (mm <sup>2</sup> )	Section (AWG/MCM)
534D		dies for insulated terminals	0.5 ÷ 6	(20-10)
535D		die for uninsulated copper terminals	0.5 ÷ 10	(20-8)
531D	16187, 16250	die for uninsulated open barrel brass terminals	0.5 ÷ 6	(20-10)
16187		positioner for die 531D - tab size 4,8 mm		
16250		positioner for die 531D - tab size 6,3 mm		
532D		die for quick-connect female flag insulated terminals	0.5 ÷ 2.5	(20-14)
537D		die for end-sleeve terminals	0.5 ÷ 4	(20-12)
539D		die for end-sleeve terminals	6 ÷ 16	(10-6)
500D		die for cable cutter		
543D		die for coaxial connectors RG 58-59		

## SERIE5

## HYDRAULIC FOOT-PUMP



**PRESSURE:**max 700 bar

**COMPATIBILITY:** usable heads  
 • 283, 284, 286, 270 (crimping)  
 • 287, 288, 289 (cutting)  
 • 265, 267, 263 (drilling)

**DRIVE:** foot-pump

- high pressure flexible tube with quick coupling female connector with automatic locking
- two working speeds to have two piston advancement speeds, one for quick approach the other for operation
- automatic end-of-work release device to guarantee punching quality
- release device activated by a button to open the tool at the end of operation and in case of a wrong maneuver

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
1600	Hydraulic foot-pump	460	130	400	13	500x150x250	SC

## ACCESSORIES FOR BM 1600 - CASE

**COMPATIBILITY:** pump

• 1600



Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
161	Metallic carrying case for 1600 with side handles and opening on the top	650	200	250	NA	NA	NA

## PNEUMATIC HYDRAULIC PUMP



**PRESSURE:**max 700 bar

**COMPATIBILITY:** usable heads  
 • 283, 284, 286, 270 (crimping)  
 • 287, 288, 289 (cutting)  
 • 265, 267, 263 (drilling)

**DRIVE:** foot control

- high pressure flexible tube with quick coupling female connector with automatic locking
- automatic end-of-work release device to guarantee punching quality
- release device activated by a button to open the tool at the end of operation and in case of a wrong maneuver
- for operation it must be connected to an air compressed source of 6-10 bar

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
162	Pneumatic hydraulic pump	300	160	200	4	400x160x350	SC

## ELECTRO HYDRAULIC PUMP



**PRESSURE:** max 700 bar

**COMPATIBILITY:** usable heads

- 283, 2833, 284, 284L, 286, 270 (crimping)
- 287, 288, 289 (cutting)
- 265, 267E, 263 (drilling)

**DRIVE:** accident-prevention foot control

- high pressure flexible tube with quick coupling female connector with automatic locking
- automatic end-of-work release device to guarantee punching quality
- automatic release device at the end of operation
- for operation it needs a 220V power supply

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
163	Electrohydraulic pump	700	520	270	41	NA	NA

## CRIMPING HEADSTOCK · FOR PUMPS · UP TO 240 mm<sup>2</sup> (SERIES 83)



**CRIMPING FORCE AT DIE LEVEL:** 60kN

**DIES:** 83 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 300 mm<sup>2</sup>
- uninsulated class 6 from 10 to 185 mm<sup>2</sup>
- DIN standard from 10 to 240 mm<sup>2</sup>
- NFC standard from 4 to 240 mm<sup>2</sup>
- medium voltage from 25 to 300 mm<sup>2</sup>
- aluminum from 16 to 185 mm<sup>2</sup>
- bimetallic from 16 to 150 mm<sup>2</sup>
- bimetallic DIN from 16 to 185 mm<sup>2</sup>
- insulated from 10 to 95 mm<sup>2</sup>
- C shunt from 10 to 95 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

- lateral snap opening for quick and easy die positioning
- with male quick coupling fitting with automatic locking
- for operation it must be combined with a pump with an operating pressure of 700 bar

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
2833	60 kN crimping head for pump	230	70	55	1,76	295x155x110	VA

# SERIE83

### CRIMPING HEADSTOCK · FOR PUMPS · UP TO 400 mm<sup>2</sup> (SERIES 84)



**CRIMPING FORCE AT DIE LEVEL:** 120 kN

**DIES:** 84 series

**FIELD OF USE:** terminals

- uninsulated from 10 to 400 mm<sup>2</sup> (300 mm<sup>2</sup> for DIN)
- uninsulated class 6 from 10 to 185 mm<sup>2</sup>
- medium voltage from 25 to 400 mm<sup>2</sup>
- aluminum from 16 to 240 mm<sup>2</sup>
- bimetallic from 16 to 300 mm<sup>2</sup>
- bimetallic DIN from 16 to 300 mm<sup>2</sup>
- insulated from 10 to 240 mm<sup>2</sup>
- C shunt from 10 to 150 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

- “C” opening for easy joint crimping (the maximum conductor section depends on cable insulation thickness)
- bigger “C” opening in 284L version to crimp big section joints
- with male quick coupling fitting with automatic locking
- for operation it must be combined a pump with an operating pressure of 700 bar

Code	Description	Max “C” opening (mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
284	120 kN crimping head for pump	25	210	130	70	3,6	440x270x130	VA
284L	120 kN crimping head for pump	42	250	130	70	5,3	440x270x130	VA

## SERIE84

### CRIMPING HEADSTOCK · FOR PUMPS · UP TO 400 mm<sup>2</sup> (SERIES 86, SERIES 84)



**CRIMPING FORCE AT DIE LEVEL:** 120 kN

**DIES:** 84 series and 86 series

**FIELD OF USE:** 84 series for terminals

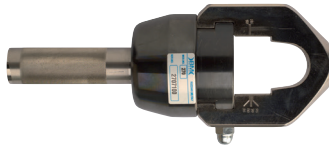
- uninsulated from 10 to 400 mm<sup>2</sup> (300 mm<sup>2</sup> for DIN)
- uninsulated class 6 from 10 to 185 mm<sup>2</sup>
- medium voltage from 25 to 400 mm<sup>2</sup>
- aluminum from 16 to 240 mm<sup>2</sup>
- bimetallic from 16 to 300 mm<sup>2</sup>
- bimetallic DIN from 16 to 300 mm<sup>2</sup>
- insulated from 10 to 240 mm<sup>2</sup>
- C shunt from 10 to 150 mm<sup>2</sup>
- end-sleeve from 50 to 150 mm<sup>2</sup>

86 series for deep indent of terminals  
• aluminum from 35 to 240 mm<sup>2</sup>

- with 86 series dies, it allows aluminum terminal to be crimped through deep indent
- 18694 adapter is required to use the 84 series dies
- with male quick coupling fitting with automatic locking
- for operation it must be combined with a pump with an operating pressure of 700 bar

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
286	120 kN deep indent crimping head for pump	280	90	80	4,5	470x270x130	VA

## SERIE86      SERIE84

**CRIMPING HEADSTOCK - FOR PUMPS - UP TO 630 mm<sup>2</sup> (SERIES 70)**

**CRIMPING FORCE AT DIE LEVEL:** 230 kN

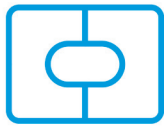
**FIELD OF USE:** terminals

- uninsulated terminals from 10 to 630 mm<sup>2</sup>
- C terminals da 16 a 185 mm<sup>2</sup>

- deep indent
- section adjustment nut
- for operation it must be combined with a pump with an operating pressure of 700 bar

Code	Description	Section (mm <sup>2</sup> )	Section (AWG/MCM)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
270	230 kN crimping head for pump, with dies for uninsulated terminals from 10 to 630 mm <sup>2</sup>	10 ÷ 630	(8-1250)	350	120	120	7,5	400x150x150	VA

# SERIE70

**DIES SERIES 70**


Code	Conductor sections for C shunts (mm <sup>2</sup> )	Terminal type
716	35-35	for C shunts
735	16-16, 25-25	for C shunts
770	50-50, 70-70	for C shunts
795	95-95, 120-120, 150-185	for C shunts

# SERIE70

### CUTTING HEADSTOCK - FOR PUMPS - UP TO 40 mm



- closed guillotine cut
- for operation it must be combined with a pump with an operating pressure of 700 bar

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Al rod (Ø mm)	Steel cable (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
287	cable cutters / wire rope cutters tool head	40 max	25 max	25 max	20 max	16 max	310	110	70	4	450x180x100	SC

### CUTTING HEADSTOCK - FOR PUMPS - UP TO 85 mm



- closed guillotine cut
- protections on the guillotine sides
- for operation it must be combined with a pump with an operating pressure of 700 bar

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Al rod (Ø mm)	Steel cable (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
288	cutting tool head	85 max	-	-	-	-	450	170	100	7	450x190x120	SC

### CUTTING HEADSTOCK - FOR PUMPS - UP TO 110 mm



- closed guillotine cut
- protections on the guillotine sides
- for operation it must be combined with a pump with an operating pressure of 700 bar

Code	Description	Cu/Al cable (Ø mm)	Cu rod (Ø mm)	Al rod (Ø mm)	Steel cable (Ø mm)	Iron rod (Ø mm)	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
289	cutting tool head	100 max	-	-	-	-	550	190	120	9	470x270x130	SC

## PUNCHING HEADSTOCK · FOR PUMPS



**FORCE:** 160 kN

**PUNCHER DIES:** T series, Q series and R series

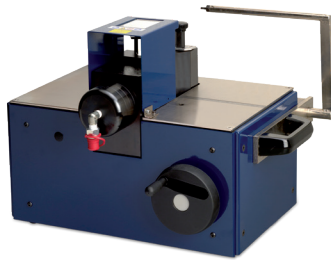
**PUNCH CONNECTION THREAD:** M16

**MAXIMUM PUNCHING THICKNESS:** • iron sheet (max 3 mm)  
• steel sheet (max 1.5 mm)

**HOW TO USE:** • insert the head into a pump multi-head tool  
• make the hole on the sheet with the drill  
• pass the guide pin through the pre-drilled hole  
• assembly the die and the punch on both sides of the sheet  
• perform the punching

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
265	Hydraulic punching head for pump	210	80	80	3	250x140x100	SC

## BAR BENDING/DRILLING · HEADSTOCKS · FOR PUMPS



**FIELD OF USE:** • bending and punching of copper bars sized 12x110 mm max

**FEATURES:** • equipped with a protractor that guarantees the uniformity of the operations with bars of same dimensions

Code	Description	Length (mm)	Width (mm)	Thickness (mm)	Weight (kg)	Pack size LxWxH (mm)	
267	Bar bending/drilling head for BM 1600 hydraulic foot-pump and BM 162 pneumatic/hydraulic pump	580	520	300	6	600x500x500	SC
267E	Bar bending/drilling head for BM 163 electrohydraulic pump	580	520	300	6	600x500x500	SC

## PUNCHERS FOR BAR BENDING-DRILLING HEADSTOCK

COMPATIBILITY: BM 267 and BM 267E

SUITABLE FOR: punching

Code	Hole shape	Through hole	
26708	round	9	SA
26710	round	11	SA
26714	round	14	SA
26718	round	18	SA
26722	round	22.5	SA
26711	eyelet	11 x 17	SA
26715	eyelet	9 x 15	SA
26719	eyelet	13.5 x 19	SA
26717	eyelet	17.5 x 22	SA







# ELECTRICAL TAPES

PVC ELECTRICAL TAPE

pag. 298

EPR SELF-AMALGAMATING  
ELECTRICAL TAPE

pag. 301

### ELECTRICAL TAPE - PVC - 0.15 THICKNESS



**MATERIAL:** PVC  
**RESISTANT TO:** acids, weathering, corrosion, alkalis, oil, humidity  
**OPERATING TEMPERATURE:** 0°C - +90°C  
**TENSILE STRENGTH:** 28 N/cm equivalent to 18.6 N/mm<sup>2</sup>  
**ELONGATION:** 200 %  
**ADHESION TO STEEL:** 2.2 N/cm  
**ADHESION TO BACKING:** 2 N/cm  
**DIELECTRIC STRENGTH:** 45 kV/mm  
**ACCORDING TO STD.:** IEC 60454-2  
**FLAMMABILITY:** flame retardant  
**CLASSIFICATION:** EN 60454-3-1-5/F-PVCP/90  
**ACCORDING TO STD.:** IEC 60454-2

ELECTRICAL TAPES

Code	Color	Thickness (mm)	Height (mm)	Length (m)	
ESB1525BI	White	0,15	15	25	10/100
ESB1525BL	Blue	0,15			10/100
ESB1525GI	Yellow	0,15			10/100
ESB1525GR	Grey	0,15			10/100
ESB1525GV	YellowGreen	0,15			10/100
ESB1525MA	Brown	0,15			10/100
ESB1525NE	Black	0,15			10/100
ESB1525RO	Red	0,15			10/100
ESB1525VE	Green	0,15			10/100
ESB1925BI	White	0,15	19	25	10/100
ESB1925BL	Blue	0,15			10/100
ESB1925GI	Yellow	0,15			10/100
ESB1925GR	Grey	0,15			10/100
ESB1925GV	YellowGreen	0,15			10/100
ESB1925MA	Brown	0,15			10/100
ESB1925NE	Black	0,15			10/100
ESB1925RO	Red	0,15			10/100
ESB1925VE	Green	0,15			10/100
ESB2525BI	White	0,15	25	25	8/80
ESB2525BL	Blue	0,15			8/80
ESB2525GI	Yellow	0,15			8/80
ESB2525GR	Grey	0,15			8/80
ESB2525GV	YellowGreen	0,15			8/80
ESB2525MA	Brown	0,15			8/80
ESB2525NE	Black	0,15			8/80
ESB2525RO	Red	0,15			8/80
ESB2525VE	Green	0,15			8/80
ESB1510BI	White	0,15	15	10	10/200
ESB1510BL	Blue	0,15			10/200
ESB1510GI	Yellow	0,15			10/200
ESB1510GR	Grey	0,15			10/200
ESB1510GV	YellowGreen	0,15			10/200
ESB1510MA	Brown	0,15			10/200
ESB1510NE	Black	0,15			10/200
ESB1510RO	Red	0,15			10/200
ESB1510VE	Green	0,15			10/200



**FLAME  
RETARDANT**

**ELECTRICAL TAPE - PVC - 0.18 THICKNESS**


**MATERIAL:** PVC

**RESISTANT TO:** acids, weathering, corrosion, alkalis, oil, humidity

**OPERATING TEMPERATURE:** 0°C - +80°C

**TENSILE STRENGTH:** 28 N/cm equivalent to 15.5 N/mm<sup>2</sup>

**ELONGATION:** 200 %

**ADHESION TO STEEL:** 2.2 N/cm

**ADHESION TO BACKING:** 2.2 N/cm

**DIELECTRIC STRENGTH:** 7000 V equivalent to 38 kV/mm

**ACCORDING TO STD.:** ASTM-D-1000

**FLAMMABILITY:** flame retardant

**ACCORDING TO STD.:** UL 510

Code	Color	Thickness (mm)	Height (mm)	Length (m)	
ESC1920NE	Black	0,18	19	20	10/100



file n° E 492005



**FLAME  
RETARDANT**

**ELECTRICAL TAPE - PVC - 0.18 THICKNESS FOR LOW AND HIGH TEMPERATURES**



**MATERIAL:** PVC  
**HIGHLY RESISTANT TO:** acids, weathering, corrosion, alkalis, oil, humidity  
**OPERATING TEMPERATURE:** -18°C - +105°C  
**TENSILE STRENGTH:** 35 N/cm equivalent to 19.4 N/mm<sup>2</sup>  
**ELONGATION:** 300 %  
**ADHESION TO STEEL:** 3.1 N/cm  
**ADHESION TO BACKING:** 2.7 N/cm  
**DIELECTRIC STRENGTH:** 10000 V equivalent to 55,5 kV/mm  
**ACCORDING TO STD.:** ASTM-D-1000  
**FLAMMABILITY:** flame retardant  
**ACCORDING TO STD.:** UL 510

Code	Color	Thickness (mm)	Height (mm)	Length (m)	
ETA1920NE	Black	0,18	19	20	1/100

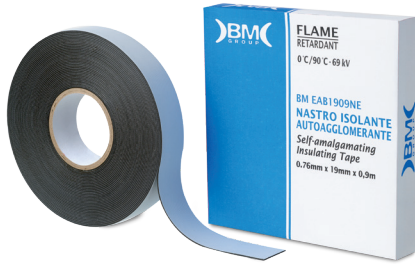


file n° E 492005



+105°C  
-18°C

**FLAME  
RETARDANT**

**ELECTRICAL TAPE - EPR SELF-AMALGAMATING**

**MATERIAL:** EPR

**RESISTANT TO:** ozone, UV rays

**EXCELLENT RESISTANCE TO:** chemicals, corrosion, humidity

**EMERGENCY OVERLOAD TEMPERATURE:** 130 °C

**ACCORDING TO STD.:** ASTM-D-4388

**OPERATING TEMPERATURE:** -40°C - +90°C

**TENSILE STRENGTH:** 2.4 N/mm<sup>2</sup> (350psi)

**ELONGATION:** 750 %

**DIELECTRIC STRENGTH:** 29.5 kV/mm (750 V/mil)

**ACCORDING TO STD.:** ASTM-D-4325

Code	Color	Thickness (mm)	Height (mm)	Length (m)	
<b>EAB1909NE</b>	Black	0,76	19	9	1/60

**APPLICATIONS**

Lining and insulation of power cable joints up to 69 kV.

Stress cones and coating of power cable terminations up to 35 kV.







# CONDUIT FIXINGS

IP67 ACCESORIES	pag. 304
IP40 ACCESORIES	pag. 307
CONDUIT FIXING	pag. 308
ACCESSORIES FOR SPIRAL CONDUITS	pag. 309



## IP67 ACCESSORIES



### OUR STRENGTH POINT

What makes BM IP67 fixings stand out from the crowd is the **double lip seal** that guarantees unique advantages in all phases of the project: choice of material, installation, use, modification of the system, and material recovery.

### 2. INSTALLATION:

the conduit's insertion with a slight pressure allows for a fast and effortless connection. After the insertion, the gasket keeps the conduit hanging, leaving the installer's hands free for other operations.

**1. CHOICE OF MATERIAL:** conduit fixings can be used with any conduit that complies with the standards. The gasket adapts to the variations of shape and diameter typical of plastic tube bars in the range allowed by the standard.

**4. MODIFICATIONS:** the disengagement with a slight traction and rotation allows rapid changes to the system or the recovery of the fixing. The gasket keeps the sealing characteristics unchanged over time so that the fixing can be reused.

**3. OPERATION:** the gasket allows for thermal expansion in the length of conduits within a range from -5°C to +60°C.



**CE IP67**

For more information about this product check out the following pages.

## IP67 ACCESSORIES · CONDUIT-BOX FITTING · TS



It connects a rigid conduit to a box or board. Complete with nut and flat gasket.

**MATERIAL:** rigid PVC

**PITCH:** metric

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP67

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Metric thread (EN 60423)	Conduit diameter (mm)	
TP7TS16	Grey RAL 7035	M 16 x 1.5	16	10/250
TP7TS20	Grey RAL 7035	M 20 x 1.5	20	10/400
TP7TS25	Grey RAL 7035	M 25 x 1.5	25	10/300
TP7TS32	Grey RAL 7035	M 32 x 1.5	32	10/200
TP7TS40	Grey RAL 7035	M 40 x 1.5	40	5/40
TP7TS50	Grey RAL 7035	M 50 x 1.5	50	5/25



**IP67**

**IP67 ACCESSORIES · 90 DEGREE ELBOW CONDUIT · CR**


It connects two rigid conduits of the same diameter, forming a 90 degree curve.

**MATERIAL:** rigid PVC

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP67

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Conduit diameter (mm)	
<a href="#">TP7CR16</a>	Grey RAL 7035	16	10/100
<a href="#">TP7CR20</a>	Grey RAL 7035	20	10/140
<a href="#">TP7CR25</a>	Grey RAL 7035	25	10/90
<a href="#">TP7CR32</a>	Grey RAL 7035	32	5/50
<a href="#">TP7CR40</a>	Grey RAL 7035	40	5/50
<a href="#">TP7CR50</a>	Grey RAL 7035	50	5/30


**IP67**
**IP67 ACCESSORIES · CONDUIT-CONDUIT FITTING · TT**


It connects two rigid conduits of the same diameter.

**MATERIAL:** rigid PVC

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP67

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Conduit diameter (mm)	
<a href="#">TP7TT16</a>	Grey RAL 7035	16	10/180
<a href="#">TP7TT20</a>	Grey RAL 7035	20	10/300
<a href="#">TP7TT25</a>	Grey RAL 7035	25	10/220
<a href="#">TP7TT32</a>	Grey RAL 7035	32	10/120
<a href="#">TP7TT40</a>	Grey RAL 7035	40	5/50
<a href="#">TP7TT50</a>	Grey RAL 7035	50	5/40


**IP67**

## IP67 ACCESSORIES · CONDUIT-SHEATHING FITTING · TG · SAME DIAMETER



It connects a rigid conduit to a spiral sheathing.  
The internal diameter of the system is the same of the sheathing.

**MATERIAL:** rigid PVC

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP67 conduit, IP65 sheathing

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Conduit diameter (mm)	Sheathing diameter (mm)	
TP7TG16	Grey RAL 7035	16	16	10/100
TP7TG20	Grey RAL 7035	20	20	10/160
TP7TG25	Grey RAL 7035	25	25	10/120
TP7TG32	Grey RAL 7035	32	32	5/70
TP7TG40	Grey RAL 7035	40	40	5/40
TP7TG50	Grey RAL 7035	50	50	5/20



# IP67

## IP67 ACCESSORIES · CONDUIT-SHEATHING FITTING · TG · REDUCED DIAMETER



It connects a rigid conduit to a spiral sheathing.  
The internal diameter of the system is the same of the sheathing.

**MATERIAL:** rigid PVC

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP67 conduit, IP65 sheathing

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Conduit diameter (mm)	Sheathing diameter (mm)	
TP7TG16/12	Grey RAL 7035	16	12	10/100
TP7TG20/16	Grey RAL 7035	20	16	10/160
TP7TG25/20	Grey RAL 7035	25	20	25/20



# IP67

**IP40 ACCESSORIES · JUNCTION SLEEVE · MA**


Adaptable to conduit imperfections (oval shape, increased/reduced diameter within standard range).  
 Easy and full insertion up to half-length to facilitate the passage of cables and probes.  
 Better sealing thanks to its Trilo System joint.  
 New design that allows for seamless joints between conduits.

**MATERIAL:** rigid PVC

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP40

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Conduit diameter (mm)	
TP4MA16	Grey RAL 7035	16	20/300
TP4MA20	Grey RAL 7035	20	20/400
TP4MA25	Grey RAL 7035	25	20/240
TP4MA32	Grey RAL 7035	32	10/120
TP4MA40	Grey RAL 7035	40	5/80
TP4MA50	Grey RAL 7035	50	5/50


**IP40**
**IP40 ACCESSORIES · 90 DEGREE ELBOW CONDUIT · CU**


90 degree elbow conduit, narrow radius, for rigid conduits.

**MATERIAL:** rigid PVC

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP40

**STANDARD:** EN 61386-1, EN 61386-21

Code	Color	Conduit diameter (mm)	
TP4CU16	Grey RAL 7035	16	10/180
TP4CU20	Grey RAL 7035	20	10/220
TP4CU25	Grey RAL 7035	25	10/220
TP4CU32	Grey RAL 7035	32	5/120
TP4CU40	Grey RAL 7035	40	5/60
TP4CU50	Grey RAL 7035	50	5/35


**IP40**

### CONDUITS FIXINGS · SPRING CLIP SADDLE · FS



Clip support for conduits. It is equipped with side mounting for installation in series and grooves for installation in line.

**MATERIAL:** with ABS

**RESISTANCE TO FIRE:** self-extinguishing

Code	Color	Conduit diameter (mm)	
TPZFS16	■ Grey RAL 7035	16	100/800
TPZFS20	■ Grey RAL 7035	20	100/1600
TPZFS25	■ Grey RAL 7035	25	50/900
TPZFS32	■ Grey RAL 7035	32	50/800
TPZFS40	■ Grey RAL 7035	40	25/200
TPZFS50	■ Grey RAL 7035	50	25/150

### CONDUITS FIXINGS · COLLAR CLAMP FASTENER · FF



Collar clamp fastener.

**MATERIAL:** with polyamide

**RESISTANCE TO FIRE:** self-extinguishing

Code	Color	Conduit diameter (mm)	
TPZFF16/32	■ Grey RAL 7035	16 ÷ 32	100/1000
TPZFF40/63	■ Grey RAL 7035	40 ÷ 63	50/400

**IP65 ACCESSORIES FOR SPIRAL CONDUITS · SWIVEL FITTING · METRIC THREAD · RGM/RGMN**


Swivel straight fitting for spiral conduits.  
Supplied with metric thread fixing nut.

**MATERIAL:** fireproof polypropylene

**PITCH:** metric

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP65

**STANDARD:** EN 61386-1, EN 61386-23

Code	Color	Metric thread (EN 60423)	Sheathing diameter (mm)	
TP5RGM10	Grey RAL 7035	M 12 x 1.5	10	10/150
TP5RGMN10	Black RAL 9005	M 12 x 1.5	10	10/150
TP5RGM12	Grey RAL 7035	M 16 x 1.5	12	10/150
TP5RGMN12	Black RAL 9005	M 16 x 1.5	12	10/150
TP5RGM16	Grey RAL 7035	M 20 x 1.5	16	10/100
TP5RGMN16	Black RAL 9005	M 20 x 1.5	16	10/100
TP5RGM20	Grey RAL 7035	M 25 x 1.5	20	10/70
TP5RGMN20	Black RAL 9005	M 25 x 1.5	20	10/70
TP5RGM25	Grey RAL 7035	M 32 x 1.5	25	10/40
TP5RGMN25	Black RAL 9005	M 32 x 1.5	25	10/40
TP5RGM32	Grey RAL 7035	M 40 x 1.5	32	5/25
TP5RGMN32	Black RAL 9005	M 40 x 1.5	32	5/25
TP5RGM40	Grey RAL 7035	M 50 x 1.5	40	5/20
TP5RGMN40	Black RAL 9005	M 50 x 1.5	40	5/20
TP5RGM50	Grey RAL 7035	M 63 x 1.5	50	5/15
TP5RGMN50	Black RAL 9005	M 63 x 1.5	50	5/15


**IP65**

## IP65 ACCESSORIES FOR SPIRAL CONDUITS · SWIVEL FITTING · PG THREAD · RGP/RGPN



Swivel straight fitting for spiral conduits.  
Supplied with PG thread fixing nut.

**MATERIAL:** fireproof polypropylene

**PITCH:** PG

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)


**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP65

**STANDARD:** EN 61386-1, EN 61386-23

Code	Color	PG thread (DIN 40430)	Sheathing diameter (mm)	
TP5RGP10	Grey RAL 7035	PG 9	10	10/160
TP5RGPN10	Black RAL 9005		10	10/160
TP5RGP12	Grey RAL 7035	PG 11	12	10/160
TP5RGPN12	Black RAL 9005		12	10/160
TP5RGP12/13	Grey RAL 7035	PG 13.5	12	10/160
TP5RGPN12/13	Black RAL 9005		12	10/160
TP5RGP14	Grey RAL 7035		14	10/100
TP5RGPN14	Black RAL 9005		14	10/100
TP5RGP16	Grey RAL 7035	PG 11	16	10/100
TP5RGPN16	Black RAL 9005		16	10/100
TP5RGP16/13	Grey RAL 7035	PG 13.5	16	10/100
TP5RGPN16/13	Black RAL 9005		16	10/100
TP5RGP16/16	Grey RAL 7035	PG 16	16	10/100
TP5RGPN16/16	Black RAL 9005		16	10/100
TP5RGP20	Grey RAL 7035	PG 21	20	10/70
TP5RGPN20	Black RAL 9005		20	10/70
TP5RGP22	Grey RAL 7035		22	10/60
TP5RGPN22	Black RAL 9005		22	10/60
TP5RGP25	Grey RAL 7035	PG 29	25	10/50
TP5RGPN25	Black RAL 9005		25	10/50
TP5RGP28	Grey RAL 7035		28	10/40
TP5RGPN28	Black RAL 9005		28	10/40
TP5RGP32	Grey RAL 7035	PG 36	32	5/20
TP5RGPN32	Black RAL 9005		32	5/20
TP5RGP35	Grey RAL 7035		35	5/20
TP5RGPN35	Black RAL 9005		35	5/20



# IP65

**IP65 ACCESSORIES FOR SPIRAL CONDUITS · SWIVEL FITTING · GAS THREAD · RGG/RGGN**


Supplied with GAS thread fixing nut.

**MATERIAL:** fireproof polypropylene

**PITCH:** gas

**RESISTANCE TO SHOCK:** class 3 (>2 kg from 10 cm at -5 °C)

**MIN. TEMPERATURE:** class 2 (-5 °C)

**MAX. TEMPERATURE:** class 1 (+60°C)

**RESISTANCE TO FIRE:** self-extinguishing

**GLOW WIRE TEST:** pass at 850 °C

**PROTECTION GRADE:** IP65

**STANDARD:** EN 61386-1, EN 61386-23

Code	Color	Gas thread (ISO 228/1)	Sheathing diameter (mm)	
TP5RGG10	Grey RAL 7035	G 1/4"	10	10/140
TP5RGGN10	Black RAL 9005		10	10/140
TP5RGG12	Grey RAL 7035	G 3/8"	12	10/120
TP5RGGN12	Black RAL 9005		12	10/120
TP5RGG14	Grey RAL 7035	G 1/2"	14	10/100
TP5RGGN14	Black RAL 9005		14	10/100
TP5RGG16	Grey RAL 7035		16	10/100
TP5RGGN16	Black RAL 9005		16	10/100
TP5RGG20	Grey RAL 7035	G 3/4"	20	10/70
TP5RGGN20	Black RAL 9005		20	10/70
TP5RGG22	Grey RAL 7035		22	10/60
TP5RGGN22	Black RAL 9005		22	10/60
TP5RGG25	Grey RAL 7035	G 1"	25	10/40
TP5RGGN25	Black RAL 9005		25	10/40
TP5RGG28	Grey RAL 7035		28	10/40
TP5RGGN28	Black RAL 9005		28	10/40
TP5RGG32	Grey RAL 7035	G 1" 1/4"	32	5/25
TP5RGGN32	Black RAL 9005		32	5/25
TP5RGG35	Grey RAL 7035		35	5/20
TP5RGGN35	Black RAL 9005		35	5/20
TP5RGG40	Grey RAL 7035	G 1" 1/2"	40	5/20
TP5RGGN40	Black RAL 9005		40	5/20
TP5RGG50	Grey RAL 7035	G 2"	50	5/15
TP5RGGN50	Black RAL 9005		50	5/15


**IP65**







# FIXINGS

LIGHT FIXINGS	pag. 316
HEAVY DUTY FIXINGS	pag. 336
MANUAL NAILING	pag. 346

## QUICK GUIDE TO FIXINGS

To facilitate and above all to make fixings quicker and safer, the quick guide provides the solution to any problem or doubt related to fixing. Light fixings are versatile and suitable for several applications on different supports. The tables take into account a number of factors, including support materials, applied loads, type of installation, types of anchor, drilling methods, and anchoring depth, all essential for determining the correct anchor or dowel.

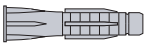
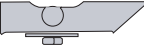

### LIGHT FIXINGS

#### UNIVERSAL

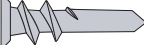



	Bricks	Concrete	Insulation	Hollow Blocks	Hollow Blocks	Plasterboard	Plasterboard	Plasterboard
 Super-V EVO	●	●	●	●	●	●	○	○
 TNU	●	●	●	●	●	●	○	○
 TN	●	●	●	●	●	●	○	○
 TM	●	●	●	○	○			

#### FOR HOLLOW MATERIALS

 TNV	○	○	○	●	●	●	●	○
 AG				●	○		●	●
 AM				●	○		●	●

#### PLASTERBOARD

 VP							●	
 VM							●	

## HEAVY DUTY FIXINGS

### THROUGH FIXINGS



TMP		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
TPP			<input checked="" type="radio"/>	<input type="radio"/>

### NON-THROUGH



TMN		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>
TPN		<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>

## CHEMICAL FIXINGS

### ACCESSORIES



GN					<input checked="" type="radio"/>	<input checked="" type="radio"/>	
BFI		<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
BF		<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>
GFA - GFO		<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>	<input checked="" type="radio"/>

Suitable application

Partially suitable application

## TYPE OF MATERIALS

SOLID			PERFORATED		LOW RESISTANCE		
Solid bricks	Concrete	Natural stone	Perforated brick	Perforated blocks	Cellular concrete	Plasterboard	Panels/slabs

## SUPER-V EVO UNIVERSAL WALL PLUGS

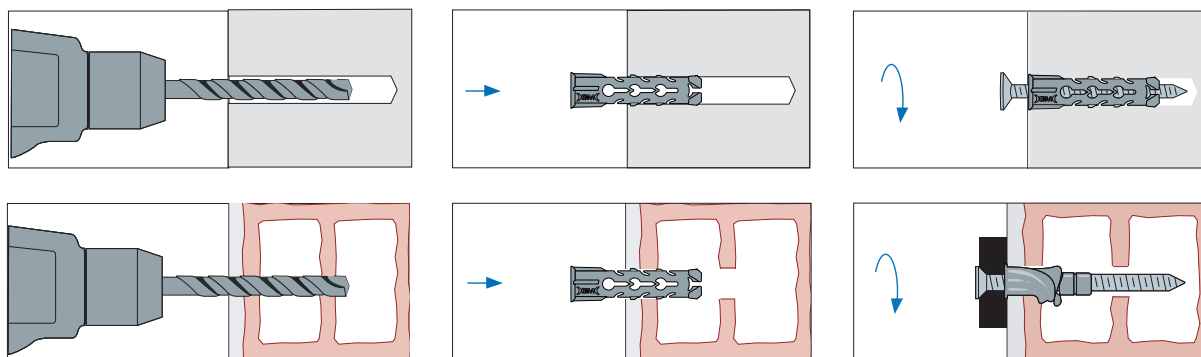
Thanks to its ability to adapt to different types of materials, the innovative **Super-V EVO** nylon plug allows extremely high holding with all-around security.

The particular inner profile and the technopolymer used allows the use of wood, chipboard and self-tapping screws. The design has been thoroughly engineered to prevent the plug from penetrating too much or rotating inside the hole during installation.

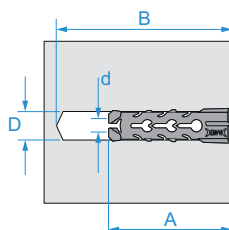
The **Super-V EVO** plug comes complete with a wide range of screws for chipboard, in different shapes and sizes, to solve any fixing issues in the various areas of use and to ensure highly reliable performance.

**Super V EVO**

### FIXING STEPS



### UNIVERSAL WALL PLUGS - SUPER-V EVO - NYLON WALL PLUG



**WALL PLUG TYPE:** Super-V EVO universal wall plugs

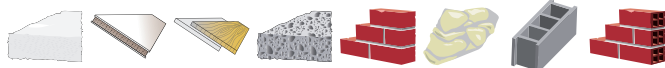
**WALL PLUG MATERIAL:** high resistance polyamide

**WALL PLUG COLOR:** grey

**SCREW MATERIAL:** galvanized steel

**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d (mm)	
F0001	5	25	35	3 ÷ 4	100/4000
F0002	6	30	40	4 ÷ 5	100/4000
F0003	8	40	50	4,5 ÷ 6	100/4000
F0004	10	50	70	6 ÷ 7	50/2000
F0005	12	60	80	7 ÷ 8	25/1000

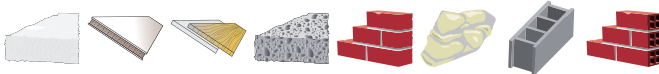
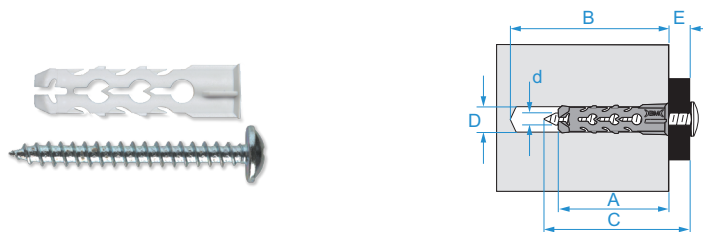


**Super V EVO**

**UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH FLAT COUNTERSUNK HEAD PZ SCREW**

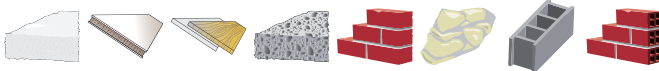
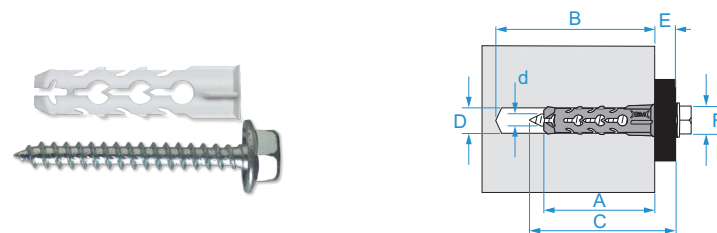

**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	E max (mm)	
F0011	5	25	35	4 x 30	5	100/3000
F0012	6	30	40	4,5 x 40	10	100/3000
F0013	8	40	50	5 x 50	10	50/1500
F0014	10	50	70	6 x 60	10	25/750


**UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH CYLINDRIC FLANGED HEAD PH SCREW**


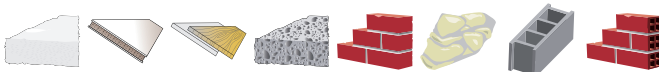
**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	E max (mm)	
F0021	5	25	35	4 x 30	5	100/3000
F0022	6	30	40	4,5 x 40	10	100/3000
F0023	8	40	50	5 x 50	10	50/1500


**UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH HEXAGONAL HEAD SCREW**


**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	E max (mm)	F (mm)	
F0073	8	40	50	5,5 x 45	5	10	50/1500
F0074	10	50	65	6,5 x 60	10	10	25/750

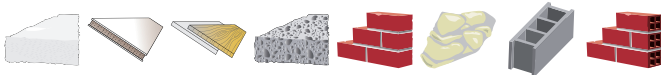


### UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH ROUND HOOK



**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	H (mm)	
F0032	6	30	40	4,5 x 35	10	25/750



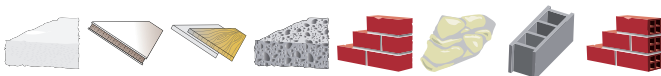
**SuperV EVO**

### UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH EYE HOOK



**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	H (mm)	
F0052	6	30	40	4,5 x 35	13	25/750



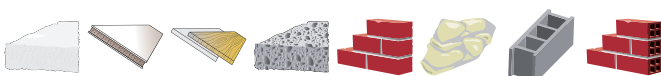
**SuperV EVO**

### UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH SHORT HOOK

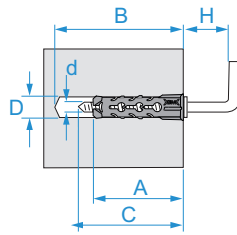
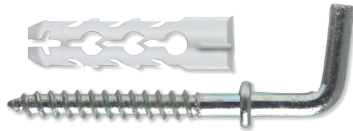


**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	H (mm)	
F0062	6	30	40	4,5 x 35	10	25/750

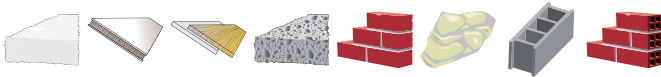
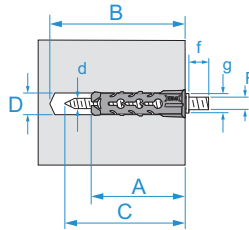
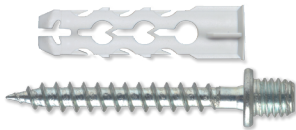


**SuperV EVO**

**UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH L-HOOK**


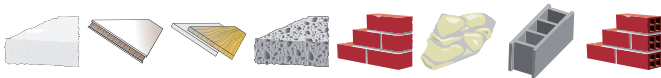
**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	H (mm)	
F0042	6	30	40	4,5 x 35	14	25/750


**UNIVERSAL WALL PLUGS - SUPER-V EVO - WITH THREADED HEAD SCREW**


**WALL PLUG TYPE:** Super-V EVO universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	g (mm)	F (mm)	f (mm)	
F0092	6	30	40	4,5 x 35	8,5	M6	6	25/750
F0093	8	40	50	5 x 45	11	M8	8	25/750

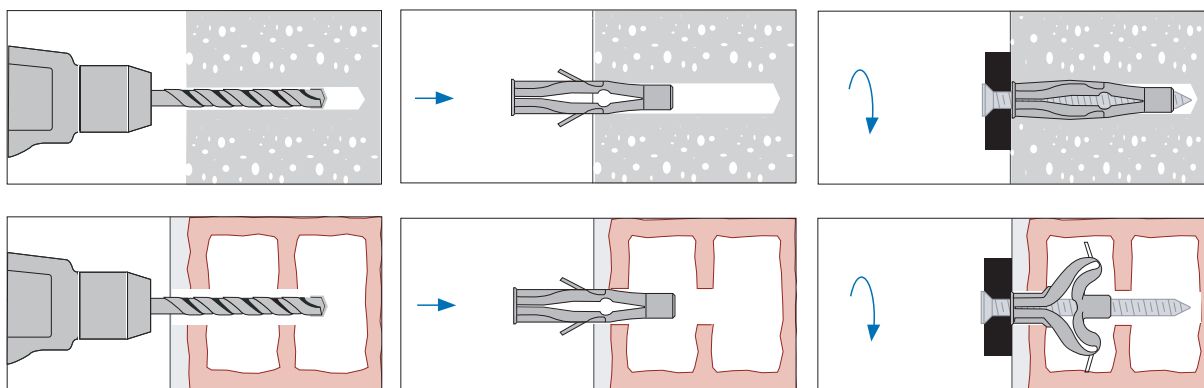




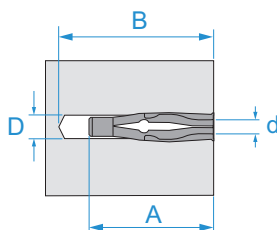
## UNIVERSAL WALL PLUGS TNU

It is a universal nylon wall plug that provides excellent anchorage especially in hollow materials. The special shape of the wall plug ensures perfect hold thanks to the correct expansion and the umbrella-like opening. The side fins and the special collar prevent the wall plug from rotating on its axis while the lengthwise opening ensures excellent hold both in solid materials by expansion and in hollow spaces due to the bending of the central part. The internal profile of the plug allows the end of the screw to grip quickly, causing an immediate expansion.

### FIXING STEPS

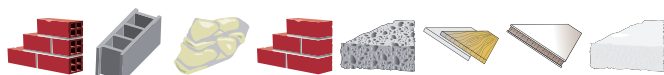


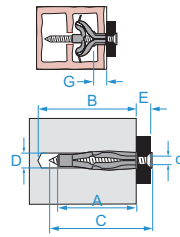
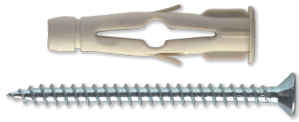
### UNIVERSAL WALL PLUGS - TNU - NYLON WALL PLUG



**WALL PLUG TYPE:** TNU universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

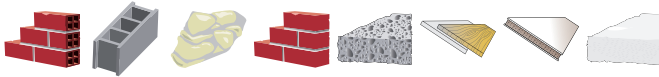
Code	D (mm)	A (mm)	B (mm)	d (mm)	
F0201	6	35	50	3.5 ÷ 4	100/5000
F0202	8	50	60	4 ÷ 5	100/10000
F0203	10	60	75	5 ÷ 6	100/1200



**UNIVERSAL WALL PLUGS - TNU - WITH FLAT COUNTERSUNK HEAD PZ SCREW**


**WALL PLUG TYPE:** TNU universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C (mm)	E max (mm)	G min (mm)	
F0211	6	35	50	3,5 x 45	10	5	100/2000
F0212	8	50	60	4,5 x 60	10	10	100/2000
F0213	10	60	75	6 x 80	10	10	100/1000



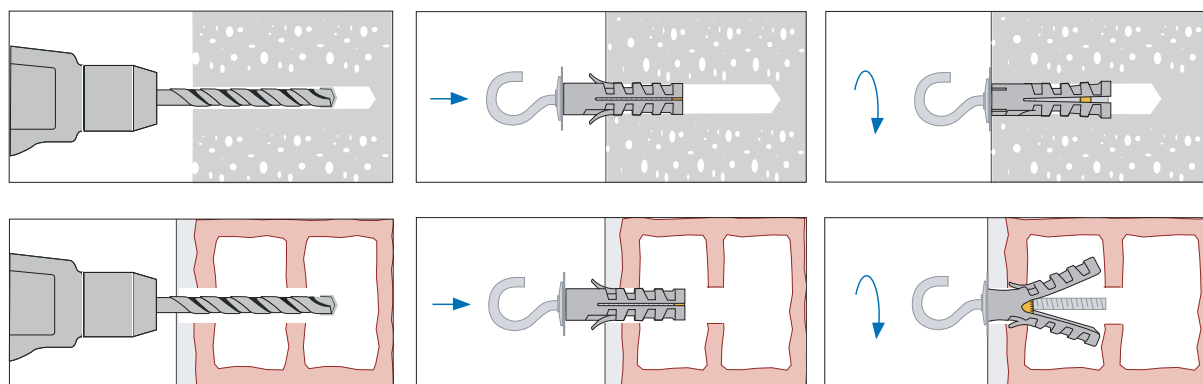
## TASSELLI UNIVERSALI TN

Designed for lightweight fixings, universal TN wall plugs feature a wide range of pre-assembled galvanized steel accessories. The particular shape of the plug, provided with side fins that prevent rotation, guarantees an effective expansion.

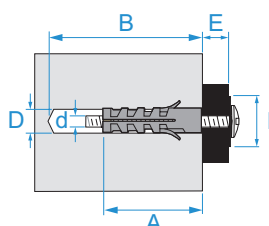
The brass cone that is drawn in by screwing the screw determines the expansion. The lengthwise openings allow for optimal adhesion even with hollow materials.



### FIXING STEPS

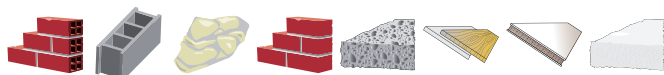


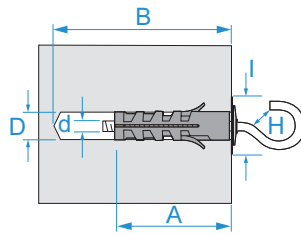
### UNIVERSAL WALL PLUGS - TN - WITH RAISED HEAD SCREW



**WALL PLUG TYPE:** TN universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

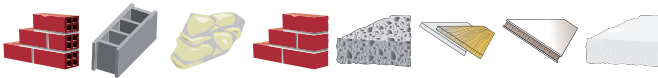
Code	D (mm)	A (mm)	B (mm)	d (mm)	I (mm)	E max (mm)	
F0311	9	40	50	M4	20	10	100/1000
F0312	12	45	55	M5	24	10	100/800



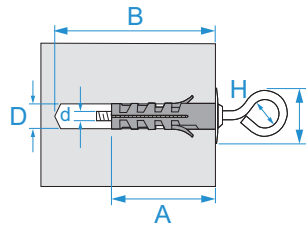
**UNIVERSAL WALL PLUGS - TN - WITH ROUND HOOK**


**WALL PLUG TYPE:** TN universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0331	9	40	50	M4	20	8	100/800
F0332	12	45	55	M5	24	8.8	50/500

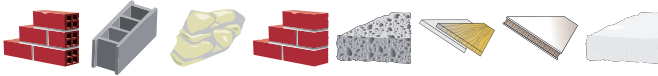


TN

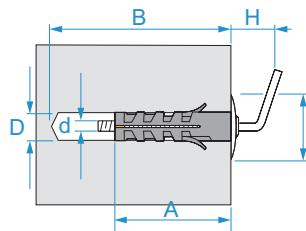
**UNIVERSAL WALL PLUGS - TN - WITH EYE HOOK**


**WALL PLUG TYPE:** TN universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0351	9	40	50	M4	20	13	100/800
F0352	12	45	55	M5	24	14	50/500

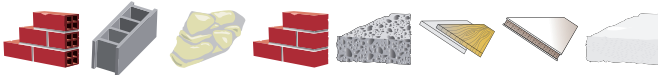


TN

**UNIVERSAL WALL PLUGS - TN - WITH SHORT HOOK**


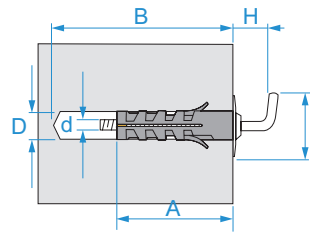
**WALL PLUG TYPE:** TN universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0361	9	40	50	M4	20	10	100/800
F0362	12	45	55	M5	24	12	100/800



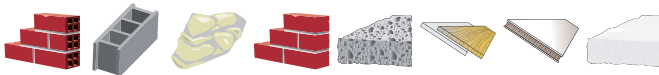
TN

### UNIVERSAL WALL PLUGS - TN - WITH L-HOOK



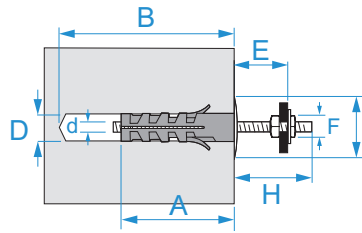
**WALL PLUG TYPE:** TN universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0341	9	40	50	M4	20	14	100/800
F0342	12	45	55	M5	24	16	100/800



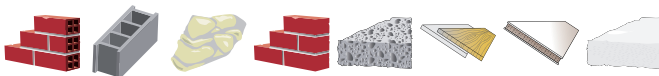
TN

### UNIVERSAL WALL PLUGS - TN - WITH DOUBLE NUT



**WALL PLUG TYPE:** TN universal wall plugs  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	E max (mm)	H (mm)	F (mm)	
F0381	9	40	50	M4	20	35	35	7	100/800
F0382	12	45	55	M5	24	40	40	8	50/400



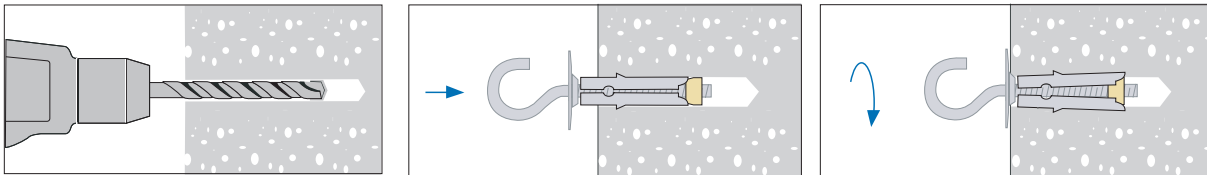
TN

## HEAVY DUTY TM ANCHORS

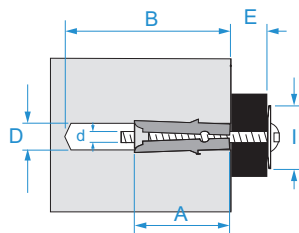
Designed for lightweight fixings, heavy duty TM anchors feature a wide range of pre-assembled galvanized steel accessories. The brass cone that is drawn in by screwing the screw determines the expansion of the anchor, while side fins prevent rotation. The shielding of the plug guarantees an effective expansion.



### FIXING STEPS



### HEAVY DUTY ANCHORS · TM · WITH RAISED HEAD SCREW

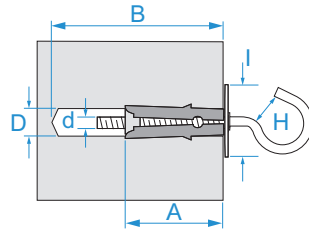


**WALL PLUG TYPE:** anchors TM  
**WALL PLUG MATERIAL:** galvanized steel  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d (mm)	l (mm)	E max (mm)	
F0411	8	40	50	M4	20	10	100/1000
F0412	9	45	55	M5	24	10	100/800



### HEAVY DUTY ANCHORS · TM · WITH ROUND HOOK



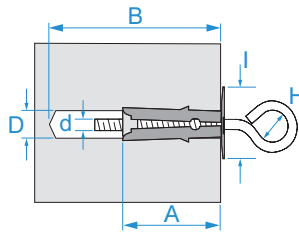
**WALL PLUG TYPE:** anchors TM  
**WALL PLUG MATERIAL:** galvanized steel  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0431	8	40	50	M4	20	8	100/800
F0432	9	45	55	M5	24	8.5	50/500



TM

### HEAVY DUTY ANCHORS · TM · WITH EYE HOOK



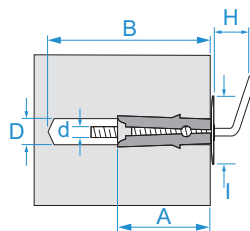
**WALL PLUG TYPE:** anchors TM  
**WALL PLUG MATERIAL:** galvanized steel  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0451	8	40	50	M4	20	13	100/800
F0452	9	45	55	M5	24	14	50/500



TM

### HEAVY DUTY ANCHORS · TM · WITH SHORT HOOK

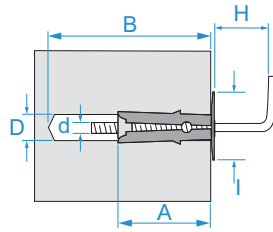


**WALL PLUG TYPE:** anchors TM  
**WALL PLUG MATERIAL:** galvanized steel  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0461	8	40	50	M4	20	9	100/800
F0462	9	45	55	M5	24	10	100/100

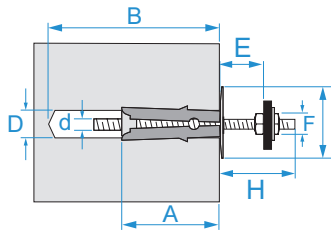


TM

**HEAVY DUTY ANCHORS · TM · WITH L-HOOK**


**WALL PLUG TYPE:** anchors TM  
**WALL PLUG MATERIAL:** galvanized steel  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	H (mm)	
F0441	8	40	50	M4	20	12	100/800
F0442	9	45	55	M5	24	15	100/800


**HEAVY DUTY ANCHORS · TM · WITH DOUBLE NUT**


**WALL PLUG TYPE:** anchors TM  
**WALL PLUG MATERIAL:** galvanized steel  
**CONE MATERIAL:** brass  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	l (mm)	E max (mm)	H (mm)	F (mm)	
F0481	8	40	50	M4	20	25	35	7	100/800
F0482	9	45	55	M5	24	30	40	8	50/400





## TNV WALL PLUGS FOR HOLLOW MATERIALS

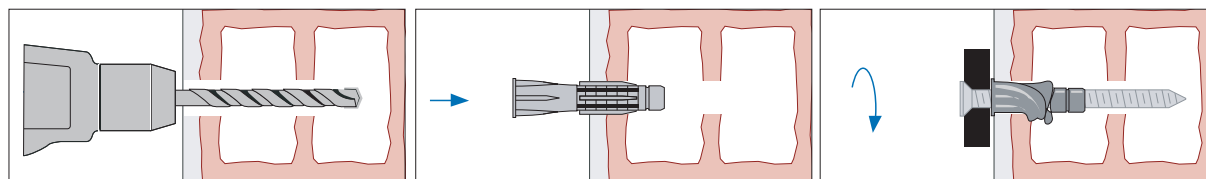
TNV wall plugs for hollow materials are specially designed to guarantee an excellent anchorage in the dry spaces of hollow materials.

The shape of the wall plug produces a special deformation that ensures a perfect hold.

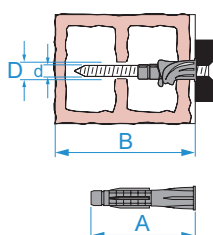
The lateral fins and the special collar prevent the plug from rotating on its own axis.



### FIXING STEPS



### WALL PLUGS FOR HOLLOW MATERIALS · TNV · NYLON WALL PLUG



**WALL PLUG TYPE:** TNV wall plugs for hollow materials

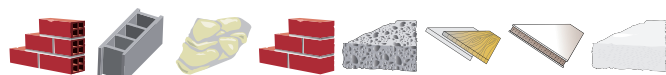
**WALL PLUG MATERIAL:** high resistance polyamide

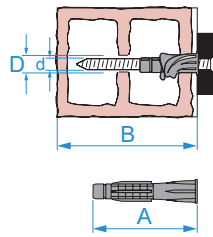
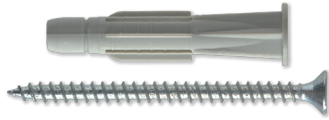
**WALL PLUG COLOR:** grey

**SCREW MATERIAL:** galvanized steel

**INSTALLATION TYPE:** non-through

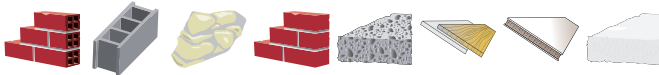
Code	D (mm)	A (mm)	B (mm)	d (mm)	
F0101	6	36	55	3,5 ÷ 4	100/3600
F0102	8	50	65	4,5 ÷ 5	100/2400
F0103	10	60	75	5	100/1200



**WALL PLUGS FOR HOLLOW MATERIALS - TNV - WITH FLAT COUNTERSUNK HEAD PZ SCREW**


**WALL PLUG TYPE:** TNV wall plugs for hollow materials  
**WALL PLUG MATERIAL:** high resistance polyamide  
**WALL PLUG COLOR:** grey  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

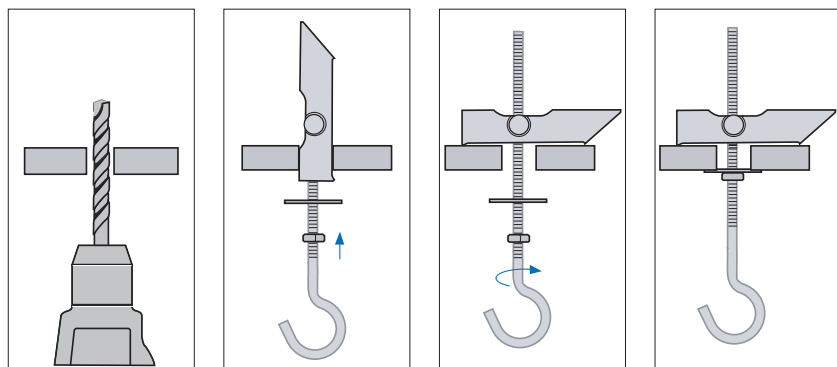
Code	D (mm)	A (mm)	B (mm)	d x C (mm)	E (mm)	
F0111	6	36	55	3,5 x 50	5	100/2400
F0112	8	50	65	4,5 x 50	5	100/1200
F0113	10	60	75	5 x 70	5	100/900



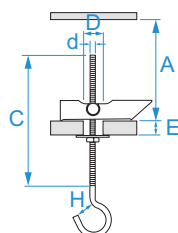
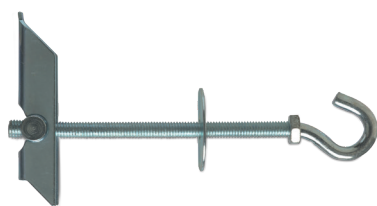
## AG GRAVITY TOGGLE BOLTS

AG graviti toggle anchor is equipped with a hinged bearing element that guarantees an excellent vertical hold. It is ideal for light fixings and perforated materials with shallow technical cavities. The threaded rod allows for depth adjustment, balancing any differences in the walls' thickness. The unique mechanism with the hinged bearing element prevents accidental release.

### FIXING STEPS

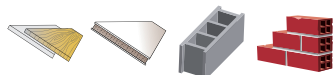


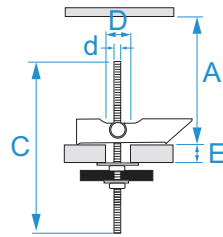
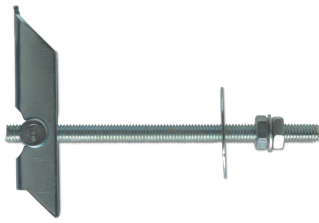
### GRAVITY TOGGLE BOLTS · AG · WITH ROUND HOOK



**WALL PLUG TYPE:** AG gravity toggle bolts  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** through

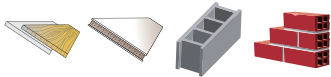
Code	D (mm)	d x C	E max (mm)	H (mm)	A min (mm)	
F1136	16	M6 x 70	31	12	67	100/100



**GRAVITY TOGGLE BOLTS · AG · WITH THREADED ROD AND DOUBLE NUT**


**WALL PLUG TYPE:** AG gravity toggle bolts  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** through

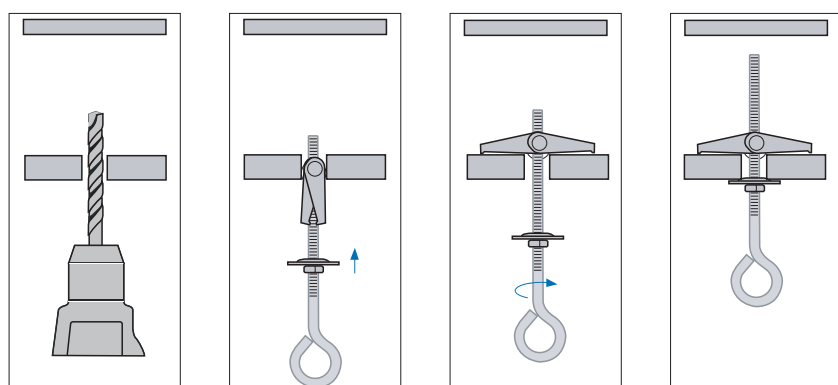
Code	D (mm)	d x C	E max (mm)	A min (mm)	
F1186	16	M6 x 100	31	67	100/100



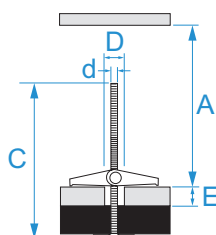
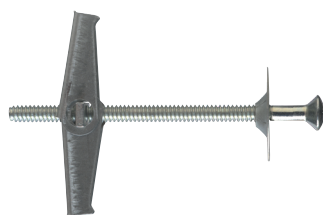
## AM SPING TOGGLES

The AM spring toggle is ideal for vertical light fixings and for perforated materials with shallow technical cavities. The threaded rod allows for depth adjustment, balancing any differences in the walls' thickness. The unique spring mechanism prevents accidental release.

### FIXING STEPS

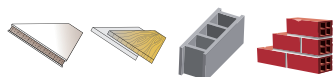


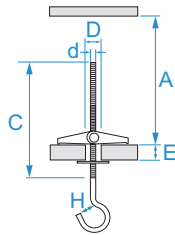
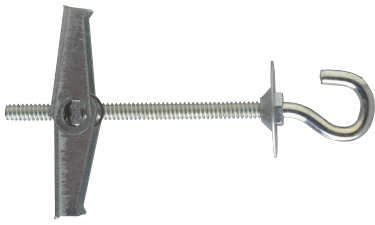
### SPING TOGGLES- AM · WITH COUNTERSUNK HEAD PH SCREW



**WALL PLUG TYPE:** AM spring toggles  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

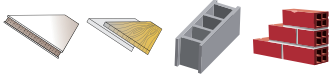
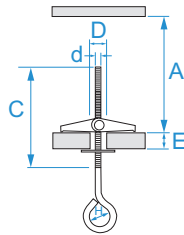
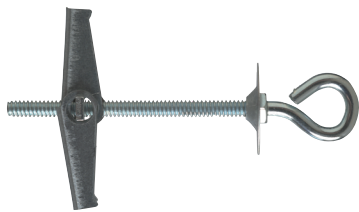
Code	D (mm)	d x C	E max (mm)	A min (mm)	
F1014	14	M4 x 90	30	34	100/100



**SPING TOGGLES- AM · WITH ROUND HOOK**


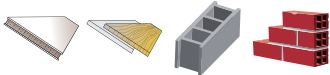
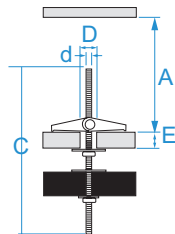
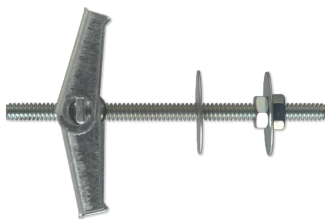
**WALL PLUG TYPE:** AM sping toggles  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	d x C	E max (mm)	H (mm)	A min (mm)	
F1034	14	M4 x 65	30	14	34	100/100


**SPING TOGGLES- AM · WITH EYE HOOK**


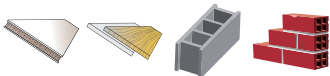
**WALL PLUG TYPE:** AM sping toggles  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	d x C	E max (mm)	H (mm)	A min (mm)	
F1054	14	M4 x 65	30	14	34	100/100


**SPING TOGGLES- AM · WITH THREADED ROD AND DOUBLE NUT**


**WALL PLUG TYPE:** AM sping toggles  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	d x C	E max (mm)	A min (mm)	
F1084	14	M4 x 95	30	34	100/100



## VP PLASTERBOARD ANCHOR

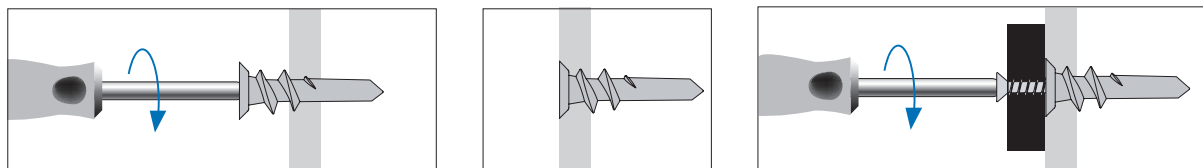
VP polyamide anchors are ideal for light fixings on plasterboard.

Thanks to their small size, there is no need for a large air space behind the plasterboard wall.

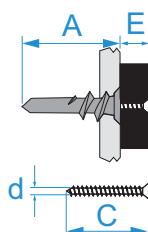
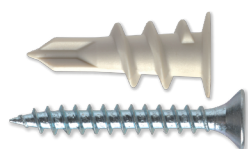
It is not suitable for fixings on fibre-cement panels and on plasterboard with synthetic coatings.

For applications on panels over 15 mm thick, you need to drill a pilot hole.

### FIXING STEPS



### PLASTERBOARD ANCHOR - VP - WITH FLAT COUNTERSUNK HEAD PZ SCREW



**WALL PLUG TYPE:** VP wall plugs for plasterboard

**WALL PLUG MATERIAL:** high resistance polyamide

**SCREW MATERIAL:** galvanized steel

**INSTALLATION TYPE:** non-through

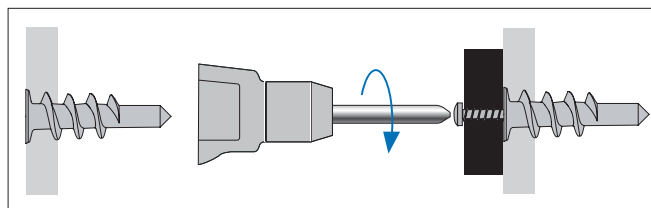
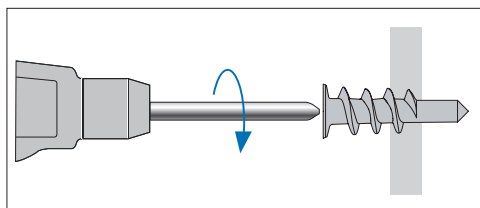
Code	A (mm)	d x C (mm)	E max (mm)	
F1311	33	4,5 x 35	12	100/2000



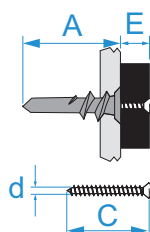
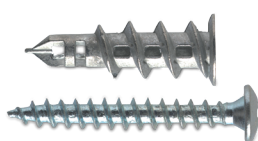
## VM PLASTERBOARD ANCHOR

The VM metal anchor is ideal for fixings on plasterboard panels and sheets. Thanks to its small size, there is no need for a large air space behind the plasterboard wall. It is not suitable for fixings on fibre-cement panels and on plasterboard with synthetic coatings. For applications on panels over 15 mm thick, you need to drill a pilot hole.

### FIXING STEPS



### PLASTERBOARD ANCHOR - VM - WITH FLAT HEAD PZ SCREW



**WALL PLUG TYPE:** VM wall plugs for plasterboard  
**WALL PLUG MATERIAL:** zinc alloy  
**SCREW MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	A (mm)	d x C (mm)	E max (mm)	
F1411	38	4,5 x 30	12	100/2000





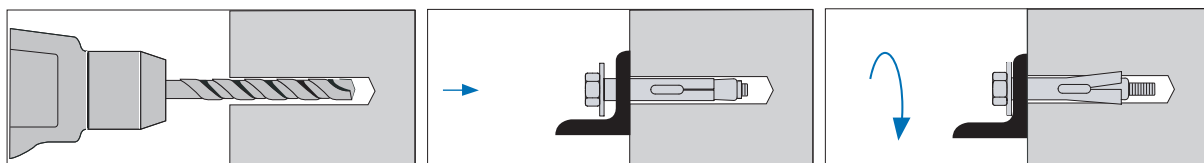
## TMP SLEEVE ANCHOR

Steel sleeve anchor for heavy duty through fixings. Designed for multiple uses, it offers high application speed and is particularly suitable for fixings in solid construction materials.

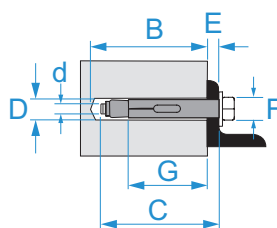
It is ideal for light carpentry, frames, profiles and doors. The large washer guarantees a better distribution of the tightening forces.

○ **TMP**

### FIXING STEPS



### SLEEVE ANCHORS · TMP · WITH HEXAGONAL HEAD 6.8 SCREW



**WALL PLUG TYPE:** anchors TMP  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** through

Code	D (mm)	B (mm)	d x C	E max (mm)	F (mm)	G min (mm)	
F3114	8	65	M6 x 65	15	10	40	100/1000
F3116	8	90	M6 x 90	40	10	40	150/900
F3126	10	65	M8 x 65	10	13	45	50/500
F3128	10	90	M8 x 90	35	13	45	50/300
F3137	12	75	M10 x 75	10	17	50	50/300
F3131	12	115	M10 x 115	50	17	50	25/150



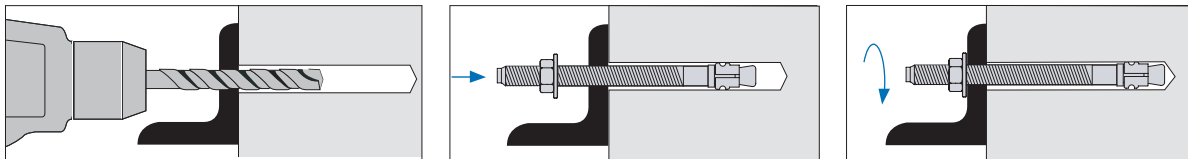
**TMP**

## TPP ANCHOR BOLTS

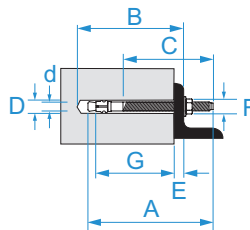
Steel anchor bolt for heavy duty through fixings. It comes with an expansion strap, a nut and a washer. The TPP anchor bolt is the ideal through fixing for metallic carpentry. The depth of insertion may vary depending on the needs. The long thread makes the TPP plug suitable for different thicknesses. The shape of the strap and the expansion area enable steady fixings on concrete.

### TPP

#### FIXING STEPS

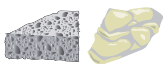


#### ANCHOR BOLTS · TPP · STEEL ANCHOR BOLT WITH NUT AND WASHER



**WALL PLUG TYPE:** anchors TPP  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** through

Code	D (mm)	A (mm)	B (mm)	d x C	F (mm)	E (mm)	G (mm)	
F8003	8	75	75	M8 x 45	13	9/22	48/35	50/50
F8004	8	100	100	M8 x 70	13	34/47	48/35	100/100
F8005	10	75	75	M10 x 35	17	3/11	50/42	100/100
F8006	10	90	90	M10 x 45	17	18/26	50/42	25/25
F8007	10	120	120	M10 x 80	17	48/56	50/42	25/25
F8008	12	95	95	M12 x 40	19	7/17	70/50	25/25
F8009	12	110	110	M12 x 55	19	12/32	70/50	50/50
F8010	12	140	140	M12 x 90	19	52/62	70/50	20/20
F8011	16	125	125	M16 x 75	24	6/26	87/64	25/25
F8012	16	150	150	M16 x 100	24	31/51	84/64	10/10



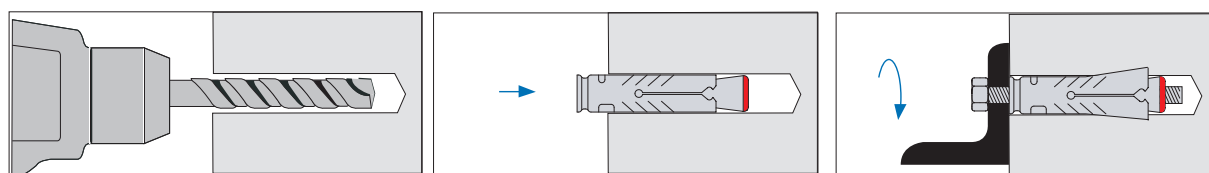
## TPP

## TMN HEAVY DUTY ANCHORS

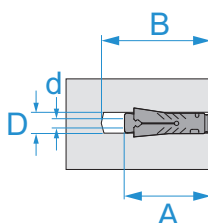
This 100% steel anchor has 3 expansion areas and comes with anti-rotation fins and gripping ribs to ensure perfect adherence to the walls of the hole. The conical nut is protected by a plastic cover to prevent the drilling debris from damaging the internal thread.

It comes complete with a wide range of screws in different shapes and sizes, which solve all fixing issues in any area of use, ensuring highly reliable performance.

### FIXING STEPS



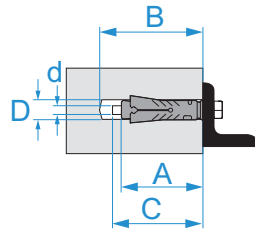
### HEAVY DUTY ANCHORS · TMN · STEEL ANCHOR



**WALL PLUG TYPE:** anchors TMN  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

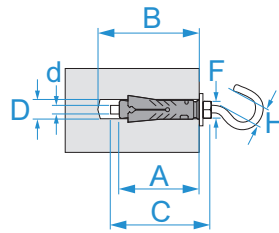
Code	D (mm)	A (mm)	B (mm)	d	
F2001	10	45	60	M6	100/100
F2002	12	50	65	M8	100/100
F2003	15	60	80	M10	50/50
F2004	18	74	100	M12	25/25



**HEAVY DUTY ANCHORS · TMN · WITH HEXAGONAL HEAD 8.8 SCREW**


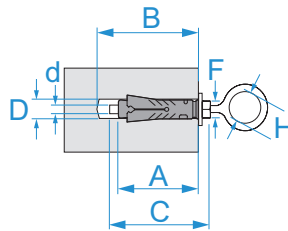
**WALL PLUG TYPE:** anchors TMN  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	E max (mm)	F (mm)	
F2011	10	45	60	M6 x 55	5	10	50/50
F2012	12	50	65	M8 x 60	5	13	50/50
F2013	15	60	90	M10 x 85	10	17	50/50
F2014	18	74	115	M12 x 105	20	19	15/15


**TMN**
**HEAVY DUTY ANCHORS · TMN · WITH 5.8 HOOK**


**WALL PLUG TYPE:** anchors TMN  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	H (mm)	F (mm)	
F2031	10	45	60	M6 x 55	8	10	50/50
F2032	12	50	65	M8 x 60	10	13	25/25
F2033	15	60	80	M10 x 73	12.5	17	15/15
F2034	18	74	100	M12 x 90	16	19	10/10

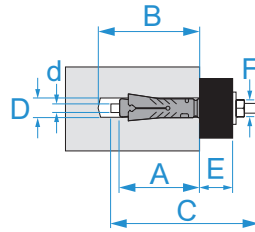

**TMN**
**HEAVY DUTY ANCHORS · TMN · WITH 5.8 EYE HOOK**


**WALL PLUG TYPE:** anchors TMN  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	H (mm)	F (mm)	
F2051	10	45	60	M6 x 55	10	10	50/50
F2052	12	50	65	M8 x 60	11	13	25/25
F2053	15	60	80	M10 x 73	14.5	17	20/20
F2054	18	74	100	M12 x 90	17	19	10/10


**TMN**

**HEAVY DUTY ANCHORS - TMN - WITH THREADED ROD**



**WALL PLUG TYPE:** anchors TMN  
**MATERIAL:** galvanized steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	E max (mm)	F (mm)	
F2081	10	45	65	M6 x 70	5	10	100/100
F2082	12	50	80	M8 x 85	10	13	25/25
F2083	15	60	100	M10 x 105	20	17	50/50
F2084	18	74	125	M12 x 130	25	19	25/25



**TMN**

## TPN HEAVY DUTY ANCHORS

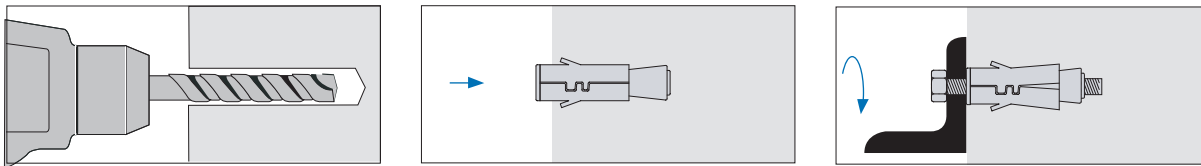
Steel anchors for heavy duty fixings. Featuring two steel elements and equipped with side fins, it is complemented by an expansion cone. It comes with a wide range of screws in different shapes and sizes, which solve all fixing issues in any area of use, ensuring highly reliable performance.

Preventing the anchor from turning during the expansion, the side fins guarantee a perfect hold.

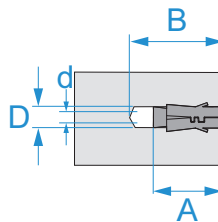
A plastic cover protects from dust the thread of the expansion cone.

TPN

### FIXING STEPS



### HEAVY DUTY ANCHORS · TPN · STEEL ANCHOR



**WALL PLUG TYPE:** anchors TPN

**MATERIAL:** steel

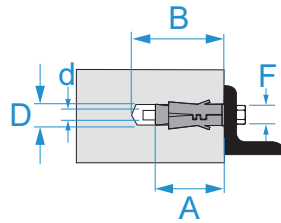
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d	
F7001	12	45	60	M6	100/100
F7002	14	50	65	M8	50/50
F7003	16	60	80	M10	50/50
F7004	20	75	95	M12	25/25



TPN

**HEAVY DUTY ANCHORS · TPN · WITH HEXAGONAL HEAD 8.8 SCREW AND LARGE WASHER**



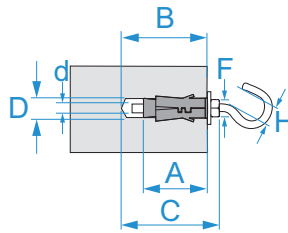
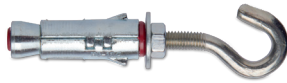
**WALL PLUG TYPE:** anchors TPN  
**MATERIAL:** steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	E max (mm)	F (mm)	
F7011	12	45	60	M6 x 50	10	10	50/50
F7012	14	50	65	M8 x 60	10	13	25/25
F7013	16	60	85	M10 x 80	20	17	20/20
F7014	20	75	95	M12 x 90	20	19	10/10



**TPN**

**HEAVY DUTY ANCHORS · TPN · WITH 5.8 HOOK AND LARGE WASHER**



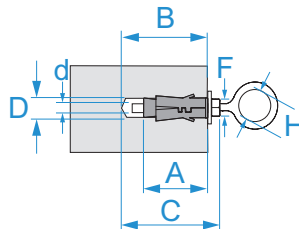
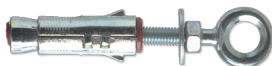
**WALL PLUG TYPE:** anchors TPN  
**MATERIAL:** steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	H (mm)	F (mm)	
F7031	12	45	60	M6 x 55	8	10	50/50
F7032	14	50	65	M8 x 60	10	13	25/25
F7033	16	60	80	M10 x 73	12.5	17	10/10
F7034	20	75	95	M12 x 90	16	19	5/5



**TPN**

**HEAVY DUTY ANCHORS · TPN · WITH 5.8 EYE HOOK AND LARGE WASHER**

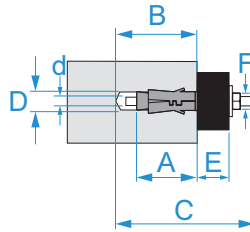


**WALL PLUG TYPE:** anchors TPN  
**MATERIAL:** steel  
**INSTALLATION TYPE:** non-through

Code	D (mm)	A (mm)	B (mm)	d x C	H (mm)	F (mm)	
F7051	12	45	60	M6 x 55	10	10	50/50
F7052	14	50	65	M8 x 60	11	13	25/25
F7053	16	60	80	M10 x 73	14.5	17	10/10
F7054	20	75	95	M12 x 90	17	19	5/5



**TPN**

**HEAVY DUTY ANCHORS - TPN - WITH 5.8 THREADED ROD AND LARGE WASHER**

**WALL PLUG TYPE:** anchors TPN

**MATERIAL:** steel

**INSTALLATION TYPE:** non-through

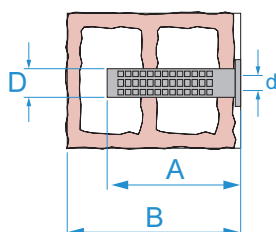
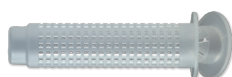
Code	D (mm)	A (mm)	B (mm)	d x C	E max (mm)	F (mm)	
<b>F7081</b>	12	45	60	M6 x 65	15	10	50/50
<b>F7082</b>	14	50	70	M8 x 75	20	13	25/25
<b>F7083</b>	16	60	80	M10 x 95	30	17	25/25
<b>F7084</b>	20	75	100	M12 x 115	35	19	15/15


**TPN**



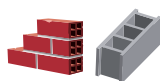
## ACCESSORIES FOR CHEMICAL FIXINGS

### ACCESSORIES FOR CHEMICAL FIXINGS - GN INJECTION ANCHOR SLEEVE

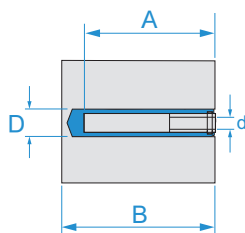


WALL PLUG TYPE: accessories for chemical anchors

Code	D (mm)	A (mm)	B (mm)	d	
F9401	12	50	55	M8	10/40
F9402	15	85	95	M10	10/40
F9403	15	130	140	M10	10/10
F9404	20	85	95	M12	10/10

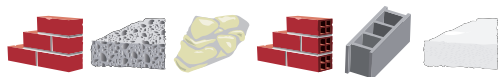


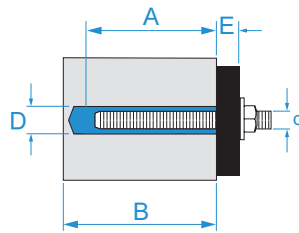
### ACCESSORIES FOR CHEMICAL FIXINGS - BFI INSIDE THREADED ANCHOR



WALL PLUG TYPE: accessories for chemical anchors

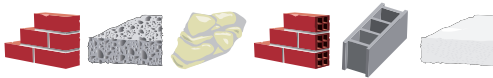
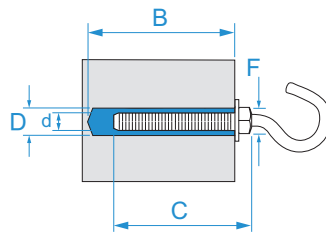
Code	D (mm)	A (mm)	B (mm)	d	
F9502	14	80	90	M8	100/100
F9503	16	80	90	M10	100/100
F9504	12	80	90	M12	50/50



**ACCESSORIES FOR CHEMICAL FIXINGS - BF 5.8 THREADED ROD**


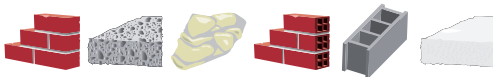
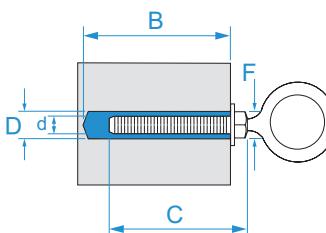
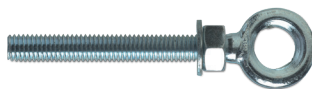
WALL PLUG TYPE: accessories for chemical anchors

Code	D (mm)	B (mm)	d x C	E max (mm)	F (mm)	
F9082	10	80	M8 x 100	10	13	10/10
F9084	12	90	M10 x 110	10	17	10/10
F9085	12	90	M10 x 135	35	17	10/10
F9087	14	110	M12 x 115	10	19	10/10


**ACCESSORIES FOR CHEMICAL FIXINGS - GFA 5.8 THREADED HOOK**


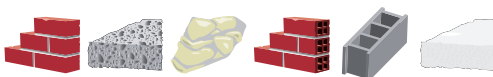
WALL PLUG TYPE: accessories for chemical anchors

Code	D (mm)	B (mm)	d x C	F (mm)	
F9032	10	65	M8 x 60	13	50/50
F9033	12	80	M10 x 73	17	25/25


**ACCESSORIES FOR CHEMICAL FIXINGS - GFO 5.8 THREADED EYE HOOK**


WALL PLUG TYPE: accessories for chemical anchors

Code	D (mm)	B (mm)	d x C	F (mm)	
F9052	10	65	M8 x 60	13	50/50
F9053	12	80	M10 x 73	17	25/25
F9054	14	95	M12 x 90	19	15/15



# MANUAL NAILING

FIXINGS

## IMPACT NAIL

**SUITABLE FOR:** fixing clips or pre-perforated steel bands without pre-drilling



Code	Length (cm)	Diameter (mm)	
F0531	17	4	200/2000

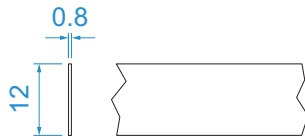
## IMPACT NAIL SETTING TOOL

**SUITABLE FOR:** the application of percussion nails directly into the concrete. Housing with nail holding ball. Robust and ergonomic bumper grip for maximum percussion safety. Head treated with special anti-splinter quenching



Code	Weight (g)	
F0521	520	5/5

## TEXTILE BAND

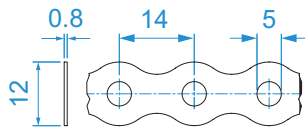


**MATERIAL:** polypropylene

**SUITABLE FOR:** fixing pipes on the floor or hanging from the ceiling

Code	Length (m)	Breaking load (daN)	
F0511	10	80	10/10

## PRE-PERFORATED METAL BAND



**MATERIAL:** metal

**SUITABLE FOR:** fixing pipes on the floor or hanging from the ceiling

Code	Length (m)	Breaking load (daN)	
F0501	10	200	10/10

## KIT: TEXTILE BANDS AND FIXING ACCESORIES WITH PLASTIC CASE



Code	Description	
F9904	textile bands and fixing accessories kit	1/1

Component	Description	Pieces
F0511	15x0.8 mm textile band	10
F0531	17 mm steel impact nails	1000
1716	Hammer (300 g)	1
1880	Shockproof plastic box	1
F0521	Impact nail setting tool	1

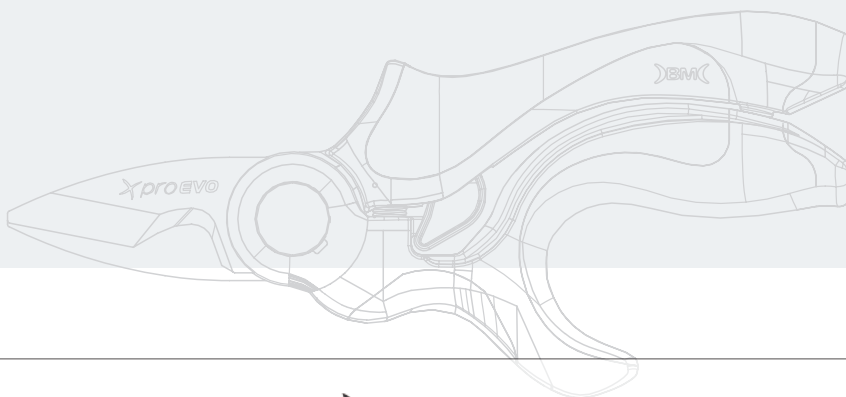




# TOOLS

SCISSORS	pag. 350
CUTTING TOOLS	pag. 353
SCREWDRIVERS	pag. 356
VOLTAGE TESTER	pag. 363
HIGH INSULATION PLIERS	pag. 364
DRILLING TOOLS	pag. 367
WRENCHES	pag. 371
HAMMERS	pag. 375
SUCTION LIFTER	pag. 376
MEASURING TOOLS	pag. 377
TOOL CASES	pag. 380

# X-PRO EVO SCISSORS



The X-PRO EVO scissors come with an innovative design, featuring lines and volumes that perfectly follow the hand's anatomy and posture, ensuring a better grip and greater comfort while cutting.

## X-PRO EVO

Body made of bi-component material that combines a soft touch material and a non-slip surface for a comfortable and safe grip

Rugged handle with steel blades running through it all its length

The convenient closing clip can be released with a single gesture

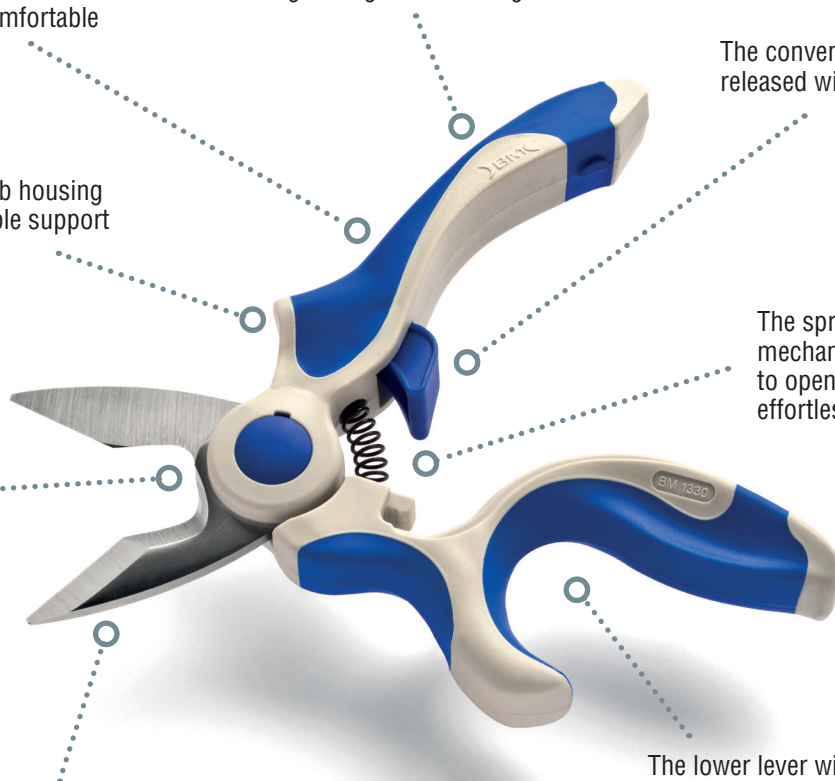
The upper lever with thumb housing makes for more comfortable support

The spring opening mechanism allows you to open the scissors effortlessly

Special profile suitable for cutting and stripping cables. Cutting up to 50 mm<sup>2</sup>

Antiskid micro-serrated stainless steel blades

The lower lever with housing for the forefinger and open eyelet is comfortable and fits hands of different sizes



Safety case with adjustable clip for fastening to the belt



Ergonomic handle, ideal for extended use without fatigue



**SCISSORS · X-PRO EVO**



- innovative design with lines and volumes that ensure excellent ergonomics.
- thanks to the special open loop shape of the lower level it fits into hands of different sizes
- body in bi-component material that alternates soft touch material with a non-slip surface for a comfortable and safe grip, which allows cutting with less effort
- sturdy handle, the steel blades run along its entire length
- the spring opening system allows the scissors to be opened effortlessly for effective stripping and cutting of the cables. The blade locking device is released with a single gesture
- antiskid micro-serrated blades
- blades with variable geometry profiles enables you to cut and strip copper and aluminium cables up to 50 mm<sup>2</sup>

**HANDLE MATERIAL:** bi-component plastic material

**BLADE MATERIAL:** stainless steel

Code	With safety case	Length (mm)	Weight (g)	
1330	√	160	125	1/12



**SCISSORS · X-PRO**



- body in bi-component material that alternates soft touch material with a non-slip surface for a comfortable and safe grip, which allows cutting with less effort
- the spring opening system allows the scissors to be opened effortlessly for effective stripping and cutting of the cables. The blade locking device is released with a single gesture
- antiskid micro-serrated blades

**HANDLE MATERIAL:** bi-component plastic material

**BLADE MATERIAL:** stainless steel

Code	With safety case	Length (mm)	Weight (g)	
1325	√	153	98	1/12



**SCISSORS · MAXI GRIP**



- innovative design with flat top eyelet that guarantees a greater cutting lever
- antiskid micro-serrated blades
- measuring notches in cm on the handle

**HANDLE MATERIAL:** bi-component plastic material

**BLADE MATERIAL:** 57-60 HRC hardened stainless steel

Code	With safety case	Length (mm)	Weight (g)	
1310		151	75	1/12
1311	√	151	111	1/20

**SCISSORS · EXTRA LIGHT**



- compact structure with light and universal structure
- antiskid micro-serrated blades
- anti loosening pin

**HANDLE MATERIAL:** plastic material

**BLADE MATERIAL:** 57-60 HRC hardened stainless steel

Code	Length (mm)	Weight (g)	
1332	143	55	1/24




## SCISSORS - HEAVY DUTY



- robust design
- antiskid micro-serrated blades
- anti loosening pin
- wire-stripping nick

**HANDLE MATERIAL:** bi-component plastic material

**BLADE MATERIAL:** 57-60 HRC hardened stainless steel

Code	With safety case	Length (mm)	Weight (g)	
1320		145	80	1/12
1321	√	145	116	1/20


## UNIVERSAL SHEARS



- the spring opening system allows the scissors to be opened effortlessly for effective stripping and cutting of the cables. The blade locking device is released with a single gesture
- antiskid micro-serrated blades
- anti loosening pin
- integrated wire stripper for sections of 1, 1.5 and 2 mm<sup>2</sup>. To carry out the operation, simply insert the wire in the corresponding section and press the handle

**HANDLE MATERIAL:** bi-component plastic material

**BLADE MATERIAL:** 52-54 HRC hardened stainless steel

Code	Length (mm)	Weight (g)	
1340	200	164	1/12

## CABLE CUTTER



- for copper and aluminum cables
- robust and ergonomic design
- adjustable anti loosening pin
- blade locking device
- return spring

**HANDLE MATERIAL:** bi-component plastic material

**BLADE MATERIAL:** 52-54 HRC hardened stainless steel

Code	Max cable section (mm <sup>2</sup> )	Length (mm)	Weight (g)	
1335	35	183	149	1/12

## CABLE STRIPPER WITH KNIFE



- transverse and longitudinal cut
- adjustable cut depth
- provided with a spare blade in the handle

**BODY MATERIAL:** in shockproof plastic

**BLADE MATERIAL:** steel

Code	Description	Diameter (mm)	Weight (g)	
1350	cable stripper with knife	8 - 28	90	1/10
1354	spare blade		2	10/10

## PIPE CUTTER · DUCT CUTTER



- versatile ratchet tool for cutting plastic pipes (max 42 mm) and ducts (max 30x15 mm) as PVC, PP and PE
- the resin support, inserted in to the tool jaws, is provided with cutting marks with angles of 45°, 90° and 135°

Code	Length (mm)	Weight (g)	
1136	240	450	1/1

## CABLE STRIPPER



- transverse and longitudinal cut
- adjustable cut depth
- provided with a spare blade in the handle

**BODY MATERIAL:** in shockproof plastic

**BLADE MATERIAL:** steel

Code	Description	Diameter (mm)	Weight (g)	
1351	cable stripper	4 - 28	80	1/10
1353	cable stripper	28 - 35	90	1/10
1354	spare blade		2	10/10



## CABLE STRIPPER KNIFE



- retractable steel hook knife

**BODY MATERIAL:** in shockproof plastic

**BLADE MATERIAL:** steel

**BLADE MATERIAL:** steel

Code	Description	Diameter (mm)	Weight (g)	
1355	cable stripper knife	4 - 28	70	1/2
1356	spare blade	4 - 28	2	10/10
1357	spare hookblade		10	10/10

## AUTOMATIC WIRE STRIPPER



- automatic stripping without adjustment of the sections
- integrated cable cutter for cables up to Ø 3 mm
- suitable for flat cables (0.75 - 1.5 mm<sup>2</sup>)

**BODY MATERIAL:** in shockproof plastic

Code	Flexible conductor section (mm <sup>2</sup> )	Rigid conductor section (mm <sup>2</sup> )	Weight (g)	
1371	0,5 - 16	0,5 - 10	205	1/6

## AUTOMATIC WIRE STRIPPER



- automatic stripping without adjustment of the sections
- integrated cable cutter for cables up to Ø 2 mm
- stripping length adjustable from 5 to 12 mm

**BODY MATERIAL:** in shockproof plastic

Code	Flexible conductor section (mm <sup>2</sup> )	Rigid conductor section (mm <sup>2</sup> )	Weight (g)	
1370	0,2 - 6	0,2 - 6	105	1/6

## WIRE STRIPPER FOR COAXIAL CABLES



- automatic stripping without adjustment of the sections
- integrated cable cutter

**BODY MATERIAL:** in shockproof plastic

Code	Diameter (mm)	Weight (g)	
1372	4,8 - 7,5	55	1/12

## AUTOMATIC WIRE STRIPPER PLIERS



It works by simply inserting the wire in the proper section and pressing the handle. The length of the removable part can be adjusted by means of a slat.

Code	Flexible conductor section (mm <sup>2</sup> )	Cable type	
544	0,5 - 6	one-pole PVC	1/1

## DOUBLE BLADE CUTTER



- reclosable knife equipped with two easily interchangeable blades: cutter and cutting blade 60 mm long
- fast switching from one blade to the other
- safety lock for opening and closing the blades
- rear hook for fastening to the belt and hanging case with blade holder pocket
- supplied with five spare blades

**BODY MATERIAL:** in aluminium

Code	Description	Length (mm)	Weight (g)	
1363	double blade knife	110	216	1/1
1364	spare blade		4	5/5

## CUTTER



**BLADE MATERIAL:** steel

Code	Description	Length (mm)	Weight (g)	
1360	cutter	170	80	1/24
1361	spare blade		6	10/10

## POCKET HACKSAW



- hacksaw with replaceable blade
- supplied with metal blade

Code	Description	Length (mm)	Weight (g)	
1341	pocket hacksaw	150	130	1/5
1342	spare blade		3	12/144

## HACKSAW



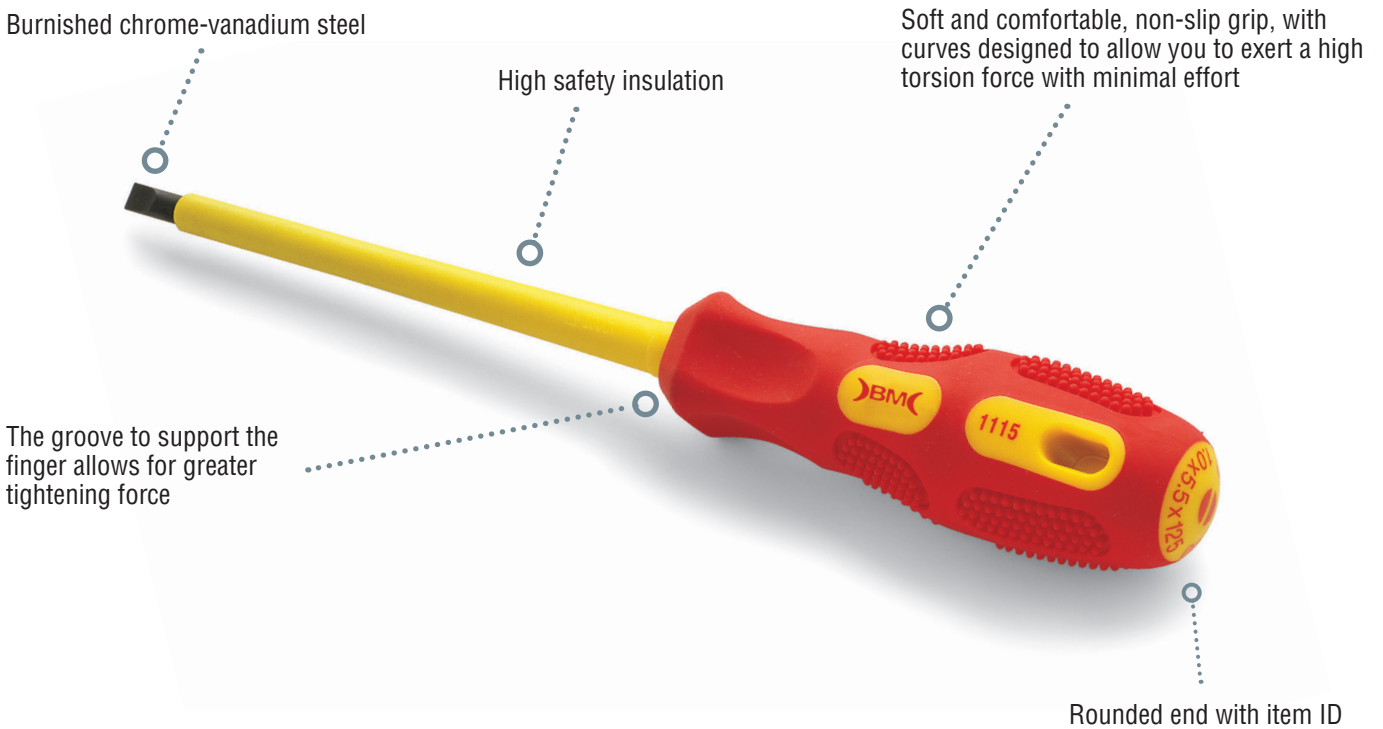
- hacksaw with replaceable blade
- supplied with Bimetall BAHCO blade for steel
- adjustable blade in 6 different cutting positions

Code	Description	Length (mm)	Weight (g)	
1345	pocket hacksaw	300	560	1/8
1344	spare blade		15	100/100

# INSULATED SCREWDRIVERS

To ensure maximum safety, BM screwdrivers for electricians have passed numerous tests and comply with the EN 60900 standard for use with voltage up to 1000 V.

Thanks to the use of chromium-vanadium steel with induction hardening and opaque surface blueing, BM screwdrivers offer high performance and last for a long time. The handle is made of bi-component reinforced elastomer, a non-sticky and corrosion resistant material.



⚡ 1 000 V EN 60900:2004  
(IEC 60900:2004)



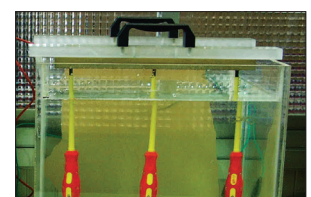
High temperature test, flame retardant test.



Low temperature test.



Individual tension tests.



Dielectric water bath test at 10000 V.

**INSULATED SCREWDRIVERS - SLOTTED**


**TIP MATERIAL:** burnished chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	⌀ (mm)	— (mm)	— (mm)	⊞
1112	2,5	75	145	1/12
1113	3	100	170	1/12
1114	4	100	200	1/12
1115	5,5	125	225	1/12
1116	6,5	150	260	1/12
1118	8	175	285	1/6


**1000 V**
**INSULATED SCREWDRIVERS - PHILLIPS HEAD (PH)**


**TIP MATERIAL:** burnished chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	⊕ (mm)	— (mm)	— (mm)	⊞
1120	0	60	130	1/12
1121	1	80	180	1/12
1122	2	100	210	1/12
1123	3	150	272	1/6


**1000 V**
**INSULATED SCREWDRIVERS - POZIDRIV HEAD (PZ)**


**TIP MATERIAL:** burnished chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	⊕ (mm)	— (mm)	— (mm)	⊞
1130	0	60	130	1/12
1131	1	80	180	1/12
1132	2	100	210	1/12
1133	3	150	272	1/6


**1000 V**
**INSULATED SCREWDRIVERS - NUT DRIVERS**


**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	⊙ (mm)	— (mm)	— (mm)	⊞
1151	7	125	235	1/12
1152	8	125	235	1/12
1153	9	125	235	1/12
1154	10	125	235	1/12
1155	11	125	235	1/12
1156	12	125	235	1/12
1157	13	125	235	1/12


**1000 V**

**INSULATED SCREWDRIVERS - 5 PCS SET (SLOTTED + PH)**



**TIP MATERIAL:** burnished chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code		
1195	1/6	
Component	⌀ (mm)	⊕ (mm)
1112	2,5	75
1114	4	100
1116	6,5	150
1121		1 80
1122		2 100



**1000 V**

**INSULATED SCREWDRIVERS - 7 PCS SET (SLOTTED + PH)**



**TIP MATERIAL:** burnished chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code		
1197	1/6	
Component	⌀ (mm)	⊕ (mm)
1112	2,5	75
1113	3	100
1115	5,5	125
1116	6,5	150
1120		0 60
1121		1 80
1122		2 100



**1000 V**

**INSULATED SCREWDRIVERS - 4 PCS SET (NUT DRIVERS)**



**HANDLE MATERIAL:** bi-component reinforced elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code		
1194	1/1	
Component	⊙ (mm)	⊕ (mm)
1151	7	125
1152	8	125
1154	10	125
1157	13	125



**1000 V**

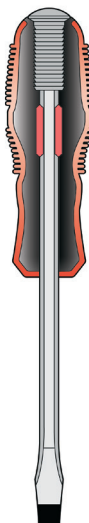
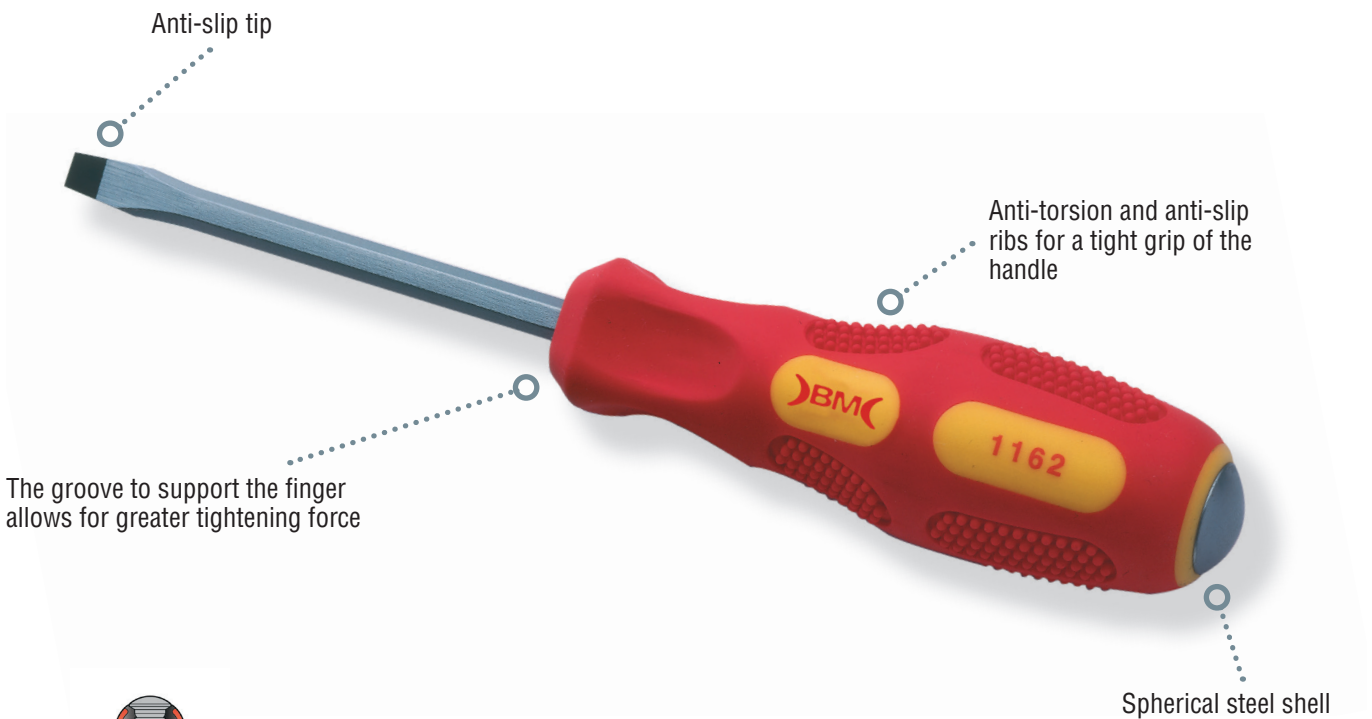
## REINFORCED SCREWDRIVERS

Made from a single piece of chrome vanadium chromium-plated steel, the shaft transfers the impact force from the spherical shell to the tip without straining the handle. Plus, thanks to its special design, it absorbs the vibrations produced by the impact, eliminating discomfort and stress on the hand.

Anti-torsion and anti-slip ribs for a tight grip of the handle.

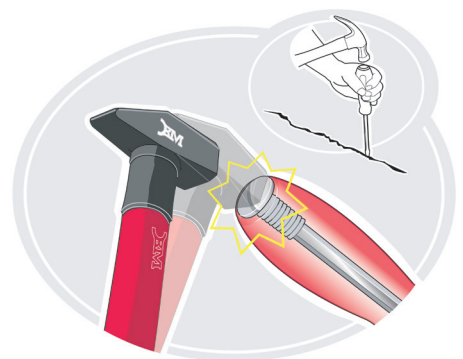
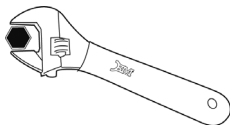
The hexagonal shape of the shaft allows users to increase the torsion using a wrench.

The innovative design of the bi-component elastomer handle ensures a soft and comfortable anti-slip grip.



One piece chrome vanadium chromium-plated steel shaft

The hexagonal shape of the shaft allows users to increase the torsion using a wrench





**REINFORCED SCREWDRIVERS - SLOTTED**



**TIP MATERIAL:** chrome-vanadium chromium-plated steel  
**HANDLE MATERIAL:** bi-component elastomer

Code	⊖ (mm)	⊖ (mm)	⊖ (mm)	📦
1161	5	75	175	1/12
1162	6	100	210	1/12
1163	8	150	272	1/6

**REINFORCED SCREWDRIVERS - PHILLIPS HEAD (PH)**



**TIP MATERIAL:** chrome-vanadium chromium-plated steel  
**HANDLE MATERIAL:** bi-component elastomer

Code	⊕ (mm)	⊕ (mm)	📦
1166	1	75	175
1167	2	100	210

**REINFORCED SCREWDRIVERS - POZIDRIV HEAD (PZ)**



**TIP MATERIAL:** chrome-vanadium chromium-plated steel  
**HANDLE MATERIAL:** bi-component elastomer

Code	⊕ (mm)	⊕ (mm)	📦
1168	1	75	175
1169	2	100	210

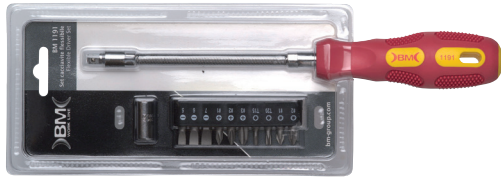
**REINFORCED SCREWDRIVERS - 7 PCS SET (SLOTTED + PH + PZ)**



**TIP MATERIAL:** chrome-vanadium chromium-plated steel  
**HANDLE MATERIAL:** bi-component elastomer

Code	📦
1190	1/1

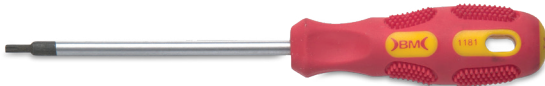
Component	⊖ (mm)	⊕	⊕ (mm)
1161	5		75
1162	6		100
1163	8		150
1166		1	75
1167		2	100
1168			1
1169			2

**FLEXIBLE DRIVER SET**


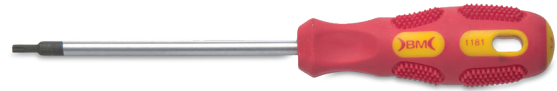
12 pieces set including:

- flexible driver
- 1/4" bit holder
- slotted bits: 5 - 6 - 7 mm
- Phillips bits: N° 1 - N° 2 - N° 3
- Pozidriv bits: N° 1 - N° 2
- Torx bits: T15 - T20

Code				
	(mm)	(mm)		
1191	150	270		1/6

**SCREWDRIVERS · TORX**


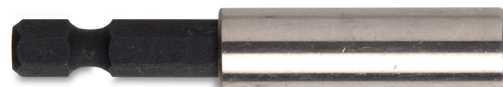
Code					
	(mm)	(mm)			
1181	T8	75	145	1/12	
1182	T9	75	145	1/12	
1183	T10	100	200	1/12	
1184	T15	100	200	1/12	
1185	T20	100	200	1/12	

**SCREWDRIVERS · 5 PCS SET (TORX)**


Code				
		(mm)	(mm)	
1196			1/12	
Component				
		(mm)	(mm)	
1181	T8	75	145	
1182	T9	75	145	
1183	T10	100	200	
1184	T15	100	200	
1185	T20	100	200	

**RETAINING SCREWDRIVER**


Code				
	(mm)	(mm)	(mm)	
1171	4	125	220	1/12

**MAGNETIC BIT-HOLDER 1/4"**


- chrome-vanadium steel

Code	Length (mm)	
11401	60	1/10

## 1/4" BITS FOR PHILLIPS SCREWS



**TIP MATERIAL:** chrome-vanadium steel

Code	⊕	Length (mm)	
11402	1	100	1/10
11403	1	150	1/10
11404	2	100	1/10
11405	2	150	1/10

## 1/4" BIT SET - 7 PCS



- 1/4" magnetic screwdriver holder
- Slotted bits: 5,5 x 0,8 - 7 x 1,2
- Phillips bits: N° 1 - N° 2
- Pozidriv bits: N° 1 - N° 2

Code	Weight (g)	
1140	95	1/10

## 1/4" BITS FOR POZIDRIV SCREWS



**TIP MATERIAL:** chrome-vanadium steel

Code	⊕	Length (mm)	
11406	1	100	1/10
11407	1	150	1/10
11408	2	100	1/10
11409	2	150	1/10

**VOLTAGE TESTER 3X60**


- protection resistance inserted in the bulb
- light (only 17g)

**HANDLE MATERIAL:** transparent plastic

**HARDNESS:** 52-55 HRC

**SURFACE TREATMENT:** nickel

Code	Voltage (VAC)	⌀ (mm)	⌀ (mm)	⌀ (mm)	
1141	120-250	3	60	140	1/10


**VOLTAGE TESTER 3.5X100**


- protection resistance inserted in the bulb
- light (only 30g)

**HANDLE MATERIAL:** transparent plastic

**HARDNESS:** 52-55 HRC

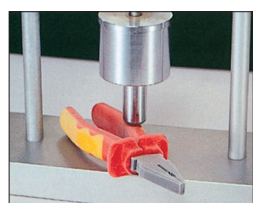
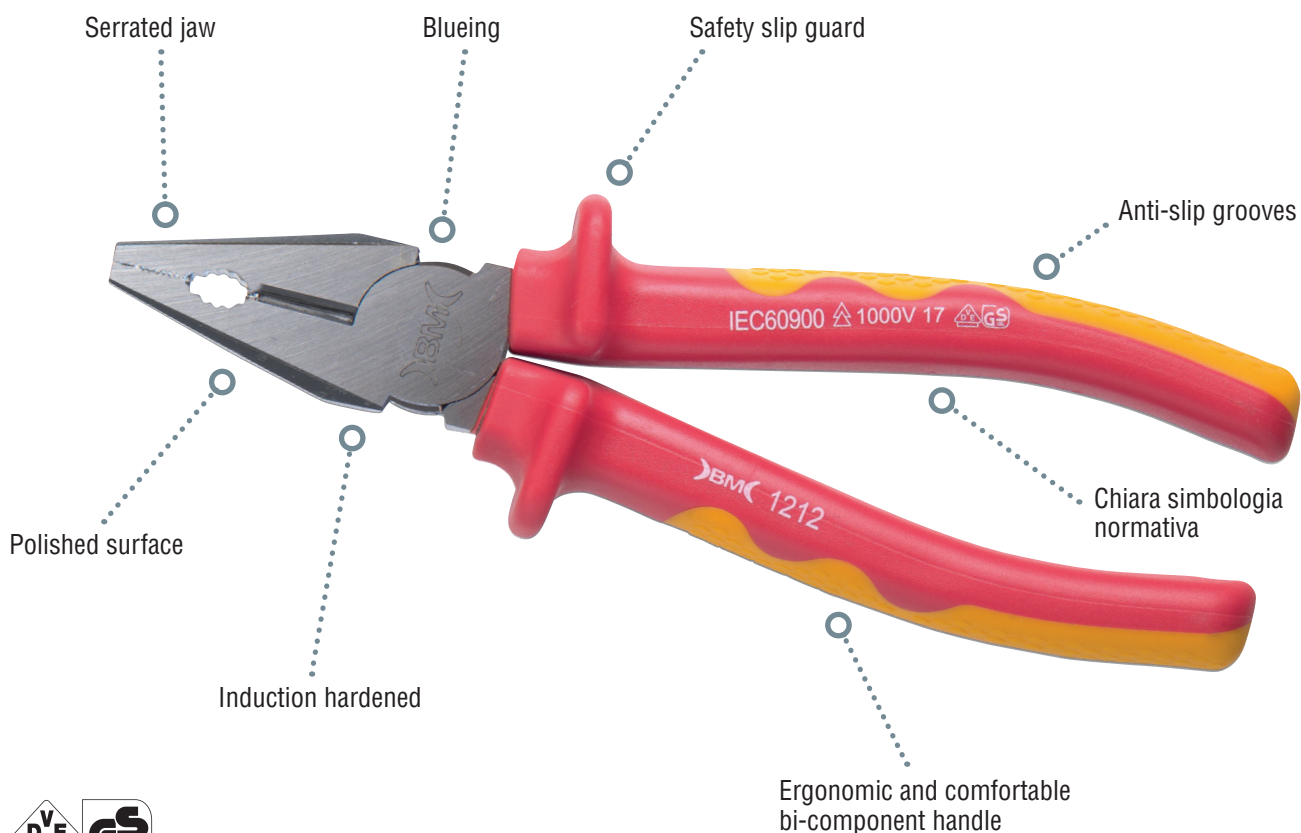
**SURFACE TREATMENT:** nickel

Code	Voltage (VAC)	⌀ (mm)	⌀ (mm)	⌀ (mm)	
1142	120-250	3,5	100	190	1/10



## HIGH INSULATION PLIERS

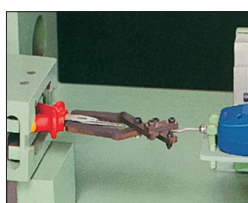
BM's high insulation pliers are manufactured and tested one by one at 10,000 V in conformity to EN 60900 for use with voltage up to 1,000 V approx. The steel used is high quality chromium-vanadium, with induction hardening treatment and opaque surface blueing, thus ensuring that BM's pliers achieve high performance and last for a long time. The pliers have an innovative design, which ensures a comfortable and ergonomic anti-slip grip. The bi-component plastic used for the handles is not sticky, it is corrosion resistant and ensures a firm grip even in heavy duty applications.



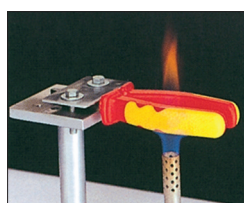
Low temperature test.



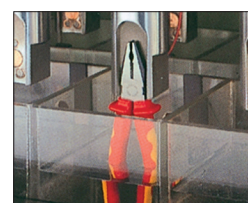
Indentation test.



Handles mechanical resistance test.



High temperature test, flame retardant test.



Dielectric water bath test to 10000 V.

**INSULATED PLIERS · COMBINATION**


**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1211	160	230	1/6
1212	180	290	1/6
1213	200	350	1/6


**1000 V**
**INSULATED PLIERS · SIDE CUTTERS**


**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1220	140	148	1/4
1221	160	220	1/6
1222	180	300	1/6


**1000 V**
**INSULATED PLIERS · LONG CHAIN NOSE**


**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1232	160	150	1/4
1233	200	210	1/6


**1000 V**
**INSULATED PLIERS · LONG CHAIN NOSE 45°**


**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1243	200	200	1/6


**1000 V**

**INSULATED PLIERS · FLAT NOSE**



**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1251	160	170	1/6



**1000 V**

**INSULATED PLIERS · WIRE STRIPPING**



**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1261	160	190	1/6



**1000 V**

**INSULATED PLIERS · WATER PUMP**



**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	Max opening (mm)	
1273•	175	220	25	1/6
1274	250	400	35	1/6



• No VDE

**1000 V**

**INSULATED PLIERS · HEAVY DUTY SIDE CUTTERS**



**TIP MATERIAL:** chrome-vanadium steel  
**HANDLE MATERIAL:** bi-component elastomer  
**ACCORDING TO STD.:** EN 60900:2004 (IEC 60900:2004)

Code	Length (mm)	Weight (g)	
1225	200	334	1/4



**1000 V**

**DRILL BITS · DIN 8039 MASONRY**

**BODY MATERIAL:** carbide 1600 HVA

Code	Ø (mm)	 (mm)	 (mm)	
1911	4	40	75	1/5
1912	5	40	85	1/5
1913	6	55	100	1/5
1914	8	70	120	1/5
1915	10	70	120	1/5
1916	12	90	150	1/5

**DRILL BITS · SDS-PLUS HAMMER**


- SDS-PLUS drill bits
- for hammer drills
- with 4 spirals for faster feed and more debris discharge

**BODY MATERIAL:** 50-55 HRC steel

**HEAD MATERIAL:** 1650 HVA carbide metal

Code	Ø (mm)	 (mm)	 (mm)	
1921	5	50	110	1/1
1922	6	50	110	1/1
1923	6	100	160	1/1
1924	8	50	110	1/1
1925	8	100	160	1/1
1926	10	100	160	1/1
19261	10	400	460	1/1
19262	10	550	600	1/1
1927	12	100	160	1/1
19271	12	400	460	1/1
19272	12	550	600	1/1

**DRILL BITS · 5 PCS SET · DIN 8039 MASONRY**

**SET PIECES:** 5

Code	Ø (mm)	Weight (g)	
1919	4 - 5 - 6 - 8 - 10	125	1/1

**DRILL BITS · 6 PCS SET · SDS-PLUS HAMMER**


- for hammer drills

**SET PIECES:** 6

Code	Ø (mm)	Weight (g)	
1929	5 - 6 x 110 - 6 - 8 - 10 - 12 x 160	355	1/1

**DRILL BITS · 19 PCS SET · HSS DIN 338 ROLLED TWIST**


- complete with saw holder, pilot tips and saw holder adapter

**HEAD MATERIAL:** HSS

**SET PIECES:** 19

Code	Ø (mm)	Weight (g)	
1949	1 ÷ 10 x 0.5	443	1/1



**DRILL BITS · 19 PCS SET · HSS-TIN DIN 338**



**HEAD MATERIAL:** HSS-TIN  
**SET PIECES:** 19

Code	Ø (mm)	Weight (g)
1950	1 ÷ 10 x 0.5	443

**DRILL BITS · 19 PCS SET · MASONRY DIN 8039 AND HSS DIN 338**



**DIN 338 DRILL BIT APPLICATION:** holes on iron and steel for non industrial uses  
**DIN 8039 DRILL BIT APPLICATION:** holes on walls, cement, marble, non hard-stones with non-intensive use  
**SET PIECES:** 19

Code	Masonry drill DIN 8039 (ISO 5468) (mm)	Drill HSS DIN 338 (mm)	Weight (g)	
1939	4, 5, 6, 8, 9, 10	1, 1.5, 2, 2.5, 3, 3.5, 4, 4.5, 5, 5.5, 6, 8, 10	325	1/1

**BI-METAL HSS HOLE SAW SET**



- HSS bi-metal hole saws with variable toothing and positive scab for cutting any material including metal, plastic, wood, and plasterboard
- drilling depth max 30mm
- complete with saw holder, pilot drills and saw adapter

Code	Ø (mm)	Weight (g)	
1959	19 - 22 - 29 - 35 - 38 - 44 - 51 - 57 - 64	1470	1/1

**ACCESSORIES FOR HOLE SAW · MANDREL**



Code	Ø (mm)	Shank Ø (mm)	Weight (g)	
1972	14 ÷ 30	8.5	86	1/1
1973	32 ÷ 152	8.5	193	1/1

**ACCESSORIES FOR HOLE SAW · MANDREL PILOT BIT**



Code	Ø (mm)	(mm)	(mm)	
1974	6,35	40	80	1/1

## HSS BI-METAL HOLE SAWS



Code	Ø (mm)	Weight (g)	
1960	19	26	1/1
1961	22	35	1/1
1962	29	60	1/1
1963	35	77	1/1
1964	38	89	1/1
1965	44	92	1/1
1966	51	118	1/1
1967	57	143	1/1
1968	60	159	1/1
1969	64	177	1/1
1970	68	193	1/1
1971	76	237	1/1

## ADJUSTABLE CIRCULAR CUTTER WITH TRANSPARENT DUST PROTECTION



- cutter suitable for all types of drills with torque regulator
- easy fine adjustment of the cutting edges
- provided with dust cover
- suitable for plasterboard, fiber cement, wood, plywood veneer, stucco and acrylic materials, synthetic glass

Code	Ø (mm)	Cutting depth (mm)	Weight (g)	
1975	40 ÷ 125	30	1980	1/1
1976	40 ÷ 205	30	2470	1/1



## CONE DRILL BIT - HSS



- for drilling metal sheets, pipes, metal or plastic rails up to 5 mm thick
- anti-slip joint
- coupling diameter 10 mm

Code	Ø (mm)	Weight (g)	
1941	3 ÷ 31	170	1/1

## STEP DRILL BIT - HSS



- for drilling cylindrical and precise holes in metal sheets, pipes, metal or plastic rails up to 5 mm thick
- anti-slip joint
- coupling diameter 10 mm

Code	Ø (mm)	Weight (g)	
1944	4 - 6 - 8 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 26 - 28 - 30	140	1/1

## STEP DRILL BIT - HSS - FOR PG THREADS




- for drilling cylindrical and precise holes in metal sheets, pipes, metal or plastic rails up to 5 mm thick
- anti-slip joint
- coupling diameter 10 mm
- suitable for thread-through holes from PG 7 to PG 29

Code	Ø (mm)	Weight (g)	
1942	13 - 16 - 19 - 21 - 23 - 26 - 29 - 32 - 35 - 38	160	1/1

## STEP DRILL BIT · HSS · FOR METRIC THREADS




- specifically designed for drilling nut and through holes with threads from M12 x 1.5 to M40 x 1.5
- coupling diameter 12 mm

Code	Ø (mm)	Weight (g)	
1943	6 - 10.5 - 12.5 - 14.5 - 16.5 - 18.5 - 20.5 - 23.5 - 25.5 - 30.5 - 32.5 - 38.5 - 40.5	230	1/1

## RATCHET TAP WRENCH




**BODY MATERIAL:** chrome steel

Code	For male (mm)	Weight (g)	
1930	M3 ÷ M10	155	1/1

## DRILL TAPS HSS-G DIN 371/B

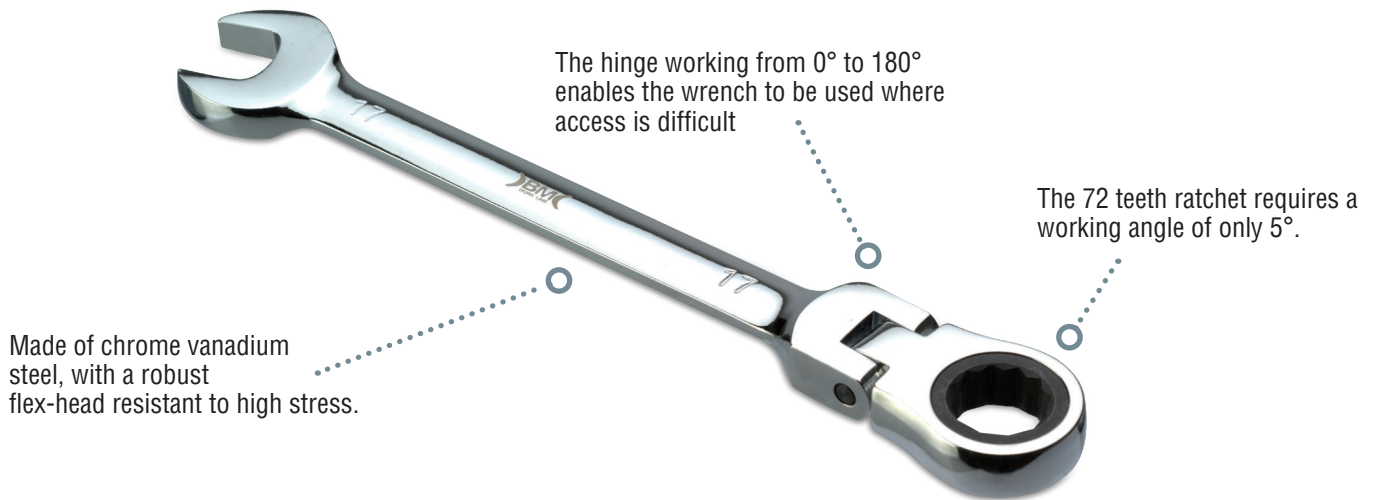


- metric thread ISO 2/6H, coarse pitch. Reinforced shank

Code	Thread (mm)	Weight (g)	
1934	M4	6	1/5
1935	M5	11	1/5
1936	M6	14	1/5
1938	M8	27	1/5

## COMBINED RATCHET WRENCHES WITH SWIVEL POLYGON HEAD

BM combination ratcheting wrenches with flexible head are built and tested one by one to guarantee maximum efficiency and duration.



### COMBINED RATCHET WRENCHES WITH SWIVEL POLYGON HEAD



**MATERIAL:** chrome-vanadium steel with shiny chrome plating

Code	○ (mm)	Length (mm)	Torque (Nm)	Weight (g)	
16608	8	140	36	54	1/5
16610	10	160	85	91	1/5
16613	13	176	138	119	1/5
16617	17	225	230	214	1/5

### COMBINED RATCHET WRENCHES WITH SWIVEL POLYGON HEAD - 4 PCS SET



- the 72 tooth ratchet mechanism requires a shooting angle of only 5°
- the articulated and adjustable head up to 180° allows to operate in difficult access conditions

**MATERIAL:** chrome-vanadium steel with shiny chrome plating

**SET CONSISTING OF:** 4 pieces

Code	Weight (g)	
16698	500	1/5

Component	○ (mm)	Pcs
16608	8	1
16610	10	1
16613	13	1
16617	17	1

### DOUBLE ENDED WRENCHES DIN 3110



**MATERIAL:** chrome-vanadium chromium-plated steel  
**ACCORDING TO STD.:** DIN 3110

Code	Ø (mm)	Length (mm)	Weight (g)	
16301	6 x 7	122	23	1/10
16302	8 x 9	140	39	1/10
16303	10 x 11	156	59	1/10
16304	12 x 13	172	81	1/10
16305	14 x 15	188	101	1/10
16306	16 x 17	203	125	1/5
16307	18 x 19	220	187	1/5
16308	20 x 22	233	217	1/5

### COMBINATION WRENCHES DIN 3113



**MATERIAL:** chrome-vanadium chromium-plated steel  
**ACCORDING TO STD.:** DIN 3113

Code	Ø (mm)	Length (mm)	Weight (g)	
16506	6	100	15	1/10
16507	7	110	19	1/10
16508	8	120	29	1/10
16509	9	130	34	1/10
16510	10	140	37	1/10
16511	11	150	49	1/10
16512	12	160	55	1/10
16513	13	170	67	1/10
16514	14	180	86	1/10
16517	17	210	119	1/10
16519	19	230	167	1/10
16522	22	260	235	1/10

### DOUBLE ENDED WRENCHES DIN 3110 - 8 PCS SET



**MATERIAL:** chrome-vanadium chromium-plated steel  
**ACCORDING TO STD.:** DIN 3110  
**SET CONSISTING OF:** 8 pieces

Code	Weight (g)	
1630	890	1/1

Component	Ø (mm)	Pcs
16301	6 x 7	1
16302	8 x 9	1
16303	10 x 11	1
16304	12 x 13	1
16305	14 x 15	1
16306	16 x 17	1
16307	18 x 19	1
16308	20 x 22	1

### COMBINATION WRENCHES DIN 3113 - 12 PCS SET



**MATERIAL:** chrome-vanadium chromium-plated steel

**ACCORDING TO STD.:** DIN 3113

**SET CONSISTING OF:** 12 pieces

Code	Weight (g)	
1650	1020	1/1

Component	Ø (mm)	Pcs
16506	6	1
16507	7	1
16508	8	1
16509	9	1
16510	10	1
16511	11	1
16512	12	1
16513	13	1
16514	14	1
16517	17	1
16519	19	1
16522	22	1

### ALLEN WRENCHES DIN 911 90° BENDED - 9 PCS SET



**MATERIAL:** galvanized chrome-vanadium steel

**ACCORDING TO STD.:** DIN 911

**SET CONSISTING OF:** 9 pieces

Code	Weight (g)	
1620	230	1/10

Component	Ø (mm)	Pcs
16201	1,5	1
16202	2	1
16203	2,5	1
16204	3	1
16205	4	1
16206	5	1
16207	6	1
16208	8	1
16209	10	1

### ALLEN WRENCHES DIN 911 BENDED 90°



**MATERIAL:** galvanized chrome-vanadium steel

**ACCORDING TO STD.:** DIN 911

Code	Ø (mm)	Length (mm)	Weight (g)	
16201	1,5	45 x 14	1	1/10
16202	2	50 x 16	2	1/10
16203	2,5	56 x 18	3	1/10
16204	3	63 x 20	5	1/10
16205	4	71 x 25	10	1/10
16206	5	80 x 28	18	1/10
16207	6	90 x 32	30	1/10
16208	8	100 x 36	60	1/10
16209	10	112 x 40	103	1/10

### SPHERICAL HEAD ALLEN WRENCHES 90° BENDED - 9 PCS SET



9-piece set, sizes: 1.5-2-2.5-3-4-5-6-8-10 mm

**MATERIAL:** chrome-vanadium chromium-plated steel

**SET CONSISTING OF:** 9 pieces

Code	Weight (g)	
1621	435	1/1

### ADJUSTABLE WRENCH



- ergonomic handle with anti-slip surface
- metric measuring scale

**MATERIAL:** chrome-vanadium chromium-plated steel

Code	Length (mm)	Opening (mm)	Weight (g)	
1610	200	24	330	1/1

### UNIVERSAL SWITCH CABINET WRENCH



- square shapes: 5-6-7-8 mm
- triangular shape: 7-8 mm
- double notch: 3-5 mm
- adapter 1/4"
- screwdriver bit

Code	Weight (g)	
1625	60	1/5

### 1/4" SOCKET WRENCH SET - 47 PCS



47-piece chrome vanadium steel set in a plastic case:

- hexagonal sockets: 4 - 4,5 - 5 - 5,5 - 6 - 7 - 8 - 9 - 10 - 11 - 12 - 13 - 14 mm
- slotted bit-sockets: 4 - 5,5 - 6,5 mm
- Phillips bit-sockets: N°1 - N°2 - N°3
- Pozidriv bit-sockets: N°1 - N°2 - N°3
- hexagonal bit-sockets: 3 - 4 - 5 - 6 - 7 - 8 mm
- Torx bit-sockets: T10 - T15 - T20 - T25 - T30 - T40
- hexagonal sockets extension : 8 - 10 - 11 - 13 mm
- allen wrenches 1,5 - 2 - 2,5 mm
- universal joint 40 mm
- extension bar 50 mm - 100 mm
- sliding T-handle 115 mm
- spinner handle 145 mm
- reversible ratchet handle 140 mm

Code	Weight (g)	
1640	1520	1/1

**HAMMERS**


- hardened and varnished C 45 steel. Shaped ash wood handle, nylon protection collar, steel wedge lock

Code	Weight (g)	
1715	200	1/12
1716	300	1/12

**RUBBER HAMMER**


- rubber-covered hammer with metallic core

Code	Weight (g)	
1740	700	1/6

**THREE-COMPONENT HAMMER**


- hardened and varnished C 45 steel. Patented nylon handle, anti-slip rubber grip, aluminum alloy core, anti-vibration

Code	Weight (g)	
1710	300	1/6

**SLEDGE HAMMER**


- hardened and varnished C 45 steel. Shaped ash wood handle, nylon protection collar, steel wedge lock

Code	Weight (g)	
1720	800	1/18
1721	1000	1/18



### SUCTION LIFTER · 1 CUP



- universal suction lifter for different loads
- suitable for all kind of surfaces: flat, gas-proof, slightly curved or structural
- suction pad 120 mm
- aluminum structure
- handle and levers in synthetic material

Code	Description	Maximum load	Weight (g)	
1760	suction lifter 1 cup	30 kg - vert.	425	1/1
1761	spare cup			1/1

### SUCTION LIFTER · 2 CUPS



- universal suction lifter for different loads
- suitable for all kind of surfaces: flat, gas-proof, slightly curved or structural
- suction pad 120 mm
- aluminum structure
- handle and levers in synthetic material

Code	Description	Maximum load	Weight (g)	
1770	suction lifter 2 cups	60 kg - parall.	860	1/1
1771	spare cup			

## WOOD MEASURING RULER



- wood, with spring, millimetric graduation on both sides

Code	Length (m)	
1410	2	1/12

## CHALK REEL



- aluminium body, 15 metres long cotton twine, handle for rewinding and locking the cord

Code	Weight (g)	
1430	280	1/6

## TAPE MEASURE



- body in bi-component material ABS and rubber, with back hook
- tape in hardened and painted steel C60, double-stop device, stop damper, movable butt for inner and outer measuring, reinforced with duralumin
- accuracy class: II (second)

Code	Length (m)	Height (mm)	
1423	3	16	1/12
1424	5	19	1/12

## CHALK FOR CHALK REEL



Code	Weight (g)	Chalk colour	
1431	250	Blue	1/6
1432	250	Red	1/6



## REWINDING MEASURING TAPE



- shockproof rubber coated ABS case, folding tape winding crank, fiberglass tape. Centimetres and metres marks on both sides

Code	Length (m)	Height (mm)	
1421	20	14	1/1

### SPIRIT LEVEL - MINI



- made with painted structural aluminum, one vial. Accuracy 1 mm per 1 m

Code	Length (mm)	
1551	150	1/30

### SPIRIT LEVEL - MAXI



- made with painted structural aluminium, three vials with the possibility of adjusting the central one. Accuracy 0,5 mm per 1 m

Code	Length (mm)	
1554	400	1/10
1555	600	1/10

### SPIRIT LEVEL - POCKET



- made with painted structural aluminium, two vials. Accuracy 0,5 mm per 1 m

Code	Length (mm)	
1552	220	1/20

### SPIRIT LEVEL - WITH MAGNETIC BASE



- made with painted structural aluminum, two vials. Accuracy 0,5 mm per 1 m

Code	Length (mm)	
1553	220	1/20

**VOLTAGE TESTER**


- protection class IP 65
  - security alarm
  - acoustic and LED continuity detector
  - measuring category: cat IV 600 V - cat III 1000 V
- ACCORDING TO STD.:** IEC/EN 61243-3

Code	Voltage range (V)	
1143	12-1000	1/1


**IP65**
**MULTI-DETECTOR**


- simple three-function tool
- it detects wood, metal and active electric cables hidden in walls with an acoustics and luminous signal
- it is controlled by a processor
- the depth it can reach depends on the type of surface up to a maximum of 50 mm with plasterboard

Code	Weight (g)	
1560	200	1/1

**CONTINUITY AND LINE TESTER**


- for low resistance testing
  - with acoustic and visual alarms
  - it can be used as a torch
  - battery not included
- ACCORDING TO STD.:** IEC/EN 61010-1

Code	Electric resistance range (KΩ)	
1144	1, 10, 100	1/1



## TOOL CASES



## POUCH



- empty reinforced nylon pouch

Code	Description
18030	Pouch

## POUCH + TOOL SET (5 PCS)



- reinforced nylon pouch complete with 5 tools:
- VDE insulated Phillips screwdriver 1x8
  - VDE insulated slotted screwdriver 3x100
  - VDE insulated slotted screwdriver 4x100
  - cutter/stripper scissor + case
  - VDE insulated combination pliers 180

Code	Description
18030M1	Pouch + 5 tools

## SOFT BACKPACK/TROLLEY



- canvas trolley backpack
- in high resistance fabric
- side handle
- double pocket and reflective band on the front
- internal compartment with mesh pocket and two removable tool panels that can be used separately

Code	Description	Dimensions (mm)
1815	Canvas backpack/trolley	360x250x540

## CANVAS SOFT BAG



- soft canvas bag
- in high resistance fabric
- two separate internal compartments with pockets and elastic tool holders
- it can be fully opened
- removable shoulder strap
- tubular aluminium handle with optional cover
- rigid base with rubber feet

Code	Description	Dimensions (mm)
1814	Canvas soft bag	370x270x360

## SOFT BACKPACK/TROLLEY + TOOL SET (14 PCS)



- canvas trolley backpack  
in high resistance fabric  
side handle  
double pocket and reflective band on the front  
internal compartment with mesh pocket and two removable tool panels that can be used separately  
complete with 14 tools:
- VDE insulated slotted screwdriver 3x100
  - VDE insulated slotted screwdriver 4x100
  - VDE insulated slotted screwdriver 5,5x125
  - VDE insulated slotted screwdriver 6,5x150
  - VDE insulated screwdriver, PH 0 head
  - VDE insulated screwdriver, PH 1 head
  - VDE insulated screwdriver, PH 2 head
  - voltage tester 3x60 250 V
  - VDE insulated combination pliers 180
  - cutter/stripper scissors + case
  - pocket saw
  - measuring tape: 3 m - W=16 mm bi-component
  - pocket spirit level 220 mm
  - hammer 300 gr

Code	Description	Dimensions (mm)
1815A1	Canvas backpack/trolley + 14 tools	360x250x540

Components	Description
1815	Canvas backpack/trolley
18A1	14-piece tool set

## CANVAS SOFT BAG + TOOL SET (14 PCS)



- soft canvas bag  
in high resistance fabric  
two separate internal compartments with pockets and elastic tool holders  
it can be fully opened  
removable shoulder strap  
tubular aluminium handle with optional cover  
rigid base with rubber feet  
complete with 14 tools:
- VDE insulated slotted screwdriver 3x100
  - VDE insulated slotted screwdriver 4x100
  - VDE insulated slotted screwdriver 5,5x125
  - VDE insulated slotted screwdriver 6,5x150
  - VDE insulated screwdriver, PH 0 head
  - VDE insulated screwdriver, PH 1 head
  - VDE insulated screwdriver, PH 2 head
  - voltage tester 3x60 250 V
  - VDE insulated combination pliers 180
  - cutter/stripper scissors + case
  - pocket saw
  - measuring tape: 3 m - W=16 mm bi-component
  - pocket spirit level 220 mm
  - hammer 300 gr

Code	Description	Dimensions (mm)
1814A1	Canvas soft bag + 14 tools	370x270x360

Components	Description
1814	Canvas soft bag
18A1	14-piece tool set

### WATERPROOF CASE



- case made of Ultra High-Impact and dust-proof ABS plastic
- the seal along the entire closing line guarantees airtight sealing and watertightness
- internal air pressure compensation valve
- resistant to weather and corrosive agents
- document pocket, tool panel, thermoformed tray
- removable shoulder strap

Code	Description	Dimensions (mm)
1816	Waterproof case	430x286x159

### WATERPROOF CASE + TOOL SET (14 PCS)



case made of Ultra High-Impact and dust-proof ABS plastic. the seal along the entire closing line guarantees airtight sealing and watertightness. internal air pressure compensation valve. resistant to weather and corrosive agents. document pocket, tool panel, thermoformed tray, removable shoulder strap.

- complete with 14 tools:
- VDE insulated slotted screwdriver 3x100
  - VDE insulated slotted screwdriver 4x100
  - VDE insulated slotted screwdriver 5,5x125
  - VDE insulated slotted screwdriver 6,5x150
  - VDE insulated screwdriver, PH 0 head
  - VDE insulated screwdriver, PH 1 head
  - VDE insulated screwdriver, PH 2 head
  - voltage tester 3x60 250 V
  - VDE insulated combination pliers 180
  - cutter/stripper scissors + case
  - pocket saw
  - measuring tape: 3 m - W=16 mm bi-component
  - pocket spirit level 220 mm
  - hammer 300 gr

Code	Description	Dimensions (mm)
1816A1	Waterproof case + 14 tools	430x286x159

Components	Description
1816	Waterproof case
18A1	14-piece tool set

### ALUMINIUM CASE



- aluminium case with rounded and reinforced corners
- chrome-plated handle with soft grip
- locks with keys
- two toolholder panels
- thermoformed tray
- removable shoulder strap

Code	Description	Dimensions (mm)
18500	Aluminium case	450x330x152

### ALUMINIUM CASE + TOOL SET (14 PCS)



aluminium case with rounded and reinforced corners, chrome-plated handle with soft grip, locks with keys, two toolholder panels, thermoformed tray, removable shoulder strap.

- complete with 14 tools:
- VDE insulated slotted screwdriver 3x100
  - VDE insulated slotted screwdriver 4x100
  - VDE insulated slotted screwdriver 5,5x125
  - VDE insulated slotted screwdriver 6,5x150
  - VDE insulated screwdriver, PH 0 head
  - VDE insulated screwdriver, PH 1 head
  - VDE insulated screwdriver, PH 2 head
  - voltage tester 3x60 250 V
  - VDE insulated combination pliers 180
  - cutter/stripper scissors + case
  - pocket saw
  - measuring tape: 3 m - W=16 mm bi-component
  - pocket spirit level 220 mm
  - hammer 300 gr

Code	Description	Dimensions (mm)
18500A1	Aluminium case + 14 tools	450x330x152

Components	Description
18500	Aluminium case
18A1	14-piece tool set

## ALUMINIUM TROLLEY



- aluminium trolley case
- rounded and reinforced corners
- chrome-plated handle with soft grip
- locks with keys
- document pocket
- two toolholder panels
- thermoformed tray

Code	Description	Dimensions (mm)
18400	Aluminium trolley	482x340x205

## ABS TROLLEY TOP



- thermoformed ABS trolley case with aluminium seals
- robust trolley with telescopic handle
- locks with keys
- chrome-plated handle with soft grip
- wheels with a 110 mm diameter, ideal for all surfaces
- document pocket
- two toolholder panels
- thermoformed ABS tray
- two boxes for small components

Code	Description	Dimensions (mm)
1817	ABS trolley	510x375x240

**CHOOSE  
THE BAG  
OR  
CASE  
THAT BEST SUITS  
YOUR NEEDS AND  
COMPLETE IT  
WITH THE MOST  
APPROPRIATE TOOL  
ASSORTMENT  
FOR YOU**

On the next page you can find three different assortment proposals to choose from:

- **33 tools for every need**
- **29 frequently used tools**
- **14 essential tools**



Please, remember to put

**THE BAG  
CODE**



**THE ASSORTMENT  
CODE**

in your order.



# ASSORTMENTS

TOOLS

Code	Description	18A3	18A2	18A1
		33-Piece tool set	29-Piece tool set	14-Piece tool set
1113	VDE insulated slotted screwdriver 3x100 mm			
1114	VDE insulated slotted screwdriver 4x100 mm			
1115	VDE insulated slotted screwdriver 5.5x125			
1116	VDE insulated slotted screwdriver 6.5x150			
1120	VDE insulated screwdriver, PH 0 head			
1121	VDE insulated screwdriver, PH 1 head			
1122	VDE insulated screwdriver, PH 2 head			
1131	VDE insulated screwdriver Pozidriv 1			
1132	VDE insulated screwdriver Pozidriv 2			
1141	Voltage tester 3x60 mm 250 V			
1212	VDE insulated combination pliers 180 mm			
1221	VDE insulated side cutter 160 mm			
1251	VDE insulated flat nose pliers 160 mm			
1274	VDE insulated water pump pliers			
1325	Cutter/stripper scissors + case			
1370	Automatic stripping tool 0,2-6 mm <sup>2</sup>			
534	Crimping pliers for 0.5-6 mm insulated terminals			
1341	Pocket saw			
1423	Measuring tape 3 m - W=16 mm bi-component			
1552	Pocket spirit level 220 mm			
1716	Hammer 300 gr			
1630	Double ended wrenches - 8 pcs set	x8	x8	
1625	Universal switch cabinet wrench			
1140	1/4 bits - 7 pcs set			
1430	Chalk reel			
1431	Blue chalk for chalk reel			

## CASE WITH BOXES FOR SMALL COMPONENTS



- case with propylene boxes
- double hook locking system
- roomy storage under the lid
- strong frame that can be used as a seat

Code	Description	Dimensions (mm)
1818	Case with boxes for small components	420x303x400

## PLASTIC CASE



- plastic case
- removable containers

Code	Description	Dimensions (mm)
00405	Plastic case	420x330x65

## TOOL BOX



- shockproof plastic box
- tray and 2 removable boxes for small components

Code	Description	Dimensions (mm)
1880	Tool box	520x290x270

## BOX FOR SMALL COMPONENTS



Code	Description	Dimensions (mm)	Slots
1881		230x125x35	18
1882		292x186x42	18
1883		382x234x48	24





# APPENDICES

CRIMPING TOOL GUIDE	pag. 389
DEFINITIONS	pag. 398
STANDARDS	pag. 399
RETIE CERTIFIED CODES	pag. 400
APPROXIMATE CORRESPONDENCE BETWEEN SECTIONS OF THE AMERICAN AND EUROPEAN STANDARD	pag. 401
CONDUCTOR RESISTENCE VALUES	pag. 402
DEGREES OF PROTECTION PROVIDED BY CASINGS (IP CODE)	pag. 403
ANALYTICAL INDEX	pag. 404



# CRIMPING TOOL GUIDE

## FOR CLASS 1,2,5,6 UNINSULATED TERMINALS AND GROUND NETWORK

### L.V. COPPER TERMINAL LUGS

- uninsulated from sheet: ring  
fork  
round pin  
silver alloy brazed DIN 46234
- uninsulated from tube: straight, bent 45°, bent 90°  
for class 6 conductors  
with small plate  
fork  
pin

### COPPER TERMINAL FOR GROUND NETWORK

- uninsulated long barrel for land network
- uninsulated with ring for land network
- uninsulated rectangular for land network

### L.V. BUTT CONNECTORS

- uninsulated butt connectors (L.V.)
- uninsulated parallel connectors (L.V.)

Crimping tool		Section mm <sup>2</sup> (AWG)																								
Type	Code	0,25 (22)	0,5 (20)	0,75 (18)	1 (17)	1,5 (16)	2,5 (14)	4 (12)	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	300 (600)	400 (800)	500 (1000)	630 (1250)		
manual	HB	522																								
	CRIM	535																								
		5305 (kit)																								
	CRIMDEM	5351																								
		5345 (kit)																								
	CRIMPAR	53P000 + 53M5N2																								
		53P000 + 53M5N1																								
		53KPBF (kit)																								
	parallel	6534 + 635D																								
	long handles	526																								
510																										
512																										
523																										
pneumatic	582 + series 82																									
	1661 + 535D																									
	50 kN	182/182P (*) + series 82																								
		1823/1824 (*) + series 82																								
		1823P + series 82																								
		1823A1/A2/A3/A4 + series 82																								
		200 + series 82																								
	hydraulic	200PA + series 82																								
		60 kN	1833/1833A1 + series 83																							
		80 kN	183/183P (*) + series 83																							
120 kN		184P/184PL + series 84																								
125 kN		184 (*) + series 84																								
battery	130 kN	186 + series 84																								
	55 kN	37A055/37A055A1 + series 83																								
	60 kN	383 (*) + series 83																								
	62 kN	38A062 + series 85																								
	120 kN	384 (*) + series 84																								
	130 kN	38A130 + series 84																								
		38A130L + series 84																								
head	50 kN	200A + series 82																								
	60 kN	2833 + series 83																								
	80 kN	283 (*) + series 83																								
	120 kN	284/284L + series 84																								
	230 kN	286 + series 84																								
	270 + series 70																									

(\*) item running out

CL5 = only Class 5 terminals (no Class 6 terminals that have sections not greater than 185 mm<sup>2</sup>)

# CRIMPING TOOL GUIDE

## FOR L.V. DIN AND NFC TERMINALS

### L.V. COPPER TERMINAL LUGS

- uninsulated compliant to DIN 46235 (L.V.)
- uninsulated compliant to DIN 46235 in untinned copper (L.V.)
- uninsulated 90° bended obtained from terminal lugs compliant to DIN 46235 (L.V.)
- uninsulated NFC terminals (L.V.)

### L.V. BUTT CONNECTORS

- uninsulated compliant to DIN 46267/1 (L.V.)

Crimping tool		Section mm <sup>2</sup> (AWG)																								
Type	Code	0.25 (22)	0.5 (20)	0.75 (18)	1 (17)	1.5 (16)	2.5 (14)	4 (12)	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	300 (600)	400 (800)	500 (1000)	630 (1250)		
manual	long handles	524																								
		525																								
		511																								
		513																								
		582 + series 82																								
hydraulic	50 kN	182/182P (*) + series 82																								
		1823/1824 (*) + series 82																								
		1823P + series 82																								
		1823A1/A2/A3/A4 + series 82																								
		200 + series 82																								
		200PA + series 82																								
		60 kN	1833/1833A1 + series 83							NF	NF															
		80 kN	183/183P (*) + series 83							NF	NF															
		120 kN	184P + series 84								NF															
		120 kN	184PL + series 84								NF														NF	
battery	120 kN	125 kN	184 (*) + series 84							NF														NF		
		130 kN	186 + series 84							NF														NF		
		55 kN	37A055/37A055A1 + series 83							NF	NF															
		60 kN	383 (*) + series 83							NF	NF															
		62 kN	38A062 + series 85								NF													NF		
		120 kN	384 (*) + series 84								NF															
		130 kN	38A130 + series 84								NF														NF	
head	120 kN	130 kN	38A130L + series 84							NF														NF		
		50 kN	200A + series 82																							
		60 kN	2833 + series 83								NF	NF														
		80 kN	283 (*) + series 83								NF	NF														
		120 kN	284 + series 84								NF															
120 kN	284L + series 84								NF														NF			
		286 + series 84																								

(\*) item running out

NF = only FNC terminals (no DIN terminals)

# CRIMPING TOOL GUIDE

## FOR UNINSULATED TERMINALS M.V.

### M.V. COPPER TERMINAL LUGS

- uninsulated
- uninsulated with double hole

### M.V. COPPER JOINTS

- uninsulated

Crimping tool		Section mm <sup>2</sup> (AWG)															
Type	Code	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	300 (600)	400 (800)	500 (1000)	630 (1250)
hydraulic	50 kN	582 + series 82															
		182/182P (*) + series 82															
		1823/1824 (*) + series 82															
		1823P + series 82															
		1823A1/A2/A3/A4 + series 82															
		200 + series 82															
	60 kN	200PA + series 82															
	60 kN	1833/1833A1 + series 83															
	80 kN	183/183P (*) + series 83															
	120 kN	184P/184PL + series 84															
125 kN	184 (*) + series 84																
130 kN	186 + series 84																
battery	55 kN	37A055/37A055A1 + series 83															
	60 kN	383 (*) + series 83															
	62 kN	38A062 + series 85															
	120 kN	384 (*) + series 84															
	130 kN	38A130 + series 84															
head	50 kN	200A + series 82															
	60 kN	2833 + series 83															
	80 kN	283 (*) + series 83															
	120 kN	284/284L + series 84															
	286 + series 84																

(\*) item running out



# CRIMPING TOOL GUIDE

## FOR UNINSULATED ALUMINUM AND BIMETALLIC TERMINALS

### ALUMINUM TERMINAL LUGS

- uninsulated for aluminum conductors DIN 48201

### BIMETALLIC TERMINAL LUGS

- uninsulated ring
- uninsulated ring DIN 48201

### ALUMINUM JOINTS

- uninsulated for DIN 48201 aluminum conductors
- uninsulated for Medium Voltage aluminum conductors
- uninsulated reduction joints for Medium Voltage aluminum or copper conductors

Crimping tool		Section mm <sup>2</sup> (AWG)																
Type	Code	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	300 (600)	400 (800)	500 (1000)	630 (1250)	
manual	long handles	<b>582 + series 82</b>																
		<b>182/182P (*) + series 82</b>																
	50 kN	<b>1823/1824 (*) + series 82</b>																
		<b>1823P + series 82</b>																
		<b>1823A1/A2/A3/A4 + series 82</b>																
		<b>200 + series 82</b>																
hydraulic	60 kN	<b>200PA + series 82</b>																
		<b>1833/1833A1 + series 83</b>																
	80 kN	<b>183/183P (*) + series 83</b>																
	120 kN	<b>184P/184PL + series 84</b>																
	125 kN	<b>184 (*) + series 84</b>																
		<b>186 + series 84</b>																
battery	130 kN	<b>186 + series 86</b>																
		<b>37A055/37A055A1 + series 83</b>																
	55 kN	<b>383 (*) + series 83</b>																
	60 kN	<b>38A062 + series 85</b>																
	120 kN	<b>384 (*) + series 84</b>																
		<b>38A130 + series 84</b>																
head	130 kN	<b>38A130L + series 84</b>																
		<b>200A + series 82</b>																
	50 kN	<b>283 (*) + series 83</b>																
	80 kN	<b>2833 + series 83</b>																
		<b>284/284L + series 84</b>																
	120 kN	<b>286 + series 84</b>																
<b>286 + series 86</b>																		

(\*) item running out

D = only aluminum and bimetallic DIN

# CRIMPING TOOL GUIDE

## FOR INSULATED TERMINALS

### PVC INSULATED TERMINALS

- insulated from sheet: ring  
fork  
round and blade pin
- insulated from sheet and anti-vibrating: ring  
fork  
round pin

### L.V. NYLON INSULATED TERMINALS

- insulated from sheet: ring  
fork  
round blade pin
- insulated from tube: black  
black nylon for class 6 conductors  
black with small plate  
black with fork  
black with blade pin  
coloured

### BUTT CONNECTORS

- PVC insulated
- nylon insulated
- with heat shrinking insulation (only with "T")

### ONE -WAY TERMINAL BLOCKS

- close end connectors for clamping (only with "C")

Crimping tool		Section mm <sup>2</sup> (AWG)																								
Type	Code	0,25 (22)	0,5 (20)	0,75 (18)	1 (17)	1,5 (16)	2,5 (14)	4 (12)	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	300 (600)	400 (800)	500 (1000)	630 (1250)		
manual	HB 536		+T	+T	+T	+T	+T	+T	+T																	
	CRIM 534																									
	CRIMDEM 5341																									
	CRIMDEM 5345 (kit)																									
	CRIMPAR 53P02H																									
	CRIMPAR 53P000 + 53M02H																									
	CRIMPAR 53KPBF (kit)																									
	parallel 6534 + 634D																									
	parallel 6534 + 636D																									
	long handles 528			C, T	C, T	C, T	C, T	C, T	C, T	C, T																
pneumatic	528 + series 82																									
	1661 + 534D																									
	182/182P (*) + series 82																									
	1823/1824 (*) + series 82																									
	1823P + series 82																									
	1823A1/A2/A3/A4 + series 82																									
	200 + series 82																									
	200PA + series 82																									
	60 kN 1833/1833A1 + series 83																									
	80 kN 183/183P (*) + series 83																									
hydraulic	120 kN 184P/184PL + series 84																									
	125 kN 184 (*) + series 84																									
	130 kN 186 + series 84																									
	55 kN 37A055/37A055A1 + series 83																									
	60 kN 383 (*) + series 83																									
	62 kN 38A062 + series 85																									
	120 kN 384 (*) + series 84																									
	130 kN 38A130 + series 84																									
	130 kN 38A130L + series 84																									
	battery	55 kN 200A + series 82																								
60 kN 283 (*) + series 83																										
80 kN 2833 + series 83																										
120 kN 284/284L + series 84																										
head	286 + series 84																									
	286 + series 84																									

(\*) item running out

CT = butt connectors with heat shrinking insulation and close end connectors

+T = the tool crimps butt connectors with heat shrinking insulation in addition to PVC and nylon insulated terminals

# CRIMPING TOOL GUIDE

## FOR END-SLEEVES

- uninsulated single cable
- insulated single cable
- insulated single cable in a strap (only with "S")
- insulated double cable

Crimping tool		Section mm <sup>2</sup> (AWG)																				
Type	Code	0,08 (28)	0,25 (22)	0,5 (20)	0,75 (18)	1 (17)	1,5 (16)	2,5 (14)	4 (12)	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	
manual	HB	540																				
		541																				
		542																				
	CRIM	537																				
		539																				
		533																				
		5305 (kit)																				
	CRIMDEM	5371																				
		5391																				
		5331																				
	CRIMPAR	5345 (kit)																				
		53P02E																				
		53P000 + 53M02E																				
		53P2E1																				
		53P000 + 53M2E1																				
		53P000 + 53M5D2																				
		53P5D1																				
		53P000 + 53M5D1																				
		53KPBF (kit)																				
		53P000 + 53M2E4				D	D	D	D	D	D	D										
53P000 + 53M2E5											D	D										
CRIMQ	5382																					
	53816																					
long handles	527																					
	582 + series 82																					
strap	5375			S	S	S	S	S														
	1661 + 537D																					
pneumatic	1661 + 539D																					
	182/182P (*) + series 82																					
hydraulic	50 kN	1823/1824 (*) + series 82																				
		1823P + series 82																				
		1823A1/A2/A3/A4 + series 82																				
		200 + series 82																				
		200PA + series 82																				
	60 kN	1833/1833A1 + series 83																				
	80 kN	183/183P (*) + series 83																				
	120 kN	184P/184PL + series 84																				
	125 kN	184 (*) + series 84																				
	130 kN	186 + series 84																				
battery	55 kN	37A055/37A055A1 + series 83																				
	60 kN	383 (*) + series 83																				
	62 kN	38A062 + series 85																				
	120 kN	384 (*) + series 84																				
	130 kN	38A130 + series 84																				
		38A130L + series 84																				
head	55 kN	200A + series 82																				
	60 kN	2833 + series 83																				
	80 kN	283 (*) + series 83																				
	120 kN	284/284L + series 84																				
	286 + series 84																					

(\*) item running out  
 S = only end-sleeves in a strap  
 D = only double cable end-sleeves

# CRIMPING TOOL GUIDE

## FOR UNINSULATED BRASS QUICK-CONNECTORS

- uninsulated female
- uninsulated female flag type
- uninsulated male
- uninsulated female+male
- uninsulated from sheet open brass

Crimping tool		Section mm <sup>2</sup> (AWG)									
Type		Code	0,1 (27)	0,25 (22)	0,5 (20)	0,75 (18)	1 (17)	1,5 (16)	2,5 (14)	4 (12)	6 (10)
in-line	manual	HB	530								
			531								
		CRIM	5305 (kit)								
			5313								
		CRIMDEM	5345 (kit)								
			53P000 + 53M2CL								
	pneumatic		53P000 + 53M02C								
			6534 + 631D								
		parallel	6534 + 6311D								
			6534 + 6321D								
			6534 + 6322D								
			1661 + 531D								
lateral	manual	CRIM	5311								
			5312								
			5314								
	CRIMDEM	5315									
	parallel		6534 + 6321D								
			6534 + 6322D								

# CRIMPING TOOL GUIDE

## FOR INSULATED QUICK-CONNECTORS

### PVC QUICK-CONNECTORS TERMINALS

- insulated and anti-vibrating: female
  - female totally insulated
  - male
  - female+male

### NYLON QUICK-CONNECTORS TERMINALS

- insulated and anti-vibrating: female totally insulated
  - male totally insulated
- flag type totally insulated: female

### PVC CYLINDER PLUG

- insulated cylinder plug and anti-vibrating: female
  - male

### NYLON CYLINDER PLUG

- insulated cylinder plug and anti-vibrating: female
  - male

Crimping tool		Section mm <sup>2</sup> (AWG)									
Type	Code	0,1 (27)	0,25 (22)	0,5 (20)	0,75 (18)	1 (17)	1,5 (16)	2,5 (14)	4 (12)	6 (10)	
in-line	manual	HB	536								
		CRIM	534 5305 (kit)								
	pneumatic	CRIMDEM	5341 5345 (kit)								
		parallel	53P02H								
			53P000 + 53M02H 53KPBF (kit)								
		1661 + 534D									
		lateral	manual	CRIM	532						
				CRIMPAR	53P000+53M02F						

# CRIMPING TOOL GUIDE

## FOR C-SHUNT

- copper bright
- tinned

Crimping tool		Section mm <sup>2</sup> (AWG)																
Type	Code	6 (10)	10 (8)	16 (6)	25 (4)	35 (2)	50 (1/0)	70 (2/0)	95 (3/0)	120 (4/0)	150 (300)	185 (400)	240 (500)	300 (600)	400 (800)	500 (1000)	630 (1250)	
manual	long handles	529																
		582 + series 82																
hydraulic	50 kN	182/182P (*) + series 82																
		1823/1824 (*) + series 82																
		1823P + series 82																
		1823A1/A2/A3/A4 + series 82																
		200 + series 82																
		200PA + series 82																
	60 kN	1833/1833A1 + series 83																
	80 kN	183/183P (*) + series 83																
	120 kN	184P/184PL + series 84																
	125 kN	184 (*) + series 84																
130 kN	186 + series 84																	
battery	55 kN	37A055/37A055A1 + series 83																
	60 kN	383 (*) + series 83																
	62 kN	38A062 + series 85																
	120 kN	384 (*) + series 84																
	130 kN	38A130 + series 84																
head		38A130L + series 84																
	55 kN	200A + series 82																
	60 kN	283 (*) + series 83																
	80 kN	2833 + series 83																
	120 kN	284/284L + series 84																
		286 + series 84																

(\*) item running out

## DEFINITIONS

Term	Definition	Reference
BARREL (OF TERMINAL LUG, CONNECTOR, ETC)	Part of a device into which the conductor to be connected is introduced.	IEV 461-17-06
CLASS 1 CONDUCTORS	Copper or aluminium solid conductors with circular or shaped cross-section for single-core and multi-core cables.	EN 60228
CLASS 2 CONDUCTORS	Copper or aluminum stranded (multiple wires) circular non-compacted (wires with the same circular section) or circular compacted (wires with different circular sections) or shaped for single-core and multiple-core cables.	EN 60228
CLASS 5 CONDUCTORS	Copper flexible conductors (multiple wires) with wires with the same circular section for single-core and multiple-core cables.	EN 60228
CLASS 6 CONDUCTORS	Copper flexible conductors (which are more flexible than class 5 conductors) with wires with the same circular section for single-core and multiple-core cables.	EN 60228
COMPRESSION JOINTING	Method of securing a connector to a conductor by using a special tool to produce permanent deformation of connector and conductor.	---
MECHANICAL JOINTING	Method of securing a connector to a conductor, for example by means of a bolt or screw working on the latter or by alternative methods.	---
CONNECTOR (CABLES)	Metallic device for connecting a conductor to an equipment terminal or for connecting two or more conductors to each other.	EN 61238-1
INSULATION PIERCING CONNECTOR (IPC)	Connector in which the electrical contact with the conductor is made by metallic protusions which pierce the insulation of the cable core.	IEV 461-11-08
BRANCH CONNECTOR	Metallic device for connecting a branch conductor to a main conductor at an intermediate point on the latter.	IEV 461-17-05
TERMINAL LUG	Metallic device to connect a cable conductor to other electrical equipment.	IEV 461-17-01
CORRENTE NOMINALE	Valore di corrente assegnato dal costruttore, che il connettore può portare con continuità (senza interruzione) e contemporaneamente attraverso tutti i suoi contatti, cablati con il conduttore specificato di più elevata Section, preferibilmente ad una temperatura ambiente di 40°C, senza che sia superata la temperatura limite superiore.	EN 61984
MULTIWAY TERMINAL DEVICE	Connecting device that is made of several terminals, insulated from each other in a common housing of insulation material, which can be split by the user to make connecting devices with one or more terminals.	EN 60998-1
CLEARANCE	Shortest distance between two conductive parts or between a conductive part and the device accessible surface.	EN 60335-1
CABLE TIE	Band or length of material, employing a docking device, used for bundling or tying groups of cables together, securing and/or supporting the cables.	EN 62275
THROUGH CONNECTOR	Metallic device for connecting two consecutive lengths of a conductor.	IEV 461-17-04
TERMINAL BLOCK	Assembly of terminals in a housing or body of insulating material to facilitate the interconnection among multiple conductors.	IEV 581-26-26
FLAT QUICK-CONNECT TERMINAL	Electrical connection consisting of a male tab and a female connector, which can be inserted and withdrawn with or without a tool.	EN 61210
PALM (OF A TERMINAL LUG)	Part of a terminal lug used for the connection to an electrical equipment.	IEV 461-17-07
CABLE GLAND	A device designed to allow the entry of a cable, a flexible cable or an insulated conductor in a casing and to provide sealing and tightness.	EN 62444
RATED IMPULSE VOLTAGE	Voltage derived from the rated voltage and the overvoltage category of the devices, characterizing the specified resistance capability of its insulation against transient overvoltages.	EN 60335-1
RATED VOLTAGE	Value of voltage assigned by the manufacturer to the connector and to which operation and performance characteristics are referred.	EN 61984
RATED INSULATION VOLTAGE	r.m.s. withstand voltage value assigned by the manufacturer to the connector, characterizing the specified (long term) withstand capability of its insulation. The rated insulation voltage is not necessarily equal to the rated voltage, which is primarily related to functional performance.	EN 61984

## STANDARDS

Standard	Title
DIN 46228-1	Tubular ferrules without plastic sleeve.
DIN 46228-4	Tubular ferrules with plastic sleeve.
DIN 46234	Terminal ends for solderless connections; ring type without insulation sleeve for copper conductors.
DIN 46235	Cable lugs for compression connections for copper conductors > 6 mm <sup>2</sup> .
DIN 46267-1	Uninsulated connectors not resistant to high tensile stress for copper conductors > 6 mm <sup>2</sup> .
DIN 48083-1	Dies for pressure connections; mechanical presses with nominal compressive force up to 15 and to 60 kN. Fitting dimensions.
DIN 48083-3	Dies for pressure connections; hydraulic presses with nominal compressive force up to 300, up to 450 and up to 1000 kN. Fitting dimensions.
DIN 48083-4	Press dies for compression connections; dimensions of the hexagonal pressing shapes.
DIN 48201-1	Copper stranded conductors.
DIN 48201-5	Aluminium stranded conductor.
EN 60228	Conductors for insulated cables.
EN 60335-1	Household and similar electrical appliances – Safety. Part 1: General requirements.
EN 60352-2	Solderless connections. Part 2: Crimped connections – General requirements, test methods and practical guidance.
EN 60454-3-1	Pressure-sensitive adhesive tapes for electrical purposes. Part 3: Specifications for individual materials. Sheet 1: PVC film tapes with pressure-sensitive adhesive.
EN 60695-2-10	Fire hazard testing. Part 2-10: Glowing/hot-wire based test methods. Glow-wire apparatus and common test procedure.
EN 60695-2-11	Fire hazard testing. Part 2-11: Glowing/hot wire based tests methods – Glow-wire flammability test method for end products.
EN 60695-2-12	Fire hazard testing. Part 2-12: Glowing/hot wire based tests methods. Glow-wire flammability test method for materials.
EN 60947-1	Low-voltage switchgear and controlgear. Part 1: General uses
EN 60947-7-1	Low-voltage switchgear and controlgear. Part 7-1: Ancillary equipment – Terminal blocks for copper conductors.
EN 60998-1	Connecting devices for low-voltage circuits for household and similar purposes. Part 1: General requirements.
EN 60998-2-1	Connecting devices for low-voltage circuits for household and similar purposes. Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units.
EN 61210	Connecting devices – Flat quick-connect terminations for electrical copper conductors – Safety requirements
EN 61386-1	Conduit systems for cable management. Part 1: General requirements.
EN 61386-21	Conduit systems for cable management. Part 21: Particular requirements – Rigid conduit systems.
EN 61984	Connectors - Safety requirements and tests.
EN 62275	Cable management systems. Cable ties for electrical installations.
EN 62444	Cable glands for electrical installations.
UL 310	Quick-Connect Terminals.
UL 486A-486B	Wire connectors
UL 486C	Splicing Wire Connectors
UL 486F	Bared and Covered ferrules



## RETIE CERTIFIED CODES

### Terminals

00107, 00113, 00114, 00119, 00120, 00125, 00126, 00130, 00131, 00132, 00137, 00140, 00143, 00145, 00148, 00150, 00151, 00160, 00180, 00190, 00191, 00192, 00193, 00198, 00208, 00213, 00214, 00219, 00220, 00225, 00226, 00230, 00231, 00231B, 00232, 00234, 00237, 00240, 00244, 00245, 00248, 00250, 00251, 00252, 00260, 00280, 00290, 00291, 00292, 00298, 00313, 00314, 00319, 00319B, 00320, 00325, 00326, 00330, 00331, 00332, 00337, 00338, 00340, 00343, 00350, 00352, 00360, 00380, 00390, 00391, 00392, 00395, 00419, 00431, 00438, 00450, 00512, 00520, 00521, 00525, 00531, 00537, 00549, 00562, 00637, 00737, 01002, 01005, 01016, 01017, 01018, 01119, 01120, 01126, 01149, 01191, 01225, 012251, 01226, 01280, 01290, 01319, 013251, 013311, 01390, 01391, 01401, 01411, 01419, 01431, 01437, 01443, 01460, 01525, 01531, 015319, 01537, 01543, 01549, 01560, 01625, 01631, 016319, 01637, 01643, 01649, 01660, 01731, 01737, 017379, 01743, 01749, 01760, 01831, 01837, 01843, 01849, 01860, 01931, 01937, 01943, 01949, 01960, 02145, 02290, 02437, 02443, 02449, 02837, 03137, 03143, 03149, 03155, 03160, 03237, 03243, 03249, 03260, 03343, 03349, 03360, 03449, 03455, 03460, 03461, 03549, 03555, 03560, 03561, 03649, 03661, 03761, 03767, 03861, 03867, 60015, 60025, 60120, 60130, 60142, 60225, 61015, 61020, 61025, 61125, 61130, 61142, 61225, 61230, 70004, 70005, 70007, 71537, 71637, 71643, 71737, 71743, 71843, 71943, 73035, 73125, 73143, 73149, 73202, 73203, 73204, 73208, 73210, 73240, 73249, 74015, 76017, 76026, 80180, 80191, 80280, 80291, 80380, 80392, 80431, 81760, 91103, 91104, 91105, 91205

### Screw connections

5160, 5161, 5162, 5163, 5164, 5165, 5166, 5167, 5168, 5251, 5252, 5253, 5261, 5262, 5263, 5264, 5266

### Terminal blocks

00110, 00170, 00210, 00270, 00310, 00370, 092, 92/2, 9200, 9201, 9202, 9203, 9204, 94CS2, 94CS3, 9517, 9518, 9520, 9521, 9523, 9524, 95262, 95GF/2, 95GF3, 975, 9904, 9905, 9906, 9907, 9911, 9915, 9926, 996, 997, 998, 9981, 99811, 9982, 99821, 9983, 999, M092, M093, M094, M095, M9023, M9024, M9033, M9034, M9053, M9054, M93CS, M95CS, M95GF

### Cable glands

24592, 24692, 2507, 2509, 2511, 2513, 2516, 2520, 2521, 2525, 2529, 2532, 2536, 2540, 2542, 2548, 2599, 2600, 2601, 2602, 2603, 2696, 2697, 2698, 2699, 2700, 2701, 2702, 2703, 2704, 2705, 2720, 2725, 2732, 2740, 2832, 2840, 3451, 3452, 3453, 3454, 3455, 3461, 3462, 3463, 3464, 3465, 3597, 3598, 3599, 3600, 3601, 3602, 3620, 3622, 3623, 3624, 3697, 3698, 3699, 3700, 3701, 3702, 4597, 4598, 4599, 4600, 4601, 4602, 4612, 4616, 4620, 4625, 4650, 4712, 4807, 4809, 4811, 4812, 4813, 4816, 4817, 4820, 4821, 4825, 4829, 4832, 4836, 4842, 4848, 4850, 4863, 4907, 4909, 4911, 4912, 4913, 4916, 4917, 4920, 4921, 4925, 4929, 4932, 4936, 4942, 4948, 4950, 4963



## APPROXIMATE CORRESPONDENCE BETWEEN SECTIONS OF THE AMERICAN AND EUROPEAN STANDARD

American Standard sections			European standard sections
AWG	MCM	(mm <sup>2</sup> )	mm <sup>2</sup>
30	-	0,0507	-
29	-	0,0647	-
28	-	0,0804	0,08
27	-	0,102	0,1
26	-	0,128	0,14
25	-	0,162	-
24	-	0,205	0,2 - 0,25
23	-	0,259	0,25
22	-	0,324	0,34
21	-	0,412	-
20	-	0,519	0,5
19	-	0,653	-
18	-	0,823	0,75 - 1
17	-	1,04	1
16	-	1,31	-
15	-	1,65	1,5
14	-	2,08	-
13	-	2,63	2,5
12	-	3,31	-
11	-	4,17	4
10	-	5,26	-
9	-	6,63	6
8	-	8,37	-
7	-	10,6	10
6	-	13,3	-
5	-	16,8	16
4	-	21,2	-
3	-	26,7	25
2	-	33,6	35
1	-	42,4	-
1/0 (0)	-	53,5	50
2/0 (00)	-	67,4	70
3/0 (000)	-	85,0	95
4/0 (0000)	-	107,2	-
-	250	127	120
-	300	152	150
-	350	177	-
-	400	203	185
-	500	253	240
-	600	304	300
-	700	355	-
-	800	405	400
-	900	456	-
-	1000	507	500
-	1250	633	630
-	1500	760	800
-	1750	887	-
-	2000	1010	1000

The table shows the approximate correspondences between the sections of the American standard and the European ones.

### NOTE

American and European standards provide normalized sections.

The American standard defines the normalized cross sections of conductors in AWG (American Wire Gauge) and MCM (short for thousands of circular mils or kcmil). These sections are reported respectively in the first and second columns of the table.

All sections of the American standard can be expressed in cmil, but for all practical purposes only the sections starting from 250 kcmil are expressed in kcmil (1 MCM = 1kcmil = 1000 cmil), while the lower sections are expressed in AWG. The American standard also provides both even and odd AWG, but only few manufacturers have cables with odd AWG sections in their catalog. The third column shows the equivalences in mm<sup>2</sup> (exact correspondences) of the American standard section. These equivalences are taken from UL 1581 (Reference Standard for Electrical Wires, Cables, and Flexible Cords).

The European standard is based on the metric system and defines the normalized cross-sections of conductors in square millimeters (mm<sup>2</sup>). These sections are in the fourth column of the table and are taken from the EN 60228 standard for sections greater than 0,5 mm<sup>2</sup>.

As you can see, there is no exact correspondence between the normalized sections of the two standards. This means that there are only approximate matches and that each approximation is either over or under. For example, the European standard section of 1,5 mm<sup>2</sup> can be approximated up or down by the American harmonized sections AWG 15 and AWG 16.

BM terminal lugs have been designed to be used with both native European and American conductors. For this reason, the normalized section of the conductor is specified for each terminal according to both standards. From terminal selection point of view, following cases may arise:

- 1) Terminal selection for a European standard cable
- 2) Terminal selection for an American standard cable

To select the terminal, look at conductor section and look for this value in the "mm<sup>2</sup>" column for the European standard cable and in the "AWG / MCM" column for the American standard cable.

When you need to replace a European standard cable with an American standard cable or vice versa, you must first find the corresponding cable section based on the design specifications and then select the terminal based on that section.

## CONDUCTOR RESISTENCE VALUES

Normalized section of the conductor			Exact conversion	Resistance
mm <sup>2</sup>	AWG	MCM	mm <sup>2</sup>	W/km
-	30	-	0,0507	347
-	29	-	0,0647	271
-	28	-	0,0804	218
-	27	-	0,102	172
-	26	-	0,128	138
-	25	-	0,162	108
-	24	-	0,205	85,9
-	23	-	0,259	67,9
-	22	-	0,324	54,3
-	21	-	0,412	42,7
0,5	-	-	0,500	39,0
-	20	-	0,519	33,9
-	19	-	0,653	26,9
0,75	-	-	0,750	26,0
-	18	-	0,823	21,4
1,0	-	-	1,00	19,5
-	17	-	1,04	16,9
-	16	-	1,31	13,5
1,5	-	-	1,50	13,3
-	15	-	1,65	10,6
-	14	-	2,08	8,45
2,5	-	-	2,50	7,98
-	13	-	2,63	6,69
-	12	-	3,31	5,31
4	-	-	4,00	4,95
-	11	-	4,17	4,22
-	10	-	5,26	3,343
6	-	-	6,00	3,300
-	9	-	6,63	2,652
-	8	-	8,37	2,102
10	-	-	10,0	1,910
-	7	-	10,6	1,667
-	6	-	13,3	1,323
16	-	-	16,0	1,210
-	5	-	16,8	1,049
-	4	-	21,2	0,8315
25	-	-	25,0	0,7800
-	3	-	26,7	0,6595
-	2	-	33,6	0,5231
35	-	-	35,0	0,5540
-	1	-	42,4	0,4146
50	-	-	50,0	0,3860
-	1/0 (0)	-	53,5	0,3287
-	2/0 (00)	-	67,4	0,2608
70	-	-	70,0	0,2720
-	3/0 (000)	-	85,0	0,2069
95	-	-	95,0	0,2060
-	4/0 (0000)	-	107,2	0,1640
120	-	-	120	0,1610
-	-	250	127	ns
150	-	-	150	0,1290
-	-	300	152	ns
-	-	350	177	ns
185	-	-	185	0,1060
-	-	400	203	ns
240	-	-	240	0,0801
-	-	500	253	ns
300	-	-	300	0,0641
-	-	600	304	ns
-	-	700	355	ns
400	-	-	400	0,0486
-	-	800	405	ns
-	-	900	456	ns
500	-	-	500	0,0384
-	-	1000	507	ns
630	-	-	630	0,0287
-	-	1250	633	ns
-	-	1500	760	ns
-	-	1750	887	ns
-	-	2000	1010	ns

The table shows the resistance values for the normalized sections of the European standard expressed in square millimeters (mm<sup>2</sup>) and normalized sections of the American standard expressed in AWG (American Wire Gauge) and MCM (short for thousands of circular mils or kcmil).

### NOTES

















The resistances of the European normalized sections are taken from the EN 60228 standard starting from 0.5 mm<sup>2</sup>, while the resistances of the American normalized sections are taken from the UL 1581 standard (Reference Standard for Electrical Wires, Cables, and Flexible Cords). In both cases, the resistances are for bare conductors at 20° C. The acronym 'ns' stands for 'not specified'.

The European and American standard have normalized sections, however there is no exact correspondence between the normalized sections of the two standards. This means that replacing a native mm<sup>2</sup> cable with a native AWG/MCM cable always involves oversizing or undersizing and vice versa. The replacement is therefore not an automatic operation but must be performed from time to time according to the application and project specifications.

The conductor resistance value is a fundamental parameter for evaluating the different impact of the Joule effect as the conductor section changes.

## DEGREE OF PROTECTION PROVIDED BY CASING (IP CODE)

IP degree ranks and evaluates the degree of protection provided by casings against the intrusion of solid particles (such as objects and dust) and the access of fluids, according to EN 60529. The IP degree is given by the combination of the first and the second digit of the following tables.

1° DIGIT GRADE OF PROTECTION AGAINST SOLID OBJECTS			2° DIGIT DEGREE OF PROTECTION AGAINST WATER	
MEANING FOR THE PROTECTION OF EQUIPMENT	DEGREE	MEANING FOR THE PROTECTION OF PEOPLE	DEGREE	MEANING FOR THE PROTECTION OF EQUIPMENT
No protection	 <b>0</b>		 <b>0</b>	No protection
Protection against solid objects with a diameter up to 50 mm	 <b>1</b>	Protection against contact with large areas of the body (e.g. back of the hand)	 <b>1</b>	Protection against vertically falling drops of water (e.g. condensation) for 10 minutes
Protection against solid objects with a diameter up to 12.5 mm	 <b>2</b>	Protection against contact with fingers	 <b>2</b>	Protection against direct sprays of water up to 15 degrees from the vertical for 2.5 minutes for each position
Protection against solid objects with a diameter up to 2.5 mm	 <b>3</b>	Protection against tools and wires with a diameter over 2.5 mm	 <b>3</b>	Protection against direct sprays of water up to 60 degrees from the vertical for 10 minutes
Protection against solid objects with a diameter up to 1 mm	 <b>4</b>	Protection against tools and wires with a diameter over 1 mm	 <b>4</b>	Protection against water sprayed from all directions for 10 minutes
Protection against dust: limited ingress (i.e. no harmful deposit)	 <b>5</b>	Dust protection	 <b>5</b>	Protected against low-pressure jets of water from all directions for at least 3 minutes
Total protection against dust	 <b>6</b>	Dust protection	 <b>6</b>	Protected against strong jets of water from all directions for at least 3 minutes
			 <b>7</b>	Protected against the effect of immersion between 15 cm and 1 m for 30 minutes
			 <b>8</b>	Protected against the conditions given by the manufacturer, which must be stricter than for digit 7

# ANALYTICAL INDEX

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
00101	18	00262	27	00444	81	00544	81	006431	77	00831	82	01066	125
00102	21	00270	28	004491	77	00547	81	006431	79	008311	77	01068	125
00105	29	00280	31	004491	79	00549	81	00644	81	008314	79	01069	125
00107	18	00290	29	00450	84	005491	77	00649	81	00832	82	01101	41
001071	81	00291	30	00470	28	005491	79	006491	77	00837	82	01102	42
00108	21	00292	30	00500	44	00550	84	006491	79	008371	77	01107	41
00109	18	00293	30	005001	44	00551	47	006492	81	008374	79	011071	48
00110	28	00298	29	005002	44	00552	47	00650	84	00838	82	01108	42
00113	18	00310	28	005003	44	00553	47	00651	47	00843	82	01113	41
00114	21	00313	18	005004	44	005531	47	00652	47	008431	77	01114	42
00119	18	00314	21	005005	44	00554	47	00653	47	008434	79	01119	41
001191	81	00319	18	00501	44	00555	47	006531	47	00844	82	011191	48
00120	21	003191	81	005011	44	005551	47	00654	47	00849	82	01120	42
00125	18	00320	21	005012	44	005552	47	00655	47	008491	77	01125	41
001251	81	00325	18	00502	44	00556	47	006551	47	008494	79	011251	48
00126	21	003251	81	005021	44	00557	47	006552	47	00852	82	01126	42
00130	33	00326	21	005022	44	005571	47	00656	47	00855	82	01131	41
00131	18	00330	33	005023	44	00558	47	00657	47	008551	77	011311	48
001311	81	00331	18	00503	44	00559	47	006571	47	00856	82	01132	42
00132	21	003311	81	005031	44	00560	47	00661	47	009314	79	01137	41
00137	18	00332	21	005032	44	00561	47	00662	47	00937	82	01143	41
00140	32	00337	18	005033	44	00562	47	00663	47	009371	77	01145	35
00143	18	003371	81	00504	44	00563	47	00700	101	009374	79	01146	35
00145	29	00338	21	005041	44	00600	100	00701	44	00943	82	01148	35
00148	29	00340	32	005042	44	00601	44	00702	44	009431	77	01149	35
00150	23	00343	18	005043	44	006011	44	007021	44	009434	79	01150	42
00151	23	003431	81	00505	44	006012	44	007022	44	00949	82	01151	42
00152	25	00344	21	00506	44	00602	44	007023	44	009491	77	01160	64
00153	25	00350	23	005061	45	006021	44	007034	44	009494	79	01162	64
00160	26	00352	25	005062	44	006022	44	007036	44	00955	82	01180	37
00162	27	00353	25	00507	45	006023	44	00706	44	009551	77	01181	37
00170	28	00360	26	00508	45	00603	44	007061	45	009554	79	01190	35
00180	31	00362	27	005081	45	006031	44	00707	45	00961	82	01191	35
00190	29	00370	28	00509	45	006032	44	007071	44	009611	77	01195	36
00191	30	00380	31	00510	45	006033	44	00708	45	009614	79	01196	36
00192	30	00390	29	00511	45	00604	44	007081	45	01002	37	01198	36
00193	30	00391	29	00512	45	006041	44	00709	45	01005	37	01199	36
00198	29	00392	30	00513	45	006042	44	00710	45	01009	37	01201	41
00201	18	00393	29	00514	45	006043	44	00711	45	01011	38	01202	42
00202	21	00395	29	00515	45	00605	44	00712	45	01013	38	01207	41
00205	29	00405	385	00516	45	00610	45	00713	45	01014	38	01208	42
00207	18	00410	126	005161	45	00611	45	00714	45	01016	38	01213	41
00208	21	00411	94	005162	45	00612	45	00715	45	01017	38	01214	42
00209	18	00412	95	00517	45	00613	45	00716	45	01018	39	01219	41
00210	28	00413	96	005171	45	00614	45	007161	45	01019	39	012191	48
00213	18	00417	97	005172	45	00615	45	007162	45	01020	38	01220	42
00214	21	00419	81	00518	45	00616	45	00731	81	01021	38	01225	41
00219	18	004191	77	005181	45	006161	45	007311	77	01022	39	012251	48
002191	81	004191	79	00519	45	006162	45	007314	79	01023	39	01226	42
00220	21	00420	81	00520	45	006163	45	00732	81	01031	124	01231	41
00225	18	004201	83	00521	45	00617	45	00737	82	01032	124	012311	48
002251	81	00421	85	00522	45	006171	45	007371	77	01033	124	01232	42
00226	21	00422	85	005231	83	006172	45	007374	79	01033R	124	01237	41
00230	33	00423	86	00525	81	006173	45	00738	82	01034	124	01243	41
00231	18	00424	86	005251	77	00618	45	00743	82	01036	124	01250	42
002311	81	004261	83	005251	79	006181	45	007431	77	01039	124	01251	42
00232	21	00431	81	00526	81	00625	81	007434	79	01041	124	01260	64
00234	33	004311	77	005261	83	006251	77	00744	82	01042	124	01262	64
00237	18	004311	79	00531	81	006251	79	00749	82	01043	124	01280	37
00240	32	00432	81	005311	77	00626	81	007491	77	01043R	124	01281	37
00243	18	00437	81	005311	79	00631	81	007494	79	01044	124	01290	35
00244	32	004371	77	00532	81	006311	77	00752	82	01046	124	01291	35
00245	29	004371	79	00537	81	006311	79	00753	47	01049	124	01295	36
00248	29	00438	81	005371	77	00632	81	007533	47	01060B	125	01296	36
00250	23	00441	98	005371	79	00637	81	00758	47	01060N	125	01298	36
00251	23	00442	99	00538	81	006371	77	00760	47	01060R	125	01299	36
00252	25	00443	81	00543	81	006371	79	00761	47	01060V	125	01313	41
00253	25	004431	77	005431	77	00638	81	00762	47	01064	125	01314	42
00260	26	004431	79	005431	79	00643	81	00763	47	01065	125	01319	41

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
013190	48	01421	73	01549	56	018431	50	02230	123	03161	49	034439	52
013191	48	014211	74	015491	50	018433	57	02240	123	031611	50	03449	49
01320	42	01426	83	0154945	54	018434	56	02280	37	031614	56	034491	50
01325	41	01431	48	015499	52	0184345	54	02281	37	0316145	54	034493	57
013250	48	01431	56	01550	84	018439	52	02290	35	031619	52	034494	57
013251	48	014311	50	01560	64	01849	48	02291	35	03237	49	0344945	54
01326	42	0143145	54	01625	48	018491	50	02295	36	032371	50	034499	52
01331	41	014319	52	01625	56	018494	56	02296	36	032373	57	03455	49
013310	48	01437	48	016251	50	0184945	54	02298	36	032374	56	034551	50
013311	48	01437	56	0162545	54	018499	52	02299	36	0323745	54	034554	57
01332	42	014371	50	016259	52	01850	84	02300	35	032379	52	0345545	54
01337	41	0143745	54	01631	48	01855	48	02391	35	03243	49	034559	52
013370	48	014379	52	01631	56	018551	50	02395	35	032431	50	03460	64
013371	48	01443	48	016311	50	0185545	54	02396	35	032433	57	03461	49
01338	42	01443	56	0163145	54	018559	52	02425	59	032434	56	034611	51
01343	41	014431	50	016319	52	01860	64	02431	59	0324345	54	034614	57
013431	48	0144345	54	01637	48	01931	48	02437	59	032439	52	0346145	55
01344	42	014439	52	01637	56	019311	50	02443	59	03249	49	034619	53
01350	42	01449	48	016371	50	019313	57	02449	59	032491	50	03467	49
01360	64	01449	56	0163745	54	019314	56	02525	59	032494	56	034671	51
01362	64	014491	50	016379	52	0193145	54	02531	59	0324945	54	034674	57
01390	35	0144945	54	01643	48	019319	52	02537	59	032499	52	0346745	55
01391	35	014499	52	01643	56	01937	48	02543	59	03255	49	034679	53
01395	35	01450	84	016431	50	019371	50	02549	59	032551	50	03543	49
01396	35	01460	64	0164345	54	019374	56	02561	59	032554	56	035431	51
01400	73	01501	43	016439	52	0193745	54	02631	59	0325545	54	03549	49
014001	74	01502	43	01649	48	019379	52	02637	59	032559	52	035491	51
01401	73	01503	43	01649	56	01943	48	02643	59	03260	64	035493	57
014011	74	01504	43	016491	50	019431	50	02649	59	03261	49	0354945	55
01402	73	01505	43	0164945	54	019433	57	02655	59	032611	50	035499	53
014021	74	01506	43	016499	52	019434	56	02661	59	032614	56	03555	49
01403	73	01507	43	01650	84	0194345	54	02731	59	0326145	54	035551	51
014031	74	01508	43	01660	64	019439	52	02737	59	032619	52	0355545	55
01404	73	01509	43	01731	48	01949	48	02743	59	03337	49	035559	53
014041	74	01510	43	017311	50	019491	50	02749	59	033371	50	03560	64
01405	73	01511	43	017313	57	019494	56	02755	59	033373	57	03561	49
014051	74	01512	43	017314	56	0194945	54	02761	59	033374	56	035611	51
01406	73	01513	43	0173145	54	019499	52	02837	59	0333745	54	0356145	55
014061	74	01514	43	017319	52	01950	84	02843	59	033379	52	035619	53
01407	73	01515	43	01737	48	01955	48	02849	59	03343	49	03567	49
014071	74	01516	43	017371	50	019551	50	02855	59	033431	50	035671	51
01408	73	01517	43	017374	56	019554	56	02861	59	033433	57	0356745	55
014081	74	01518	43	0173745	54	0195545	54	02937	59	033434	56	035679	53
01409	73	01519	43	017379	52	019559	52	02943	59	0334345	54	03649	49
014091	74	01520	43	01743	48	01960	64	02949	59	033439	52	036491	51
01410	73	01521	43	017431	50	01961	48	02955	59	03349	49	03655	49
014101	74	01523	83	017434	56	019611	50	03137	49	033491	50	036551	51
01411	73	01525	48	0174345	54	019614	56	031371	50	033494	56	03660	64
014111	74	01525	56	017439	52	0196145	54	031373	57	0334945	54	03661	49
01412	73	015251	50	01749	48	019619	52	031374	56	033499	52	036611	51
014121	74	0152545	54	017491	50	02002	37	0313745	54	03355	49	03667	49
01413	73	015259	52	017494	56	02005	37	031379	52	033551	50	036671	51
014131	74	01526	83	0174945	54	02009	37	03143	49	033554	56	03669	49
01414	73	01531	48	017499	52	02011	38	031431	50	0335545	54	036691	51
014141	74	01531	56	01750	84	02013	38	031433	57	033559	52	03749	49
01415	73	015311	50	01760	64	02014	38	031434	56	03360	64	037491	51
014151	74	0153145	54	01831	48	02050	84	0314345	54	03361	49	03755	49
01416	73	015319	52	018311	50	02145	35	031439	52	033611	50	037551	51
014161	74	01537	48	018313	57	02146	35	03149	49	033614	56	03760	64
01417	73	01537	56	018314	56	02148	35	031491	50	0336145	54	03761	49
014171	74	015371	50	0183145	54	02149	35	031494	56	033619	52	037611	51
01418	73	0153745	54	018319	52	02180	37	0314945	54	03367	49	03767	49
014181	74	015379	52	01837	48	02181	37	031499	52	033671	50	037671	51
01419	48	01543	48	018371	50	02190	35	03155	49	033674	56	03769	49
01419	56	01543	56	018373	57	02191	35	031551	50	0336745	54	037691	51
014191	50	015431	50	018374	56	02195	36	031554	56	033679	52	03860	64
0141945	54	0154345	54	0183745	54	02196	36	0315545	54	03443	49	03861	49
014199	52	015439	52	018379	52	02198	36	031559	52	034431	50	038611	51
01420	83	01549	48	01843	48	02199	36	03160	64	0344345	54	03867	49

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
038671	51	05449	82	1166	360	1555	378	1817	383	183495	269	184670	270
03960	64	054491	77	1167	360	1560	379	1818	385	183512	269	184695	270
03961	49	054494	80	1168	360	1600	290	182010	268	183515	269	184706	270
039611	51	05455	82	1169	360	161	290	182015	268	183550	269	184710	270
03967	49	054551	77	1171	361	1610	374	182016	268	183570	269	184712	270
039671	51	054554	80	1181	361	16187	289	182018	268	183595	269	184715	270
04137	59	05461	82	1182	361	162	290	182024	268	183612	269	184716	270
04143	59	054611	77	1183	361	1620	373	182025	268	183615	269	184718	270
04149	59	054614	80	1184	361	16201	373	182035	268	183650	269	184724	270
04155	59	05467	82	1185	361	16202	373	182110	268	183670	269	184725	270
04161	59	054671	77	1190	360	16203	373	182116	268	183695	269	184730	270
04243	59	054674	80	1191	361	16204	373	182125	268	183704	269	184735	270
04249	59	05549	82	1194	358	16205	373	182135	268	183706	269	184740	270
04255	59	055491	78	1195	358	16206	373	182150	268	183710	269	184750	270
04261	59	05555	82	1196	361	16207	373	182170	268	183715	269	184770	270
04267	59	055551	78	1197	358	16208	373	182195	268	183716	269	184795	270
04343	60	05561	82	1211	365	16209	373	182210	268	183718	269	184P	260
04349	60	055611	78	1212	365	1621	373	182225	268	183724	269	184PL	260
04355	60	05567	82	1213	365	1625	374	182235	268	183725	269	185	281
04361	60	055671	78	1220	365	16250	289	182310	268	18400	383	18500	382
04367	60	05649	78	1221	365	163	291	182316	268	184010	270	18500A1	382
05137	82	05661	78	1222	365	1630	372	182325	268	184012	270	185010	271
051371	77	05667	78	1225	366	16301	372	182335	268	184015	270	185012	271
051374	79	1100	202	1232	365	16302	372	1823A1	259	184016	270	185015	271
05143	82	1101	202	1233	365	16303	372	1823A2	259	184018	270	185016	271
051431	77	1105	205	1243	365	16304	372	1823A3	259	184024	270	185018	271
051434	79	1107	123	1251	366	16305	372	1823A4	259	184025	270	185024	271
05149	82	1108	213	1261	366	16306	372	1823P	259	184030	270	185025	271
051491	77	11081	213	1273	366	16307	372	182435	268	184035	270	185030	271
051494	79	11082	213	1274	366	16308	372	182450	268	184040	270	185035	271
05155	82	1112	357	1310	351	1640	374	182495	268	184050	270	185050	271
051551	77	1113	357	1311	351	1650	373	182512	268	184070	270	18506	280
051554	79	1114	357	1320	352	16506	372	182515	268	184095	270	185070	271
05161	82	1115	357	1321	352	16507	372	182550	268	184110	270	18508	280
051611	77	1116	357	1325	351	16508	372	182570	268	184112	270	185095	271
051614	79	1118	357	1330	351	16509	372	182595	268	184115	270	185110	271
05237	82	1120	357	1332	351	16510	372	182612	268	184116	270	185116	271
052371	77	1121	357	1335	353	16511	372	182615	268	184118	270	185125	271
052374	79	1122	357	1340	352	16512	372	182650	268	184124	270	185135	271
05243	82	1123	357	1341	355	16513	372	182670	268	184125	270	185150	271
052431	77	1130	357	1342	355	16514	372	182695	268	184135	270	18516	280
052434	79	1131	357	1344	355	16517	372	183010	269	184150	270	185170	271
05249	82	1132	357	1345	355	16519	372	183016	269	184170	270	18518	280
052491	77	1133	357	1350	353	16522	372	183024	269	184195	270	185195	271
052494	79	1136	353	1351	353	16608	371	183025	269	184210	270	185210	271
05255	82	1140	362	1353	353	1661	289	183035	269	184212	270	185225	271
052551	77	11401	361	1354	353	16610	371	183050	269	184225	270	185235	271
052554	79	11402	362	1354	353	16613	371	183110	269	184235	270	185250	271
05261	82	11403	362	1355	354	16617	371	183116	269	184270	270	185310	271
052611	77	11404	362	1356	354	16698	371	183125	269	184295	270	185316	271
052614	79	11405	362	1357	354	168	285	183135	269	184310	270	185325	271
05337	82	11406	362	1360	355	1710	375	183150	269	184316	270	185424	271
053371	77	11407	362	1361	355	1715	375	183170	269	184325	270	185435	271
053374	79	11408	362	1363	355	1716	375	183195	269	184424	270	185450	271
05343	82	11409	362	1364	355	1720	375	183210	269	184435	270	185495	271
053431	77	1141	363	1370	354	1721	375	183225	269	184450	270	185512	271
053434	79	1142	363	1371	354	1740	375	183235	269	184495	270	185515	271
05349	82	1143	379	1372	354	1760	376	183270	269	184512	270	185550	271
053491	77	1144	379	1410	377	1761	376	183295	269	184515	270	185570	271
053494	79	1151	357	1421	377	1770	376	1833	260	184518	270	185595	271
05355	82	1152	357	1423	377	1771	376	183310	269	184524	270	1856	281
053551	77	1153	357	1424	377	18030	380	183316	269	184530	270	185650	271
053554	79	1154	357	1430	377	18030M1	380	183324	269	184540	270	185670	271
05361	82	1155	357	1431	377	1814	381	183325	269	184550	270	185695	271
053611	77	1156	357	1432	377	1814A1	381	183335	269	184570	270	185706	271
053614	79	1157	357	1551	378	1815	381	183350	269	184595	270	185710	271
05367	82	1161	360	1552	378	1815A1	381	1833A1	260	184612	270	185712	271
053671	77	1162	360	1553	378	1816	382	183435	269	184615	270	185715	271
053674	80	1163	360	1554	378	1816A1	382	183450	269	184650	270	185716	271

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
185718	271	1963	369	2513L	185	2697	186	3598	176	4029LN	175	4711	173
185724	271	1964	369	2516	185	2698	186	3599	176	4029N	172	4711N	173
185725	271	1965	369	2516L	185	2699	186	3600	176	4036	172	4712	167
185730	271	1966	369	2517	182	270	293	3601	176	4036L	175	4712N	167
185735	271	1967	369	2517L	182	2700	186	3602	176	4036LN	175	4713	173
185750	271	1968	369	2520	182	2701	186	3603	176	4036N	172	4713N	173
185770	271	1969	369	2520L	182	2702	186	3604	176	4042	172	4716	173
185795	271	1970	369	2521	185	2703	186	3605	176	4042L	175	4716N	173
186	261	1971	369	2521L	185	2704	186	3696	177	4042LN	175	4717	167
186415	272	1972	368	2525	182	2705	186	3697	177	4042N	172	4717N	167
186424	272	1973	368	2525L	182	2712	183	3698	177	4048	172	4720	167
186470	272	1974	368	2529	185	2716	183	3699	177	4048L	175	4720N	167
186715	272	1975	369	2529L	185	2720	183	3700	177	4048LN	175	4721	173
186724	272	1976	369	2532	182	2725	183	3701	177	4048N	172	4721N	173
186750	272	200	286	2532L	182	2732	183	3702	177	4206	189	4725	167
186770	272	200A	287	2536	185	2740	183	3703	177	4213	189	4725N	167
186815	272	200CC	288	2536L	185	2750	183	3704	177	4220	189	4729	173
186824	272	200F	288	2540	182	2763	183	3705	177	4228	189	4729N	173
186850	272	200PA	286	2540L	182	2796	187	37A055	263	4238	189	4732	167
186870	272	200PF	286	2542	185	2797	187	37A055A1	263	4307	172	4732N	167
18691	272	200PT	286	2542L	185	2798	187	37T055	277	4309	172	4736	173
18692	272	200T	287	2548	185	2799	187	38A062	264	4311	172	4736N	173
18693	272	22	106	2548L	185	2800	187	38A130	265	4313	172	4740	167
18694	272	23	106	2550	182	2801	187	38A130L	265	4316	172	4740N	167
187	275	2300	109	2550L	182	2802	187	38T130	278	4321	172	4742	173
188	276	2301	109	2563	182	2803	187	39B2AH	266	4329	172	4742N	173
1880	385	2302	109	2563L	182	2804	187	39B2AH	279	4336	172	4748	173
1881	385	2303	109	2596	186	2805	187	39B5AH	266	4342	172	4748N	173
1882	385	2304	109	2597	186	2812	183	39B5AH	279	4348	172	4750	167
1883	385	2305	109	2598	186	2816	183	39C220	266	4596	179	4750N	167
189	276	2350	109	2599	186	2820	183	39C220	279	4596N	179	4763	167
18A1	384	2351	109	2600	186	2825	183	4007	172	4597	179	4763N	167
18A2	384	2352	109	2601	186	2832	183	4007L	175	4597N	179	4807	178
18A3	384	2353	109	2602	186	2833	291	4007LN	175	4598	179	4807N	178
1911	367	2354	109	2603	186	284	292	4007N	172	4598N	179	4809	178
1912	367	2355	109	2604	186	2840	183	4007S	176	4599	179	4809N	178
1913	367	2450	188	2605	186	284L	292	4007SN	176	4599N	179	4811	178
1914	367	2451	188	2612	184	2850	183	4009	172	4600	179	4811N	178
1915	367	2452	188	2616	184	286	292	4009L	175	4600N	179	4812	170
1916	367	2453	188	2620	184	2863	183	4009LN	175	4601	179	4812N	170
1919	367	2454	188	2625	184	287	294	4009N	172	4601N	179	4813	178
1921	367	2455	188	2632	184	288	294	4009S	176	4602	179	4813N	178
1922	367	2456	188	2640	184	289	294	4009SN	176	4602N	179	4816	178
1923	367	2457	188	265	295	301	283	4011	172	4603	179	4816N	178
1924	367	2458	188	2650	184	302	283	4011L	175	4603N	179	4817	170
1925	367	2459	188	2663	184	303	283	4011LN	175	4604	179	4817N	170
1926	367	24592	188	267	295	304	283	4011N	172	4604N	179	4820	170
19261	367	24593	188	26708	295	310	284	4011S	176	4605	179	4820N	170
19262	367	2460	188	26710	295	311	284	4011SN	176	4605N	179	4821	178
1927	367	2461	188	26711	295	312	284	4013	172	4612	171	4821N	178
19271	367	2462	188	26714	295	313	284	4013L	175	4612N	171	4825	170
19272	367	2463	188	26715	295	314	284	4013LN	175	4616	171	4825N	170
1929	367	2464	188	26717	295	320	285	4013N	172	4616N	171	4829	178
1930	370	2465	188	26718	295	321	285	4013S	176	4620	171	4829N	178
1934	370	2466	188	26719	295	322	285	4013SN	176	4620N	171	4832	170
1935	370	2467	188	26722	295	323	285	4016	172	4625	171	4832N	170
1936	370	2468	188	267E	295	324	285	4016L	175	4625N	171	4836	178
1938	370	2469	188	2691	181	3451	181	4016LN	175	4632	171	4836N	178
1939	368	24692	188	269111	227	3452	181	4016N	172	4632N	171	4840	170
1941	369	24693	188	269112	227	3453	181	4016S	176	4640	171	4840N	170
1942	369	2507	185	269113	227	3454	181	4016SN	176	4640N	171	4842	178
1943	370	2507L	185	269114	227	3455	181	4021	172	4650	171	4842N	178
1944	369	2509	185	26912	227	3461	181	4021L	175	4650N	171	4848	178
1949	367	2509L	185	269121	227	3462	181	4021LN	175	4663	171	4848N	178
1950	368	2511	185	269122	227	3463	181	4021N	172	4663N	171	4850	170
1959	368	2511L	185	269123	227	3464	181	4021S	176	4707	173	4850N	170
1960	369	2512	182	26913	226	3465	181	4021SN	176	4707N	173	4863	170
1961	369	2512L	182	26914	226	3596	176	4029	172	4709	173	4863N	170
1962	369	2513	185	2696	186	3597	176	4029L	175	4709N	173	4907	174



Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
49071	174	4963G	171	531D	289	60166	220	70402	71	73240	66	80137	20
4907G	180	4963L	168	532	236	60215	220	70403	71	73243	58	80140	33
4909	174	4963LN	168	532D	289	60220	220	70404	71	73249	58	80143	20
49091	174	4963N	166	533	234	60225	220	70405	71	73255	58	80150	24
4909G	180	500D	289	5331	239	60230	220	70406	71	73261	58	80160	26
4911	174	510	256	534	233	61015	219	70407	71	73300	66	80180	32
49111	174	511	257	5341	238	61017	219	70408	71	73349	58	80191	30
4911G	180	512	257	5345	242	61020	219	70409	71	73355	58	80192	30
4912	166	513	257	534D	289	61025	219	70602	72	73361	58	80193	30
4912G	171	5140	107	535	236	61115	219	70603	72	73367	58	80195	31
4912L	168	5141	107	5351	241	61120	219	70604	72	73400	66	80207	20
4912LN	168	5142	107	535D	289	61125	219	70605	72	73455	58	80208	23
4912N	166	5143	107	536	230	61130	219	70606	72	73461	58	80213	20
4912S	169	5144	108	537	234	61135	219	70607	72	73467	58	80214	23
4912SN	169	5145	108	5371	239	61142	219	70608	72	735	293	80219	20
4913	174	5146	108	5375	251	61157	219	70609	72	73500	66	80220	23
49131	174	5147	108	537D	289	61166	219	71537	58	73555	58	80225	20
4913G	180	5148	108	53816	249	61215	219	716	293	73561	58	80226	23
4916	174	5149	108	5382	250	61220	219	71637	58	73567	58	80230	34
49161	174	5150	108	539	234	61225	219	71643	58	73630	66	80231	20
4916G	180	5151	108	5391	239	61230	219	71737	58	73661	58	80232	23
4917	166	5152	108	539D	289	6311D	253	71743	58	73761	58	80237	20
4917G	171	5153	108	53K000	247	6313D	253	71837	58	75010	68	80240	33
4917L	168	5160	107	53KPBF	246	6314D	253	71843	58	75016	68	80243	20
4917LN	168	5161	107	53L02C	244	6315D	253	71849	58	75017	68	80250	24
4917N	166	5162	107	53M02C	244	6316D	253	71943	58	75025	68	80260	26
4917S	169	5163	107	53M02E	244	6317D	253	71949	58	75035	68	80280	32
4917SN	169	5164	107	53M02F	244	631D	253	71955	58	75050	68	80291	30
4920	166	5165	107	53M02H	244	6321D	253	71961	58	75070	68	80292	30
4920G	171	5166	107	53M03C	244	6322D	253	72025	67	75095	68	80293	30
4920L	168	5167	107	53M2C2	244	634D	253	72035	67	76016	69	80295	31
4920LN	168	5211	105	53M2E1	244	635D	253	72050	67	76017	69	803	117
4920N	166	5212	105	53M5D1	244	636D	253	72070	67	76025	69	80314	23
4920S	169	5213	105	53M5D2	244	6534	252	72095	67	76026	69	80319	20
4920SN	169	5214	105	53M5N1	244	65341	253	72120	67	76035	69	80320	23
4921	174	5215	105	53M5N2	244	65342	253	72150	67	76036	69	80325	20
49211	174	5216	105	53MMC4	244	70000	72	72200	67	76050	69	80326	23
4921G	180	5217	105	53P000	244	70001	72	72240	67	76051	69	80331	20
4925	166	5218	105	53P02E	245	70002	72	72300	67	76070	69	80332	23
4925G	171	5219	105	53P02H	245	70003	72	72400	67	76071	69	80337	20
4925L	168	522	231	53P2E1	245	70004	72	72500	67	76095	69	80338	23
4925LN	168	5220	105	53P5D1	246	70005	72	72630	67	76096	69	80343	20
4925N	166	5221	105	53P5YA	246	70006	72	73025	66	76097	69	80344	23
4925S	169	5222	105	540	231	70007	72	73035	66	76120	69	80350	24
4925SN	169	5223	105	541	232	70008	72	73050	66	76121	69	80360	26
4929	174	523	256	542	232	70009	72	73070	66	76150	69	80380	32
49291	174	524	254	543	236	70010	72	73095	66	76151	69	80390	30
4929G	180	525	254	5431	241	70202	70	73120	66	76152	69	80392	30
4932	166	5251	104	543D	289	70203	70	73125	66	76185	69	80395	30
4932G	171	5252	104	544	355	70204	70	73143	58	76186	69	80401	90
4932L	168	5253	104	549	248	70205	70	73149	58	76187	69	80402	93
4932LN	168	526	255	568	273	70206	70	73150	66	76240	69	80403	89
4932N	166	5261	104	5681	273	70207	70	73155	58	76241	69	80404	92
4936	174	5262	104	570	274	70208	70	73161	58	76242	69	80405	91
49361	174	5263	104	571	275	70209	70	73200	66	770	293	80411	87
4936G	180	5264	104	572	275	70232	70	73201	67	79135	75	80412	88
4940	166	5265	104	575	274	70243	70	73202	67	79235	75	80415	87
4940G	171	5266	104	576	274	70253	70	73203	67	795	293	80416	88
4940L	168	527	256	582	258	70254	70	73204	67	80107	20	80425	61
4940LN	168	528	255	60015	220	70264	70	73205	67	80108	23	804251	62
4940N	166	529	255	60020	220	70265	70	73206	67	80113	20	80431	61
4942G	180	530	231	60025	220	70275	70	73207	67	80114	23	804311	62
4948G	180	5305	237	60115	220	70276	70	73208	67	80119	20	80460	26
4950	166	531	235	60120	220	70284	70	73209	67	80120	23	805	117
4950G	171	5311	235	60125	220	70285	70	73210	67	80125	20	80531	61
4950L	168	5312	235	60130	220	70286	70	73211	67	80126	23	805311	62
4950LN	168	5313	240	60135	220	70287	70	73212	67	80130	34	80537	61
4950N	166	5314	240	60142	220	70297	70	73213	67	80131	20	805371	62
4963	166	5315	240	60157	220	70298	70	73214	67	80132	23	805379	63

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
80543	61	831619	63	90326	22	92204	40	93CS6	136	94CS5	140	95FS5	157
805431	62	83243	61	90331	19	92205	40	93CS7	136	94CS6	140	95FS6	157
805439	63	832431	62	90332	22	92213	40	93CS8	136	94CS7	140	95FS7	157
80560	26	83249	61	90337	19	92214	40	93CS9	136	94CS8	140	95FS8	157
80631	61	832491	62	90343	19	92215	40	93FS1	151	94CS9	140	95FS9	157
806311	62	83260	65	90350	24	92CS1	134	93FS10	151	94FS1	155	95GF1	156
80637	61	83261	61	90360	27	92CS10	134	93FS11	151	94FS10	155	95GF10	156
806371	62	832611	62	90501	46	92CS11	134	93FS2	151	94FS11	155	95GF11	156
80643	61	832619	63	90502	46	92CS2	134	93FS3	151	94FS2	155	95GF2	156
806431	62	83267	61	90503	46	92CS3	134	93FS4	151	94FS3	155	95GF3	156
80649	61	832671	62	90504	46	92CS4	134	93FS5	151	94FS4	155	95GF4	156
806491	62	83343	61	90506	46	92CS5	134	93FS6	151	94FS5	155	95GF5	156
806499	63	833431	62	90601	46	92CS6	134	93FS7	151	94FS6	155	95GF6	156
80660	26	83349	61	90602	46	92CS7	134	93FS8	151	94FS7	155	95GF7	156
80737	61	833491	62	90603	46	92CS8	134	93FS9	151	94FS8	155	95GF8	156
807371	62	83360	65	90604	46	92CS9	134	93GF1	150	94FS9	155	95GF9	156
80743	61	83361	61	90702	46	92FS1	149	93GF10	150	94GF1	154	95GFCS	157
807431	62	833611	62	90706	46	92FS10	149	93GF11	150	94GF10	154	963	143
80749	61	83367	61	91103	40	92FS11	149	93GF2	150	94GF11	154	963CS	143
807491	62	833671	62	91104	40	92FS2	149	93GF3	150	94GF2	154	963T	145
807499	63	83443	61	91105	40	92FS3	149	93GF4	150	94GF3	154	971	144
80837	61	834431	62	91113	40	92FS4	149	93GF5	150	94GF4	154	971CS	145
808371	62	83449	61	91114	40	92FS5	149	93GF6	150	94GF5	154	972	144
80843	61	834491	62	91115	40	92FS6	149	93GF7	150	94GF6	154	972CS	145
808431	62	83460	65	91203	40	92FS7	149	93GF8	150	94GF7	154	973	144
80849	61	83461	61	91204	40	92FS8	149	93GF9	150	94GF8	154	973CS	145
808491	62	834611	62	91205	40	92FS9	149	93GFCS	151	94GF9	154	974	144
808499	63	83467	61	91213	40	92GF1	148	93HCS1	138	94GFCS	155	974CS	145
80861	61	834671	62	91214	40	92GF10	148	93HCS10	138	95/1	141	975	144
808611	62	83549	61	91215	40	92GF11	148	93HCS11	138	95/10	141	975CS	145
80937	61	835491	62	91501	46	92GF2	148	93HCS2	138	95/11	141	9904	217
809371	62	83560	65	91502	46	92GF3	148	93HCS3	138	95/2	141	9905	217
80943	61	83561	61	91503	46	92GF4	148	93HCS4	138	95/3	141	9906	217
809431	62	835611	62	91504	46	92GF5	148	93HCS5	138	95/4	141	9907	218
80949	61	83567	61	91506	46	92GF6	148	93HCS6	138	95/5	141	991	112
809491	62	835671	62	91601	46	92GF7	148	93HCS7	138	95/6	141	9911	218
809499	63	90107	19	91602	46	92GF8	148	93HCS8	138	95/7	141	9915	218
80961	61	90108	22	91603	46	92GF9	148	93HCS9	138	95/8	141	992	112
809611	62	90113	19	91604	46	92GFCS	149	93HFS1	153	95/9	141	9924	112
81001	76	90114	22	91702	46	93/1	135	93HFS10	153	95/16	159	9924Q	113
81002	76	90119	19	91706	46	93/10	135	93HFS11	153	95/17	159	9926	216
81006	76	90120	22	917313	80	93/11	135	93HFS2	153	95/18	159	993	112
81010	76	90125	19	918313	80	93/2	135	93HFS3	153	95/19	159	993Q	113
81016	76	90126	22	918433	80	93/3	135	93HFS4	153	95/20	159	994	112
81025	76	90131	19	919313	80	93/4	135	93HFS5	153	95/21	159	994Q	113
81035	76	90132	22	919433	80	93/5	135	93HFS6	153	95/22	159	995	112
81050	76	90137	19	92/1	133	93/6	135	93HFS7	153	95/23	159	996	114
81070	76	90143	19	92/10	133	93/7	135	93HFS8	153	95/24	159	9960	112
81095	76	90150	24	92/11	133	93/8	135	93HFS9	153	95/261	118	99601	116
81120	76	90151	24	92/2	133	93/9	135	93HGF1	152	95/262	118	9961	112
81150	76	90160	27	92/3	133	931373	80	93HGF10	152	95/263	118	997	115
81185	76	90207	19	92/4	133	931433	80	93HGF11	152	95/264	118	998	114
81240	76	90208	22	92/5	133	932373	80	93HGF2	152	95CS1	142	9981	115
81300	76	90213	19	92/6	133	932433	80	93HGF3	152	95CS10	142	99811	116
81400	76	90219	19	92/7	133	933	146	93HGF4	152	95CS11	142	9982	116
81460	65	90220	22	92/8	133	933373	80	93HGF5	152	95CS2	142	99821	116
81560	65	90225	19	92/9	133	933433	80	93HGF6	152	95CS3	142	9983	115
81660	65	90226	22	9200	129	933GF	158	93HGF7	152	95CS4	142	99831	116
81760	65	90231	19	9201	129	934493	80	93HGF8	152	95CS5	142	9984	114
81860	65	90232	22	9202	129	935	146	93HGF9	152	95CS6	142	99841	116
81960	65	90237	19	9203	129	935493	80	9416	113	95CS7	142	B0824	192
83143	61	90243	19	9204	129	935GF	158	9425	113	95CS8	142	B0901	201
831431	62	90250	24	92103	40	93CS1	136	9435	113	95CS9	142	B0902	201
83149	61	90251	24	92104	40	93CS10	136	94CS1	140	95FS1	157	B0903	201
831491	62	90260	27	92105	40	93CS11	136	94CS10	140	95FS10	157	B0904	202
831499	63	90314	22	92113	40	93CS2	136	94CS11	140	95FS11	157	B0905	200
83160	65	90319	19	92114	40	93CS3	136	94CS2	140	95FS2	157	B0906	200
83161	61	90320	22	92115	40	93CS4	136	94CS3	140	95FS3	157	B1025	192
831611	62	90325	19	92203	40	93CS5	136	94CS4	140	95FS4	157	B1025M	192

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
B1025V0	194	BL3048	195	F0021	317	F2033	339	GBS012BBI	208	GBS064SBL	211	GBS254SBL	211		
B1090	192	BL3748	195	F0022	317	F2034	339	GBS012BBL	208	GBS064SGV	211	GBS254SGV	211		
B1225	192	BL3776	195	F0023	317	F2051	340	GBS012BNE	208	GBS064SNE	211	GBS254SNE	211		
B1225M	192	BP1536	197	F0032	318	F2052	340	GBS012BRO	208	GBS064SRO	211	GBS254SRO	211		
B1248	192	BP2048	197	F0042	319	F2053	340	GBS012BTR	208	GBS064STR	211	GBS254STR	211		
B1290	192	BR1576	196	F0052	318	F2054	340	GBS016BBI	208	GBS095BBI	208	GBS318BBI	209		
B1436	192	BR2076	196	F0062	318	F2081	340	GBS016BBL	208	GBS095BBL	208	GBS318BBL	209		
B1436M	192	BR3076	196	F0073	317	F2082	340	GBS016BNE	208	GBS095BGV	208	GBS318BNE	209		
B1536V0	194	BT11125	198	F0074	317	F2083	340	GBS016BRO	208	GBS095BNE	208	GBS318BRO	209		
B1576	192	BT12248	198	F0092	319	F2084	340	GBS016BTR	208	GBS095BTR	208	GBS318BTR	209		
B1590	192	BT21025	197	F0093	319	F3114	336	GBS016MBL	210	GBS095BRO	208	GBS380BBI	209		
B1625	192	BT22025	197	F0101	328	F3116	336	GBS016MNE	210	GBS095MBL	210	GBS380BBL	209		
B1625M	192	BV2312	203	F0102	328	F3126	336	GBS016MRO	210	GBS095MGV	210	GBS380BGV	209		
B1648	192	BV2319	203	F0103	328	F3128	336	GBS024BBI	208	GBS095MNE	210	GBS380BNE	209		
B1648M	192	BX1025	194	F0111	329	F3131	336	GBS024BBL	208	GBS095MRO	210	GBS380BRO	209		
B1948	192	BX1536	194	F0112	329	F3137	336	GBS024BNE	208	GBS095SBI	211	GBS380BTR	209		
B1948M	192	BX2036	194	F0113	329	F7001	341	GBS024BRO	208	GBS095SBL	211	GBS380SBI	212		
B2025	192	BX2048	194	F0201	320	F7002	341	GBS024BTR	208	GBS095SGV	211	GBS380SBL	212		
B2025M	192	BX3048	194	F0202	320	F7003	341	GBS024MBL	210	GBS095SNE	211	GBS380SGV	212		
B2036	192	BX3848	194	F0203	320	F7004	341	GBS024MNE	210	GBS095SRO	211	GBS380SNE	212		
B2036M	192	BX3876	194	F0211	321	F7011	342	GBS024MRO	210	GBS095STR	211	GBS380SRO	212		
B2036V0	194	EAB1909NE	301	F0212	321	F7012	342	GBS024SBI	211	GBS102BBI	209	GBS380STR	212		
B2048	192	ESB1510BI	298	F0213	321	F7013	342	GBS024SBL	211	GBS102BBL	209	GBS510BBI	209		
B2048M	192	ESB1510BL	298	F0311	322	F7014	342	GBS024SNE	211	GBS102BNE	209	GBS510BBL	209		
B2048V0	194	ESB1510GI	298	F0312	322	F7031	342	GBS024SRO	211	GBS102BRO	209	GBS510BNE	209		
B2076	192	ESB1510GR	298	F0331	323	F7032	342	GBS024STR	211	GBS102BTR	209	GBS510BRO	209		
B2548	192	ESB1510GV	298	F0332	323	F7033	342	GBS032BBI	208	GBS127BBI	208	GBS510BTR	209		
B2548M	192	ESB1510MA	298	F0341	324	F7034	342	GBS032BBL	208	GBS127BBL	208	GBS510SBI	212		
B2936	192	ESB1510NE	298	F0342	324	F7052	343	GBS032BGV	208	GBS127BGV	208	GBS510SBL	212		
B2936M	192	ESB1510RO	298	F0351	323	F7052	343	GBS032BNE	208	GBS127BNE	208	GBS510SGV	212		
B2976	192	ESB1510VE	298	F0352	323	F7053	343	GBS032BRO	208	GBS127BRO	208	GBS510SNE	212		
B3048	192	ESB1525BI	298	F0361	323	F7054	343	GBS032BTR	208	GBS127BTR	208	GBS510SRO	212		
B3048M	192	ESB1525BL	298	F0362	323	F7081	343	GBS032MBL	210	GBS127MBL	210	GBS510STR	212		
B3048V0	194	ESB1525GI	298	F0381	324	F7082	343	GBS032MGV	210	GBS127MGV	210	GBS760BBI	209		
B3736	192	ESB1525GR	298	F0382	324	F7083	343	GBS032MNE	210	GBS127MNE	210	GBS760BBL	209		
B3748	192	ESB1525GV	298	F0411	325	F7084	343	GBS032MRO	210	GBS127MRO	210	GBS760BNE	209		
B3776	192	ESB1525MA	298	F0412	325	F8003	337	GBS032SBI	211	GBS127SBI	211	GBS760BRO	209		
B3848V0	194	ESB1525NE	298	F0431	326	F8004	337	GBS032SBL	211	GBS127SBL	211	GBS760BTR	209		
B3876V0	194	ESB1525RO	298	F0432	326	F8005	337	GBS032SGV	211	GBS127SGV	211	GCP006MGR	225		
B3948	192	ESB1525VE	298	F0441	327	F8006	337	GBS032SNE	211	GBS127SNE	211	GCP006MNE	225		
B4348	192	ESB1925BI	298	F0442	327	F8007	337	GBS032SRO	211	GBS127SRO	211	GCP008MGR	225		
B4390	192	ESB1925BL	298	F0451	326	F8008	337	GBS032STR	211	GBS127STR	211	GCP008MNE	225		
B4576	192	ESB1925GI	298	F0452	326	F8009	337	GBS048BBI	208	GBS190BBI	209	GCP010MGR	225		
B5348	192	ESB1925GR	298	F0461	326	F8010	337	GBS048BBL	208	GBS190BBL	209	GCP010MNE	225		
B5390	192	ESB1925GV	298	F0462	326	F8011	337	GBS048BGV	208	GBS190BGV	209	GCP015MGR	225		
B5476	192	ESB1925MA	298	F0481	327	F8012	337	GBS048BNE	208	GBS190BNE	209	GCP015MNE	225		
B7190	192	ESB1925NE	298	F0482	327	F9032	345	GBS048BRO	208	GBS190BRO	209	GCP020MGR	225		
B7576	192	ESB1925RO	298	F0501	347	F9033	345	GBS048BTR	208	GBS190BTR	209	GCP020MNE	225		
B7890	192	ESB1925VE	298	F0511	347	F9052	345	GBS048MBL	210	GBS190MBL	210	GCP030MGR	225		
B8190	192	ESB2525BI	298	F0521	346	F9053	345	GBS048MGV	210	GBS190MGV	210	GCP030MNE	225		
B9021	119	ESB2525BL	298	F0531	346	F9054	345	GBS048MNE	210	GBS190MNE	210	GCP040MGR	225		
B9022	119	ESB2525GI	298	F1014	332	F9082	345	GBS048MRO	210	GBS190MRO	210	GCP040MNE	225		
B9023	119	ESB2525GR	298	F1034	333	F9084	345	GBS048SBI	211	GBS190SBI	211	M092	133		
B9024	119	ESB2525GV	298	F1054	333	F9085	345	GBS048SBL	211	GBS190SBL	211	M093	135		
B9031	120	ESB2525MA	298	F1084	333	F9087	345	GBS048SNE	211	GBS190SNE	211	M093H	137		
B9032	120	ESB2525NE	298	F1136	330	F9401	344	GBS048SRO	211	GBS190SRO	211	M094	139		
B9033	120	ESB2525RO	298	F1186	331	F9402	344	GBS048SSTR	211	GBS190SSTR	211	M095	141		
B9034	120	ESB2525VE	298	F1311	334	F9403	344	GBS064BBI	208	GBS254BBI	209	M096	143		
B9051	121	ESC1920NE	299	F1411	335	F9404	344	GBS064BBL	208	GBS254BBL	209	M0983	146		
B9052	121	ETA1920NE	300	F2001	338	F9502	344	GBS064BGV	208	GBS254BGV	209	M0984	146		
B9053	121	F0001	316	F2002	338	F9503	344	GBS064BNE	208	GBS254BNE	209	M098C	146		
B9054	121	F0002	316	F2003	338	F9504	344	GBS064BRO	208	GBS254BRO	209	M099	147		
BH1125	196	F0003	316	F2004	338	F9904	347	GBS064BTR	208	GBS254BTR	209	M9021	119		
BH2048	196	F0004	316	F2011	339	GBA030SNE	212	GBS064MBL	210	GBS254MBL	210	M9022	119		
BH3076	196	F0005	316	F2012	339	GBA060SNE	212	GBS064MGV	210	GBS254MGV	210	M9023	119		
BL1025	195	F0011	317	F2013	339	GBA090SNE	212	GBS064MNE	210	GBS254MNE	210	M9024	119		
BL1436	195	F0012	317	F2014	339	GBA120SNE	212	GBS064MRO	210	GBS254MRO	210	M9031	120		
BL2025	195	F0013	317	F2031	339	GBA190SNE	212	GBS064SBI	211	GBS254SBI	211	M9032	120		
BL2048	195	F0014	317	F2032	339	GBA240SNE	212					M9033	120		

Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page	Code	Page
M9034	120	N2548	193	Q104	283	QSCP055M4	223	SC2045	205	TP5RGG32	311	TP7TG25/20	306		
M9039	122	N2690	199	Q138	283	QSCP055M5	223	SC2079	205	TP5RGG35	311	TP7TG32	306		
M9051	121	N2936	193	Q143	283	QSCP060M4	223	SC3045	205	TP5RGG40	311	TP7TG40	306		
M9052	121	N2936M	193	Q175	283	QSCP060M6	223	SC3079	205	TP5RGG50	311	TP7TG50	306		
M9053	121	N2976	193	Q20	283	QSCP070M5	223	SC3745	205	TP5RGGN10	311	TP7TS16	304		
M9054	121	N3048	193	Q24	283	QSCP070M6	223	SC3779	205	TP5RGGN12	311	TP7TS20	304		
M92CS	134	N3048M	193	Q30	283	QSCP085M5	223	SC5079	205	TP5RGGN14	311	TP7TS25	304		
M92GF	148	N3690	199	Q40	283	QSCP090M4	223	SC5245	205	TP5RGGN16	311	TP7TS32	304		
M932	189	N3736	193	Q46	283	QSCP120M5	223	SC6845	205	TP5RGGN20	311	TP7TS40	304		
M93CS	136	N3748	193	Q50	283	QSCP120M6	223	SC6879	205	TP5RGGN22	311	TP7TS50	304		
M93GF	150	N3776	193	Q57	283	QSMS015M4	224	SC8445	205	TP5RGGN25	311	TP7TT16	305		
M93H1	137	N3948	193	Q68	283	QSMS015M5	224	SC8479	205	TP5RGGN28	311	TP7TT20	305		
M93H10	137	N4348	193	Q92	283	QSMS015M6	224	T1050	282	TP5RGGN32	311	TP7TT25	305		
M93H11	137	N4390	193	QB1221518	221	QSMS020M4	224	T1150	282	TP5RGGN35	311	TP7TT32	305		
M93H2	137	N4576	193	QB1241518	221	QSMS020M5	224	T1200	282	TP5RGGN40	311	TP7TT40	305		
M93H3	137	N4912	199	QB1242518	221	QSMS020M6	224	T1300	282	TP5RGGN50	311	TP7TT50	305		
M93H4	137	N5348	193	QB1251518	221	QSMS025M4	224	T1400	282	TP5RGM10	309	TPZFF16/32	308		
M93H5	137	N5390	193	QB1551625	221	QSMS025M5	224	T1530	282	TP5RGM12	309	TPZFF40/63	308		
M93H6	137	N5476	193	QB1552617	221	QSMS025M6	224	T1550	282	TP5RGM16	309	TPZFS16	308		
M93H7	137	N7190	193	QB2011825	221	QSMS030M4	224	T1600	282	TP5RGM20	309	TPZFS20	308		
M93H8	137	N7412	199	QB2051625	221	QSMS030M5	224	T1700	282	TP5RGM25	309	TPZFS25	308		
M93H9	137	N7576	193	QB2052517	221	QSMS030M6	224	T1950	282	TP5RGM32	309	TPZFS32	308		
M93HCS	138	N7890	193	QB2052625	221	QSMS040M4	224	T2000	282	TP5RGM40	309	TPZFS40	308		
M93HGF	152	N8190	193	QB2541620	221	QSMS040M5	224	T2100	282	TP5RGM50	309	TPZFS50	308		
M93HGFC	153	N8912	199	QB3011825	221	QSMS040M6	224	T2250	282	TP5RGMN10	309				
M94/1	139	N9201	130	QB3012825	221	QSMS050M4	224	T2400	282	TP5RGMN12	309				
M94/10	139	N9201/1	130	QB3052625	221	QSMS050M5	224	T2550	282	TP5RGMN16	309				
M94/11	139	N9201/10	130	QB3251625	221	QSMS050M6	224	T2650	282	TP5RGMN20	309				
M94/2	139	N9201/11	130	QHEP01604	222	QSMS060M4	224	T2850	282	TP5RGMN25	309				
M94/3	139	N9201/2	130	QHEP02004	222	QSMS060M5	224	T3050	282	TP5RGMN32	309				
M94/4	139	N9201/3	130	QHEP02006	222	QSMS060M6	224	T3250	282	TP5RGMN40	309				
M94/5	139	N9201/4	130	QHEP02505	222	QSMS080M5	224	T3500	282	TP5RGMN50	309				
M94/6	139	N9201/5	130	QHEP02506	222	QSMS080M6	224	T3850	282	TP5RGP10	310				
M94/7	139	N9201/6	130	QHEP03006	222	R2036	284	T4000	282	TP5RGP12	310				
M94/8	139	N9201/7	130	QHEP03008	222	R2226	284	T4200	282	TP5RGP12/13	310				
M94/9	139	N9201/8	130	QHEP03506	222	R2230	284	T4500	282	TP5RGP14	310				
M94CS	140	N9201/9	130	QHEP03508	222	R2236	284	T4800	282	TP5RGP16	310				
M94GF	154	N9201CS	131	QHEP03510	222	R2242	284	T5050	282	TP5RGP16/13	310				
M95CS	142	N9201CS1	131	QHEP04006	222	R2249	284	T5400	282	TP5RGP16/16	310				
M95GF	156	N9201CS10	131	QHEP04008	222	R2345	284	T5550	282	TP5RGP20	310				
N0824	193	N9201CS11	131	QHEP04010	222	R2445	284	T5700	282	TP5RGP22	310				
N0824M	193	N9201CS2	131	QHEP04506	222	R2658	284	T6050	282	TP5RGP25	310				
N0901	201	N9201CS3	131	QHEP04508	222	R2951	284	T6200	282	TP5RGP28	310				
N0902	201	N9201CS4	131	QHEP04510	222	R2971	284	T6500	282	TP5RGP32	310				
N0903	201	N9201CS5	131	QHEP05006	222	R3046	284	T7050	282	TP5RGP35	310				
N0905	200	N9201CS6	131	QHEP05008	222	R3251	284	T7200	282	TP5RGPN10	310				
N0906	200	N9201CS7	131	QHEP05010	222	R3276	284	T7500	282	TP5RGPN12	310				
N1012	199	N9201CS8	131	QHEP05012	222	R3646	284	T8050	282	TP5RGPN12/13	310				
N1025	193	N9201CS9	131	QHEP06008	222	R3752	284	T9100	282	TP5RGPN14	310				
N1025M	193	N9202	132	QHEP06010	222	R3757	284	TP4CU16	307	TP5RGPN16	310				
N1090	193	N9202/1	132	QHEP06012	222	R3797	284	TP4CU20	307	TP5RGPN16/13	310				
N1225	193	N9202/10	132	QHEP07010	222	R3865	284	TP4CU25	307	TP5RGPN16/16	310				
N1248	193	N9202/11	132	QHEP07012	222	R4011	284	TP4CU32	307	TP5RGPN20	310				
N1290	193	N9202/2	132	QHEP07512	222	R4672	284	TP4CU40	307	TP5RGPN22	310				
N1436	193	N9202/3	132	QSCP015M4	223	S1079	204	TP4CU50	307	TP5RGPN25	310				
N1436M	193	N9202/4	132	QSCP015M5	223	S1345	204	TP4MA16	307	TP5RGPN28	310				
N1576	193	N9202/5	132	QSCP015M6	223	S2045	204	TP4MA20	307	TP5RGPN32	310				
N1590	193	N9202/6	132	QSCP020M4	223	S2079	204	TP4MA25	307	TP5RGPN35	310				
N1625	193	N9202/7	132	QSCP020M5	223	S3045	204	TP4MA32	307	TP7CR16	305				
N1625M	193	N9202/8	132	QSCP020M6	223	S3079	204	TP4MA40	307	TP7CR20	305				
N1648	193	N9202/9	132	QSCP025M4	223	S3745	204	TP4MA50	307	TP7CR25	305				
N1890	199	NL1025	195	QSCP025M5	223	S3779	204	TP5RGG10	311	TP7CR32	305				
N1948	193	NL1436	195	QSCP025M6	223	S5079	204	TP5RGG12	311	TP7CR40	305				
N2025	193	NL2025	195	QSCP030M4	223	S5245	204	TP5RGG14	311	TP7CR50	305				
N2036	193	NL2048	195	QSCP030M5	223	S6845	204	TP5RGG16	311	TP7TG16	306				
N2048	193	NL3048	195	QSCP030M6	223	S6879	204	TP5RGG20	311	TP7TG16/12	306				
N2048M	193	NL3748	195	QSCP040M4	223	S8445	204	TP5RGG22	311	TP7TG20	306				
N2076	193	NL3776	195	QSCP045M5	223	S8479	204	TP5RGG25	311	TP7TG20/16	306				
N2412	199	NV2312	203	QSCP045M6	223	SC1345	205	TP5RGG28	311	TP7TG25	306				


## EXPORT SALES NETWORK

BM products range is available and distributed worldwide through a distribution network of more than 100 importers and distributors and a subsidiary in Slovenia.

BM worldwide presence:

Albania	Croatia	Lithuania	Romania
Saudi Arabia	Denmark	Republic of Macedonia	Russia
Argentina	Ecuador	Malta	Serbia
Australia	United Arab Emirates	Morocco	Singapore
Austria	Estonia	Mexico	Slovakia
Azerbaijan	France	Moldova	Slovenia
Belgium	Germany	Montenegro	Spain
Bosnia Herzegovina	Greece	Nicaragua	United States
Bulgaria	Honk Kong	Norway	South Africa
Canada	India	New Zealand	Sweden
Chile	Ireland	Netherlands	Switzerland
China	Iceland	Panama	Hungary
Cyprus	Israel	Peru	Uruguay
Columbia	Lebanon	Poland	
Costa Rica	Libya	United Kingdom	

For further information please contact:

 **BM Export Dept.**  
 Viale Milano, 54/56, 20089 Rozzano (MI) - Italy  
 ☎ +39.02.89.23.91.241/228/204  
 ✉ export@bm-group.com

 **BM-WIRE CONNECTIONS s.r.l.**  
 Strada Drumul Găzarului 43-45 sector 4  
 București România  
 ☎ +40 770 292425  
 ✉ info.bmwire@bm-group.com  
[www.bm-wireconnections.com](http://www.bm-wireconnections.com)

 **BM-ELEKTROMATERIAL d.o.o**  
 Industrijska cesta 2c 6310 Izola Slovenija  
 ☎ +386 (0)5 9046 500 / +386 (0)5 9046 501  
 ✉ sales@bm-elektromaterial.com  
[www.bm-elektromaterial.com](http://www.bm-elektromaterial.com)

## AGENCIES IN ITALY

### PIEMONTE, VALLE D'AOSTA

#### **D.G.E. RAPPRESENTANZE Snc**

📍 Via Finalmarina 32 - 10126 Torino  
☎ 011.6638041 / 011.6964851 📠 011.6965292  
✉ piemonte@bm-spa.com

### LOMBARDIA

Milano, Como, Lecco, Lodi, Monza e Brianza, Pavia, Sondrio, Varese + Verbania (PIEMONTE)

#### **RAMEL Srl**

📍 Via Grandi 26/28 - 20060 Pessano c/ Bornago (MI)  
☎ 02.95740341  
✉ lombardiovest@bm-spa.com

#### Milano

#### **ROSSI & ROSSI RAPPRESENTANZE**

📍 Via Tommaso Grossi 25/C - 20017 Rho (MI)  
☎ 351.8645666 📠 348.2264560  
✉ milanonord@bm-spa.com

Bergamo, Brescia, Cremona, Mantova

#### **B&C RAPPRESENTANZE Srl**

📍 Via Palazzolo 146 (1°Piano) - 25031 Capriolo (BS)  
☎ 030.7461375 📠 030.7461061  
✉ lombardiaest1@bm-spa.com

### LIGURIA

#### **S.EL.L. Sas di Monteleone S. e Reggiardo M.**

📍 Via Napoli 5R - 16135 Genova  
☎ 010.2722358  
✉ liguria@bm-spa.com

### VENETO, TRENINO-ALTO ADIGE, FRIULI-VENEZIA GIULIA

#### **A.R.I.M.E.T. - Agenzie RIunite Materiale Elettrico Triveneto**

📍 Via Panà 56/b - 35027 Noventa Padovana (PD)  
☎ 049.717237  
✉ triveneto@bm-spa.com

### EMILIA ROMAGNA

#### **CUTRUPI ANTONIO**

📍 Via G. Leopardi 3 - 40040 Vado di Monzuno (BO)  
☎ 336.566330  
✉ emiliaromagna@bm-spa.com

### TOSCANA

#### **IN5 Srl - 2P ELETTRORAPPRESENTANZE**

📍 Via Ilio Barontini 15/b - 50018 Scandicci (FI)  
☎ 055.7224231 📠 055.7227178  
✉ toscana@bm-spa.com

### ABRUZZO, MARCHE, MOLISE, UMBRIA

#### **G.R.A. Snc di Brandimarti G., Cardinali M. & Fatabbi A.**

📍 Via S. Pellico 10 c/o Palazzo Affari - 62012 Civitanova Marche (MC)  
☎ 0733.688304 📠 346-0671582  
✉ marche-abruzzo-umbria@bm-spa.com

### LAZIO

#### **SR RAPPRESENTANZE Snc di Anastasi R. & Pandolfi S. & C.**

📍 Via Gasperina 304 - 00173 Roma  
☎ 06.87165024  
✉ lazio@bm-spa.com

### CAMPANIA

#### **ELVETICO RAPPRESENTANZE Snc**

📍 Viale Colli Aminei 279 - 80131 Napoli  
☎ 081.5228660 📠 081.5228660  
✉ campania@bm-group.com

### PUGLIA, BASILICATA

#### **LUCAIOLI Snc**

📍 Via Buccari 143 - 70124 Bari  
☎ 080.5427488  
✉ puglia-basilicata@bm-spa.com

### CALABRIA

#### **SANTISE A. & C. Sas**

📍 Via Carcara 9 - 88068 Soverato (CZ)  
☎ 0967.521421 📠 392.9706433  
✉ calabria@bm-spa.com

### SICILIA

#### **FIORE RAPPRESENTANZE Snc**

📍 Via Aspromonte 57 - 90144 Palermo  
☎ 091.6269961 📠 091.6269953  
✉ sicilia@bm-spa.com

### SARDEGNA

#### **SERGI RAPPRESENTANZE di Sergi Manuela**

📍 Via Pontida 1 - 09134 Cagliari  
☎ 070.9790211 📠 340.3552763  
✉ sardegna@bm-spa.com









### **BM SPA**

📍 Viale Milano 54/56 - 20089 Rozzano (MI) Italia

☎ (+39) 02.8923911(r.a.)

📠 (+39) 02.8256873

✉ info@bm-group.com

[www.bm-group.com](http://www.bm-group.com)

The published images and drawings have representative purpose only.  
BM spa reserves the right to update and improve its product range without notice.  
Please refer to the website to keep up to date.

Edition 60 - Printed in January 2022

© Copyright BM SPA - Milan  
All right reserved.

---



**BM SPA**

📍 Viale Milano 54/56 - 20089 Rozzano (MI) Italia

☎ (+39) 02.8923911 (r.a.)

📠 (+39) 02.8256873

✉ info@bm-group.com

www.bm-group.com



99CATEN