Product Catalogue

Components for low voltage panel boards

TEKNOMEGA


3:02 PM
61%
BFX
DZP
MRS
BOC
CPH
RPQ
DIN
UBF
FLAT
BRP
BFX
GTI
GSP
GRG
GWF
GZP
Panel Boards
Fastening
Photovoltaic

YOUNG, STRONG AND EXPERT

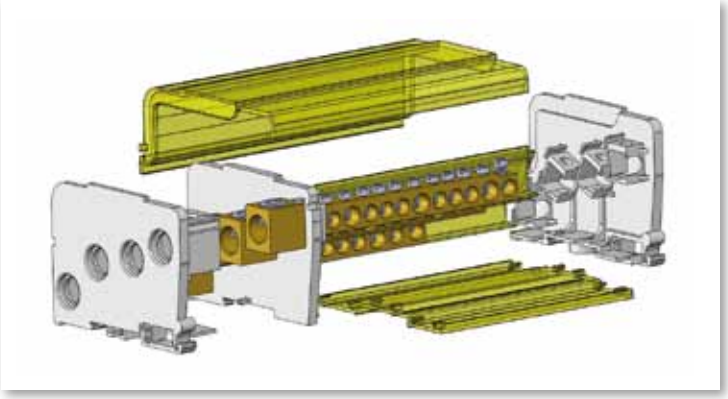
"We are what we do on a daily basis.
So excellence is not in a single act, but in behaviour"
(Aristotele)

A decade after its foundation, Teknomega is a solid reference point in the world of electrical industry. The peculiar identity that characterizes Teknomega is made of a network of people relationships, together with a rigorous organization that has its roots in the experience of the leaders who run it.
The increased knowledge, always aligned to the evolution of the Regulations, the service culture embodied in the working routine, and the daily passion that the women and men in Teknomega express in what they do, make Teknomega a reliable partner for all its Distributors and Customers in 65 Countries worldwide. Distributors and Customers who have rewarded Teknomega with high rates of growth, even in times of crisis. Thank you, dear Customers!
The ambition to emerge, the creativity used both in the operating aspect and in the generation of new products, the pleasure of working and create job places for an increasingly wide team, make Teknomega a little shining star in the galaxy of electrical equipments; a star which we are proud of.

Maurizio Mercandelli
Managing Director

Head office and Logistic Center in Buccinasco, Milano

A YOUNG HISTORY OF SUCCESS



Quality

Teknomega commitment in terms of quality is not a slogan: it is a style, a bet on the competitiveness of the Company itself, an essential value in the Business to Business field. The apparatus of research and development is active on growth of the offer, in order to meet a growing number of applications and markets, which is, for Teknomega, a fundamental objective.

Reactivity

Our Customer Service has got personality. People who like their job at service of their customers, far from the call center logic; people who answer the needs of their interlocutors with wisdom and creativity.

Promptness

The step which follows Customer Service is a well-organized, efficient and computerized Logistic Center which can flexibly react to the requests, backed by ample stores of all the items shown in the catalogue.

Capillarity

The partnership with selected Distributors of electrical equipment, and specialized importers worldwide, makes the availability of products, as well as interlocutors and informations, decentralized and widespread.

Internationality

The attractiveness of Teknomega, of its range and its style, has rapidly pushed it beyond the national and European borders, making products available in over 60 Countries worldwide.

Updating

Staying "up to date" as to regulations, techniques and technologies, paying attention to the trends of demand, being proponents of innovation, is part of Teknomega enterpreneurial style.

Presence

Both in domestic and foreign markets, in fairs and exhibitions, or through our efficient web site www.teknomega.it, with the sales force and our newsletters, we keep a high level of presence and communication with our customers.

Recognition

Teknomega has been awarded ISO9001:2008 certification which is more than just a piece of paper, it is the recognition of the validity of the operating and control system.

TEKNOMEGA PANEL BOARD DIVISION is a complete and synergic range of components for low voltage electric panel board assembling.

Upon determining the structure and electromechanic equipment, **TEKNOMEGA** proposes a wide range of solutions for panel board cabling, with the great advantage of being assisted by a qualified partner with ample field experience. The main goal is to propose the most universal solutions possible, so that they can be used on all panel board structures on the market.

What **TEKNOMEGA** proposes complies with reference standards as well as with the requirements of the recent guidelines relevant to the safety and materials used. Many products in this catalog have been electrically and mechanically **TESTED** and **PROVEN**.

The catalog products are normally available at warehouses; **TEKNOMEGA** can also meet requests of "special" or "customized" products with competence, flexibility and quickness.

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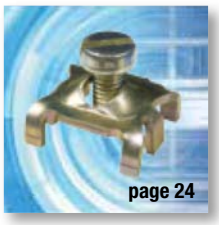
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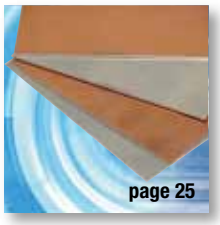
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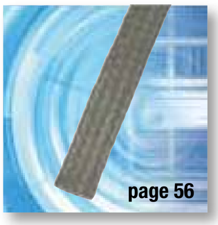
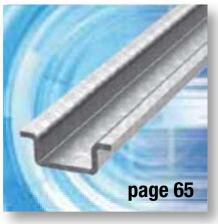
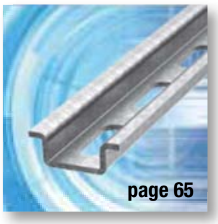
COPPER BRAIDS

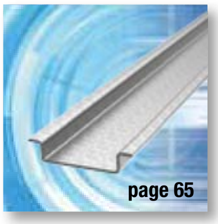


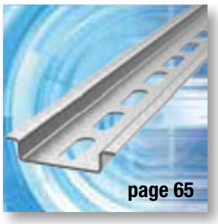
WIRING SLEEVES

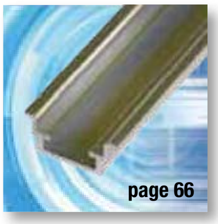
DIN RAILS

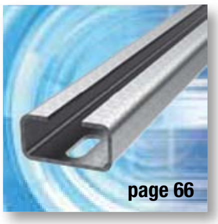












TEKNOMEGA®

WIRING ACCESSORIES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SPECIAL CONNECTIONS


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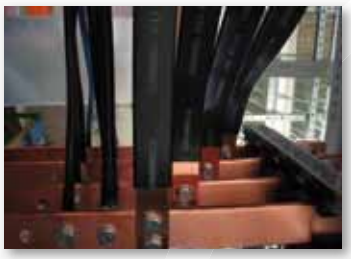
interactive TEKNOMEGA Software:
that features a project installation calculator, product datasheet and updated pricelists

Ω **FLEX** - Insulated copper flexible bars



Ω FLEX bars are made of red copper laminates (Cu ETP) coated with an extruded PVC insulation which gives excellent electrical insulation even in the presence of dampness, aggressive temperatures and environments.

The applications are for all the connections of power transportation inside L.V. electrical panel boards. It is an alternative to cable or rigid copper bars in the connection of electrical devices (disconnecting switches, circuit breakers, etc.) and the connections between transformers and/or electrical panel boards and busducts.
Insulated flexible bars are the only electrical connection system to offer great advantages compared to cable and rigid bar connections.

The costs of using flexible bars should be compared to the sum of the costs for cable + connection terminals + crimping time.

In the case of rigid bars, the same sum + support systems + bending time.

ADVANTAGES COMPARED TO RIGID BAR

Increased ampacity with an equal cross-section.
Improved safety due to the insulation.
Reductions in weight and volume inside panel boards.
Easy and quick shaping of the conductor due to the laminate flexibility.
Bar support and insulator fitting cost are reduced and time is saved as the conductor is already supplied insulated.

ADVANTAGES COMPARED TO CABLE

Increased ampacity with equal cross-section.
Connection terminal fitting saves time and money.
Elimination of the contact resistances between cable and connection terminals.
Volume saving compared to the minimum admissible curving radius for cables.

RANGE

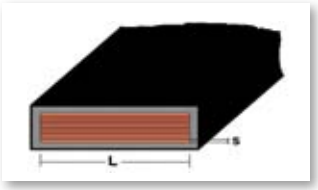
Standard length: 2 meters - 3 meters
Copper laminate thickness: from 0.5 to 1 mm
Laminate number: from 2 to 12

TECHNICAL FEATURES

Conductor
Electrolytic copper Cu-ETP 99.90%
Laminate thickness 0.5 ÷ 1 mm

Insulation
Self-extinguishing PVC UL 94-V0
Fire Class: V0
Thickness: 2 mm
Max. elongation: 365%
Hardness Shore A: 85°
Tensile strength: 19.6 MPa
Recyclable

Finished product
Dielectric rigidity: 20kV/mm
Rated voltage: 1000 V AC/1500 V DC
Working temperature:
-40°C ÷ +105°C



Reference example
BFX 4X20X1
Laminate number: n = 4
Laminate width: L = 20 mm
Laminate thickness: s = 1 mm

Selection based on temperature
In = Rated current A
Tf = Working temperature °C
Ta = Room temperature °C
ΔT = Temperature rise °C

For In = 630 A at Tf = 90°C
we can use
BFX 5X32X1 at ΔT= 50°C
Therefore:
BFX 5x32x1 = In **650 A** with
ΔT=50°C
Ta = 40°C
Tf = Ta + ΔT = 40°C + 50°C = **90°C**

Icc value (1 second)
(effective short-circuit current)

Icc parameters calculation
Initial temperature:
105°C - maximum working temperature of the conductor
Final temperature:
160°C - limit of temperature for PVC insulation compliant with IEC 60724 for cross-sections < 300 mm²
140°C - limit of temperature for PVC insulation compliant with IEC 60724 for cross-section > 300 mm²

Table of ampacities (A) based on temperature rise ΔT as per IEC 61439-1
Reference room temperature 40°C

file n° E300607

2 METERS LENGTH

L	Code	Reference			Weight (Kg)	Sect. (mm²)	Icc (A)	Temperature Rise ΔT (°C)				
								65°	50°	40°	30°	20°
								Rated Intensity In (A)				
9	**BFX1005**	BFX 3X9X0,8	1	27	0,47	22	1.879	160	**140**	125	108	89
	BFX1020	BFX 6X9X0,8	1	27	0,87	43	3.757	285	**250**	224	194	158
	BFX1021	BFX 9X9X0,8	1	27	1,17	65	5.636	319	**280**	250	217	177
13	**BFX1022**	BFX 3X13X0,5	1	24	0,43	20	1.696	194	**170**	152	132	108
	BFX1023	BFX 6X13X0,5	1	12	0,80	39	3.392	285	**250**	224	194	158
	BFX1024	BFX 10X13X0,5	1	12	1,33	65	5.653	376	**330**	295	256	209
15,5	**BFX1025**	BFX 2X15,5X0,8	1	24	0,51	25	2.157	234	**205**	183	159	130
	BFX1035	BFX 4X15,5X0,8	1	24	1,01	50	4.314	365	**320**	286	248	202
	BFX1045	BFX 6X15,5X0,8	1	12	1,46	74	6.470	456	**400**	358	310	253
	BFX1050	BFX 10X15,5X0,8	1	12	2,36	124	10.784	502	**440**	394	341	278
20	**BFX1055**	BFX 2X20X1	1	20	0,85	40	3.479	319	**280**	250	217	177
	BFX1060	BFX 3X20X1	1	20	1,21	60	5.218	399	**350**	313	271	221
	BFX1065	BFX 4X20X1	1	20	1,58	80	6.957	467	**410**	367	318	259
	BFX1070	BFX 5X20X1	1	10	1,94	100	8.697	490	**430**	385	333	272
	BFX1075	BFX 6X20X1	1	10	2,30	120	10.436	547	**480**	429	372	304
	BFX1076	BFX 8X20X1	1	10	3,00	160	13.915	638	**560**	501	434	354
	BFX1080	BFX 10X20X1	1	10	3,74	200	17.394	730	**640**	572	496	405
24	**BFX1085**	BFX 2X24X1	1	16	1,02	48	4.174	399	**350**	313	271	221
	BFX1090	BFX 3X24X1	1	16	1,45	72	6.262	456	**400**	358	310	253
	BFX1095	BFX 4X24X1	1	16	1,88	96	8.349	536	**470**	420	364	297
	BFX1100	BFX 5X24X1	1	16	2,32	120	10.436	581	**510**	456	395	323
	BFX1105	BFX 6X24X1	1	8	2,75	144	12.523	650	**570**	510	442	360
	BFX1110	BFX 8X24X1	1	8	3,61	192	16.698	781	**685**	613	531	433
	BFX1115	BFX 10X24X1	1	8	4,48	240	20.872	912	**800**	716	620	506
32	**BFX1120**	BFX 2X32X1	1	12	1,35	64	5.566	467	**410**	367	318	259
	BFX1125	BFX 3X32X1	1	12	1,92	96	8.349	559	**490**	438	380	310
	BFX1130	BFX 4X32X1	1	12	2,50	128	11.132	627	**550**	492	426	348
	BFX1135	BFX 5X32X1	1	12	3,07	160	13.915	741	**650**	581	503	411
	BFX1140	BFX 6X32X1	1	6	3,65	192	16.698	821	**720**	644	558	455
	BFX1145	BFX 8X32X1	1	6	4,80	256	22.264	992	**870**	778	674	550
	BFX1150	BFX 10X32X1	1	6	5,95	320	22.496	1163	**1020**	912	790	645
40	**BFX1155**	BFX 2X40X1	1	12	1,67	80	6.957	524	**460**	411	356	291
	BFX1160	BFX 3X40X1	1	12	2,39	120	10.436	650	**570**	510	442	360
	BFX1165	BFX 4X40X1	1	12	3,11	160	13.915	741	**650**	581	503	411
	BFX1170	BFX 5X40X1	1	6	3,83	200	17.394	884	**775**	693	600	490
	BFX1175	BFX 6X40X1	1	6	4,54	240	20.872	986	**865**	774	670	547
	BFX1180	BFX 8X40X1	1	6	5,94	320	22.496	1180	**1035**	926	802	655
	BFX1185	BFX 10X40X1	1	6	7,41	400	28.120	1343	**1178**	1054	912	745
50	**BFX1190**	BFX 3X50X1	1	10	2,98	150	13.045	672	**589**	527	456	373
	BFX1195	BFX 4X50X1	1	10	3,88	200	17.394	886	**777**	695	602	491
	BFX1200	BFX 5X50X1	1	5	4,77	250	21.742	1055	**925**	827	717	585
	BFX1205	BFX 6X50X1	1	5	5,67	300	22.090	1186	**1040**	930	806	658
	BFX1210	BFX 8X50X1	1	3	7,46	400	28.120	1357	**1190**	1064	922	753
	BFX1215	BFX 10X50X1	1	3	9,25	500	35.150	1573	**1380**	1234	1069	873
63	**BFX1220**	BFX 3X63X1	1	8	3,75	189	16.437	941	**825**	738	639	522
	BFX1225	BFX 4X63X1	1	8	4,87	252	21.916	1083	**950**	850	736	601
	BFX1230	BFX 5X63X1	1	4	6,00	315	22.144	1209	**1060**	948	821	670
	BFX1235	BFX 6X63X1	1	4	7,13	378	26.573	1391	**1220**	1091	945	772
	BFX1240	BFX 8X63X1	1	4	9,38	504	35.431	1596	**1400**	1252	1084	885
	BFX1245	BFX 10X63X1	1	2	11,63	630	44.288	1841	**1615**	1444	1251	1021
80	**BFX1250**	BFX 3X80X1	1	4	4,75	240	20.872	1138	**998**	893	773	631
	BFX1255	BFX 4X80X1	1	4	6,17	320	22.496	1311	**1150**	1029	891	727
	BFX1260	BFX 5X80X1	1	4	7,60	400	28.120	1459	**1280**	1145	991	810
	BFX1265	BFX 6X80X1	1	4	9,03	480	33.744	1602	**1405**	1257	1088	889
	BFX1270	BFX 8X80X1	1	2	11,89	640	44.991	1833	**1608**	1438	1246	1017
	BFX1275	BFX 10X80X1	1	2	14,75	800	56.239	2028	**1779**	1591	1378	1125
100	**BFX1280**	BFX 4X100X1	1	4	7,71	400	28.120	1420	**1245**	1114	964	787
	BFX1285	BFX 5X100X1	1	4	9,49	500	35.150	1750	**1535**	1373	1189	971
	BFX1290	BFX 6X100X1	1	2	11,28	600	42.179	1915	**1680**	1503	1301	1063
	BFX1295	BFX 8X100X1	1	2	14,85	800	56.239	2172	**1905**	1704	1476	1205
	BFX1300	BFX 10X100X1	1	2	18,42	1000	70299	2394	**2100**	1878	1627	1328
	BFX1305	BFX 12X100X1	1	2	21,99	1200	84359	2600	**2280**	2039	1766	1442

Ω FLEX - Insulated copper flexible bars

Table of ampacities (A) based on temperature increase ΔT
as per IEC 61439-1
Reference room temperature 40°C

file No. E300607

3 METERS LENGTH

L	Code	Reference		Weight (Kg)	Sect. (mm²)	Icc (A)	Temperature Rise ΔT (°C)				
							65°	50°	40°	30°	20°
							Rated Intensity In (A)				
20	**BFX3055**	BFX 2X20X1-3	1	1,281	40	3.479	319	**280**	250	217	177
	BFX3060	BFX 3X20X1-3	1	1,821	60	5.218	399	**350**	313	271	221
	BFX3070	BFX 5X20X1-3	1	2,907	100	8.697	490	**430**	385	333	272
24	**BFX3085**	BFX 2X24X1-3	1	1,527	48	4.174	399	**350**	313	271	221
	BFX3090	BFX 3X24X1-3	1	2,175	72	6.262	456	**400**	358	310	253
	BFX3095	BFX 4X24X1-3	1	2,823	96	8.349	536	**470**	420	364	297
	BFX3100	BFX 5X24X1-3	1	3,474	120	10.436	581	**510**	456	395	323
32	**BFX3125**	BFX 3X32X1-3	1	2,88	96	8.349	559	**490**	438	380	310
	BFX3135	BFX 5X32X1-3	1	4,608	160	13.915	741	**650**	581	503	411
	BFX3145	BFX 8X32X1-3	1	7,194	256	22.264	992	**870**	778	674	550
40	**BFX3170**	BFX 5X40X1-3	1	5,739	200	17.394	884	**775**	693	600	490
	BFX3185	BFX 10X40X1-3	1	11,121	400	28.120	1343	**1178**	1054	912	745
50	**BFX3200**	BFX 5X50X1-3	1	7,155	250	21.742	1055	**925**	827	717	585

Further sizes available on request

For ampacity values related to UL standard, please contact our technical department.

Derating coefficient for the use of bars in parallel

Number of bars in parallel	2 bars	3 bars	4 bars
Coefficient to use	1,8	2,5	3,2

EXAMPLE FOR BFX 5X100X1	In with ΔT 50°C	= 1720 A
BFX 5X100X1 in parallel	= 1720 A x 1,8	= 3096 A
	= 1720 A x 2,5	= 4300 A
	= 1720 A x 3,2	= 5504 A

UPON REQUEST:

Tinned copper or aluminium bars

Insulation for temperatures up to 125°C

Halogen-free insulation up to 90°C

PREFORMED FLEXIBLE BARS AS PER DRAWING



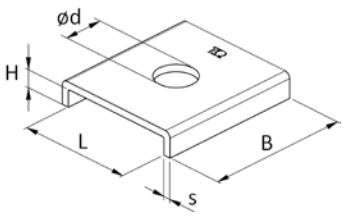
TEKNOMEGA have the capabilities to manufacture Ω FLEX INSULATED FLEXIBLE BARS bent and punched as per the customer's specific requirements.

This is convenient in the event of a "series" of production of "standard" electric panel boards and/or equipment.

The use of CUSTOM PREFORMED INSULATED FLEXIBLE BARS makes it possible to optimize the wiring time and to eliminate excessive waste material.

APPLICATIONS





TECHNICAL FEATURES

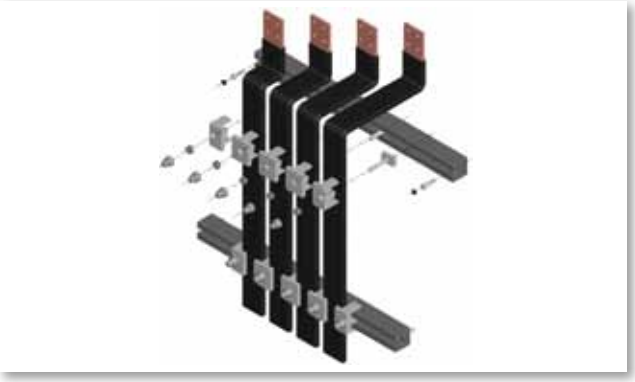
Material: Stell 140HV
Finishing: Electrogalvanized

ADVANTAGES

Constraint of laminate
Surface of connection with uniform pressure
High strength fixing

FIXING PLATES

Code	Reference		L (mm)	H (mm)	B (mm)	s (mm)	d (mm)
PBF1060	PBF 3X20-M6	10	20	2,8	25	1,6	7
PBF1065	PBF 4X20-M8	10	20	3,8	25	1,6	9
PBF1090	PBF 3X24-M8	10	24	2,8	32	1,6	9
PBF1100	BF 5X24-M10	10	24	4,8	32	2	11
PBF1125	BF 3X32-M10	10	32	2,8	40	2	11
PBF1140	BF 6X32-M12	10	32	5,8	40	2	13



Universal support with Ω FLAT

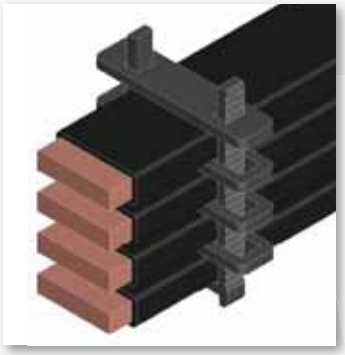
Made of:
- PVC support rail in 2-meter bars
- L-shaped anchoring block with adjustable spacing between phases
- T-shaped anchoring block with minimum allowed spacing between phases

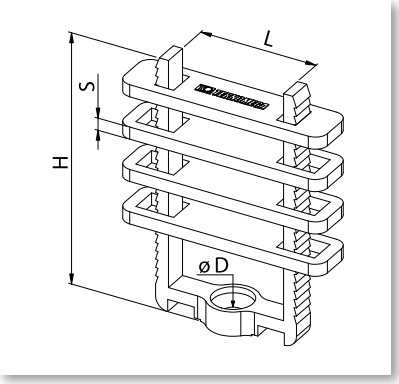
ADVANTAGES
- for flexible insulated bar cross-sections starting from 2x24x1 to 10x120x1
- support completely made of insulating material
- PVC rail easy to cut at the desired length
- quick fitting to the panel board structure by means of hex socket head cap screws M6
- high resistance to short-circuits

See Ω FLAT technical features on page 34

Simple support with spacer

APPLICATIONS and ADVANTAGES
- For use with insulated flexible bars up to 32x10x1.
- Possibility to fit up to 4 flexible bars.
- Fits easily to the panel board structure by means of screw (not included) inserted at the base of the spacer.
- Accurate and ordered fitting inside the panel board.
- Excellent heat dissipation thanks to the spacing between bars

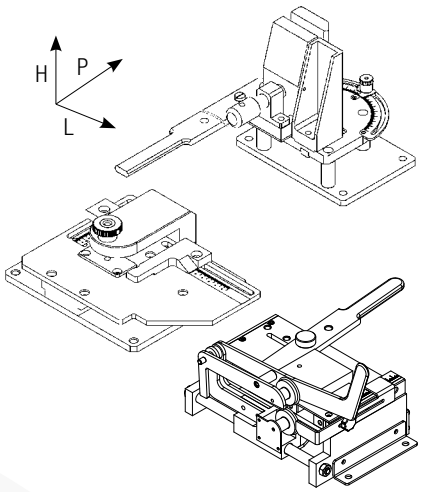




In Polyamide 6/6 reinforced with 30% fiberglass
Self-extinguishing UL 94-V0
Black colour

SPACER AND OVERLAPPING SUPPORT

Code	Reference		Sect. max Ω Flex	H (mm)	L (mm)	S (mm)	ø D (mm)
DZP3000	DZP BFX32	10	32 x 10 x 1	83	38	4	7



In order to make bending, stripping and punching even easier, as well as to make the serial details dimensions more accurate, **TEKNOMEGA** has developed a series of user-friendly hand tools

APPLICATION ADVANTAGES

1) The simplicity of the tools ensures they are safe and easy to use.
2) quick, accurate work, optimization of connection lengths, reduction of overall dimensions inside the electrical panel board
3) no need for an external power supply
4) easy to carry out work "on site"
5) easy to fit on a workbench

Hand tool to bend and to twist insulated flexible bars

The tool makes it possible to create the optimal bending angles, even with pre-determined and/or repeated angles. It also allows the user to optimize the connection length as well as the overall dimensions and to twist flexible bar to obtain various planes of connection.

Bending:
- Can be used on flexible bars up to 120x10x1 cross-sections.
- Easy to fit on a workbench.
– Quick flexible bar tightening.
- Goniometer to set the bending angle.
- Blocking for repeated work on the same bending angle.
- No damage to the insulation.
- Little effort required thanks to the lever.

Twisting:
- Can be used up to 120x10x1 cross-sections.
- Allows twisting of the insulated flexible bar without damaging the insulation, to get a change in the plane of connection.

Hand tool to strip insulated flexible bars.

The stripping tool makes it possible to quickly, neatly and cleanly remove the PVC insulation on the area desired for use with the connection terminal. It can be used to perform repeated stripping and it is easy to adjust and modify the dimension of the area from which the insulation must be removed.
- Can be used on flexible bars with cross-sections ranging from 20x2x1 to 120x10x1
- Accurate insulation cut on all 4 sides with only two moves.
- Quick and easy to determine length to be stripped thanks to the millimetric ruler.

Hand tool to drill insulated flexible bars

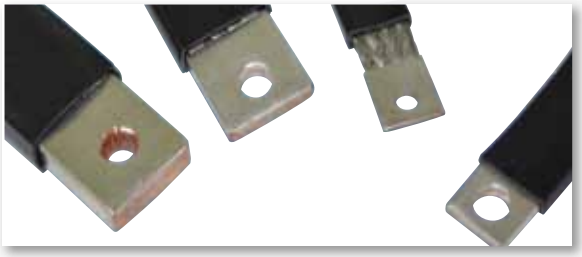
The drilling tool allows optimal drilling of the terminal destined to the connection, by simply using it with a column or hand drill. The hole is clean, without burr or deformation of the copper laminate, since the laminate package is pressed under a special drilling guide.
- For holes: Ø 6.5 – Ø 8.5 - Ø 10.5 - Ø 12.5
- Used to drill one or more holes on the bar.
- Can be used on laminate ranging from 20mm to 120mm width.
- Quick dies change for the various hole diameters.
- Can be used with column or hand drilling tool.

Code	Reference	Description		Weight (Kg)	H (mm)	P (mm)	L (mm)
UBF1005	UPB-T-BFX	Hand bending tool + Twisting tool	1	14,4	220	350	220
UBF1010	UFB-BFX	Hand drilling tool	1	7,1	65	175	240
UBF1015	USB-BFX	Hand stripping tool	1	12	120	200	280
UBF2000	USB-SET	Set of spare blades for stripping tool	1	-	-	-	-

The indicated dimensions refer to the machine body without lever

Video instructions: www.teknomega.com

Ω LINK - Insulated copper braided shunts



Ω LINK is a ready-to-use flexible prefabricated shunt made in tinned copper braid, coated with PVC insulation.
Ω LINK is the quickest and most convenient solution to create electrical connections from 125 to 630 A.
The connection terminals are made of pressed tinned copper tube. They were designed by looking at the terminals of the most widespread switchgears on the market, thus making it possible to get the best electrical contact possible.
The hole diameter, on one side, allows the optimization of the electrical contact in relation with the switch terminal whilst the other side allows for the possibility to have a universal contact with bar distribution systems.
Made in PVC, the insulation meets all the electrical specifications required for use in L.V. applications.
Maximum continuous working temperature is 105°C.

The best alternative to cable connections and flexible bars

ADVANTAGES

Ready-to-use connections: no preventive operation is required
- Extreme flexibility compared to a cable with similar cross-section
- Volume reduction inside the panel board
- Weight reduction
- Great time savings
- No cable to cut to measure
- No stripping of cable heads
- No lug to buy
- No crimping needed

EXCELLENT ELECTRICAL PARAMETERS

- Excellent electrical insulation.
- Improved contact surface.
- Improved ampacity at equal cross-sections compared to a cable and/or reduced cross-sections at the same rated current
- Reduction in heat due to the lack of crimped connections and to higher ampacities
- Excellent short-circuit resistance

RANGE

Cross-sections: from 25 mm^2 to 240 mm^2
Lengths: from 230 mm to 1030 mm
Rated ampacity: from 125 A to 630 A

SOLUTIONS FOR THE ANCHORING OF Ω LINK

TECHNICAL FEATURES

Insulation
Self-extinguishing PVC UL 94-V0
Fire Class: V0
Colour: black
Thickness: 1,0 mm (GTI 25 - GTI 35); 1,2 mm (GTI 50); 1,8 mm (GTI 120); 2,0 mm (GTI 240)
Recyclable

HALOGEN-FREE insulation upon request

Finished product
Dielectric rigidity: 20 kV/mm
Rated voltage: 1000 V AC/1500 V DC
Working temperature: -40°C to +105°C

Conductor
Tinned electrolytic copper braid Cu-ETP 99.90%
Standard wire: 0.15 mm
Terminal in tinned copper tube

file No. E300607

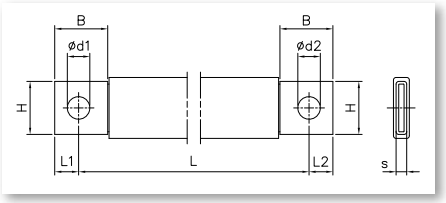
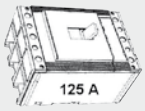
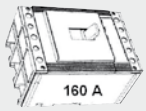
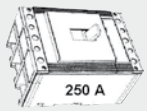
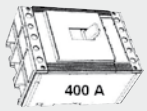
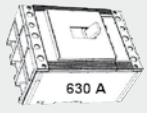


Table of ampacities (A) based on the switch ampacity or on the ΔT temperature rise as per standard IEC 61439-1
Reference room temperature 40°C

Code	Reference		Sect. (mm²)	Use with switch	Dimensions (mm)								Rated Intensity In (A) Temperature Rise ΔT		
					L	B	H	L1	L2	d1	d2	s	45°C	35°C	25°C
GTI1000	GTI 25-230	10	25		230	20	20	7,5	7,5	8,5	10,5	3,5	185	175	145
GTI1005	GTI 25-330	10	25		330	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1010	GTI 25-430	10	25		430	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1015	GTI 25-530	10	25		530	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1020	GTI 25-630	10	25		630	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1021	GTI 25-730	10	25		730	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1022	GTI 25-830	10	25		830	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1023	GTI 25-930	10	25		930	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1024	GTI 25-1030	10	25		1030	20	20	7,5	7,5	8,5	10,5	3,5			
GTI1025	GTI 35-230	10	35		230	20	20	9	9	8,5	10,5	4,2	225	205	170
GTI1030	GTI 35-330	10	35		330	20	20	9	9	8,5	10,5	4,2			
GTI1035	GTI 35-430	10	35		430	20	20	9	9	8,5	10,5	4,2			
GTI1040	GTI 35-530	10	35		530	20	20	9	9	8,5	10,5	4,2			
GTI1045	GTI 35-630	10	35		630	20	20	9	9	8,5	10,5	4,2			
GTI1046	GTI 35-730	10	35		730	20	20	9	9	8,5	10,5	4,2			
GTI1047	GTI 35-830	10	35		830	20	20	9	9	8,5	10,5	4,2			
GTI1048	GTI 35-930	10	35		930	20	20	9	9	8,5	10,5	4,2			
GTI1049	GTI 35-1030	10	35		1030	20	20	9	9	8,5	10,5	4,2			
GTI1050	GTI 50-230	10	50		230	20	20	9	9	8,5	10,5	5	280	250	220
GTI1055	GTI 50-330	10	50		330	20	20	9	9	8,5	10,5	5			
GTI1060	GTI 50-430	10	50		430	20	20	9	9	8,5	10,5	5			
GTI1065	GTI 50-530	10	50		530	20	20	9	9	8,5	10,5	5			
GTI1070	GTI 50-630	10	50		630	20	20	9	9	8,5	10,5	5			
GTI1071	GTI 50-730	10	50		730	20	20	9	9	8,5	10,5	5			
GTI1072	GTI 50-830	10	50		830	20	20	9	9	8,5	10,5	5			
GTI1073	GTI 50-930	10	50		930	20	20	9	9	8,5	10,5	5			
GTI1074	GTI 50-1030	10	50		1030	20	20	9	9	8,5	10,5	5			
GTI1075	GTI 120-330	2	120		330	30	30	11	15	10,5	10,5	7	440	400	335
GTI1080	GTI 120-430	2	120		430	30	30	11	15	10,5	10,5	7			
GTI1085	GTI 120-530	2	120		530	30	30	11	15	10,5	10,5	7			
GTI1090	GTI 120-630	2	120		630	30	30	11	15	10,5	10,5	7			
GTI1095	GTI 120-730	2	120		730	30	30	11	15	10,5	10,5	7			
GTI1096	GTI 120-830	2	120		830	30	30	11	15	10,5	10,5	7			
GTI1097	GTI 120-930	2	120		930	30	30	11	15	10,5	10,5	7			
GTI1098	GTI 120-1030	2	120		1030	30	30	11	15	10,5	10,5	7			
GTI1100	GTI 240-330	2	240		330	35	32	16	16	12,5	10,5	12	730	680	565
GTI1105	GTI 240-430	2	240		430	35	32	16	16	12,5	10,5	12			
GTI1110	GTI 240-530	2	240		530	35	32	16	16	12,5	10,5	12			
GTI1115	GTI 240-630	2	240		630	35	32	16	16	12,5	10,5	12			
GTI1120	GTI 240-730	2	240		730	35	32	16	16	12,5	10,5	12			
GTI1125	GTI 240-830	2	240		830	35	32	16	16	12,5	10,5	12			
GTI1130	GTI 240-930	2	240		930	35	32	16	16	12,5	10,5	12			
GTI1135	GTI 240-1030	2	240		1030	35	32	16	16	12,5	10,5	12			

Derating coefficient for use of Ω LINK in parallel

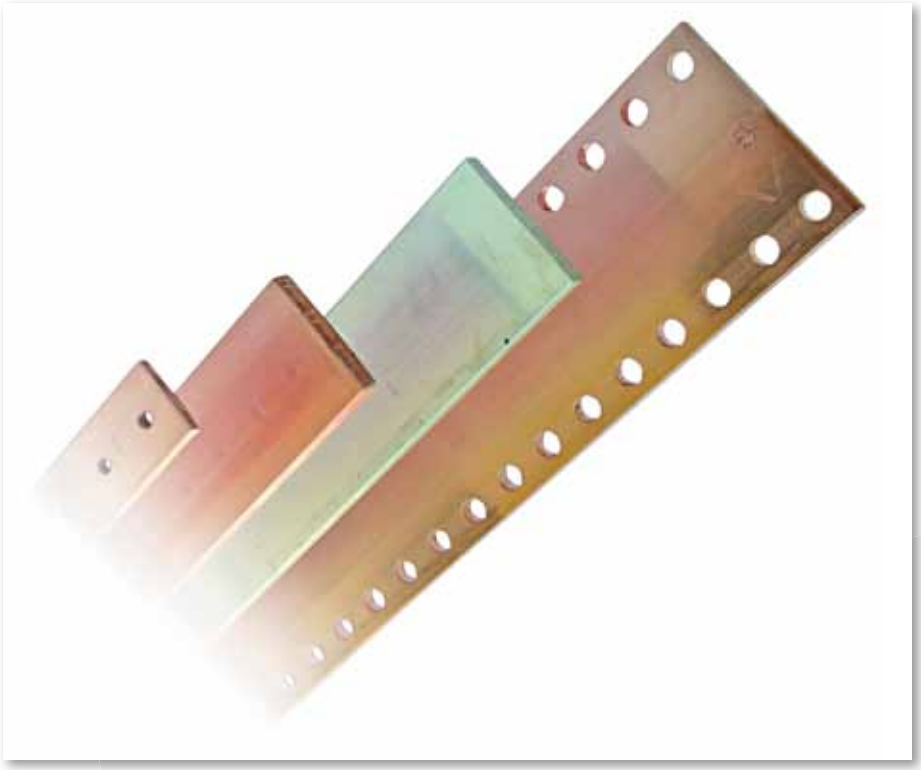
Cross-section (mm²)		
25	1,70	2,00
35	1,70	2,00
50	1,70	1,95
120	1,65	1,85
240	1,55	1,75

Comparison between the use of cable and Ω LINK

In (A)	**Cable Type N07-VK	Ω Link
	Cross-section (mm²)	
125	35	25
160	50 ÷ 70	25 ÷ 35
250	95 ÷ 120	50
400	185	120
630	2 x 150	240

*** Indicative data*

Copper and Aluminium **busbars**



Two metals are currently used as conductors in electrical panel boards: copper and aluminium.
In particular, when needing to define the power distribution inside an electrical panel board, people mainly choose to use drawn bars, using both the above mentioned metals.
In configuring a bar distribution system, it is important to consider some electrical and mechanical parameters such as those listed below:
Electrical parameters: rated intensity value to carry based on the conductor cross-section and number, and the resulting voltage loss.
Mechanical parameters: bar size and number, based on the panel board dimensions and on their mechanical resistance.

Other factors to consider which might limit the passage of current through the selected conductors are linked to the working temperature of the conductor and to its capability to dissipate heat.
In electricity, there is also a phenomenon called "skin effect" which determines the concentration of current on the conductors surface. The best conductor is therefore a flat one such as drawn bars in which the bar length and thickness ratio is the highest possible.
E.g. for the same cross-section and working temperature, a 100x5 mm bar carries 1.431 A, whereas the same cross-section, with 50x10 mm bar carries 1.129 A (cf. ampacity values on page 22, table for solid copper bars, referred to a ΔT 50°C).

ADVANTAGES

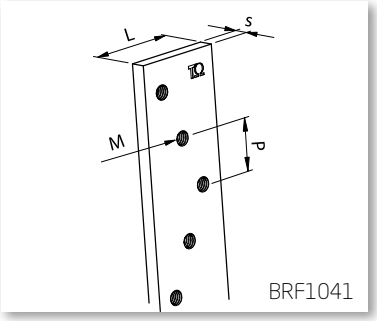
Prepunched and threaded copper bars
ready to use
no need for punching tools
wiring time savings

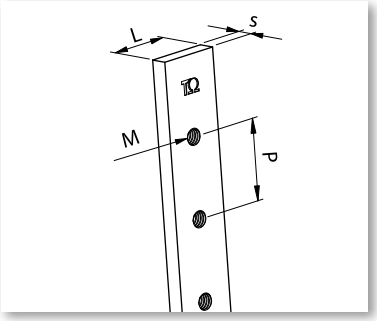
Solid aluminium bars
When compared to a copper bar with the same cross-section there is a significant weight saving, up to 70% less, with an ampacity reduction of about 30%.
Significant cost saving advantages due to the different cost of the raw material and, especially, the great difference in the weight/volume ratio.

TECHNICAL FEATURES

Copper bars:
Electrolytic copper Cu-ETP 99.90%
Rounded corners
tensile strength: 250 N/mm²
resistivity: 0,0172 Ω mm²/m
density: 8.9 kg/dm³

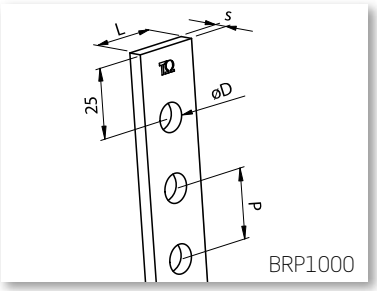
Aluminium bars:
Aluminium type EN-AW 1350 A
Rounded corners
tensile strength: 80 N/mm²
resistivity: 0.0286 Ω mm²/m
density: 2.7 kg/dm³

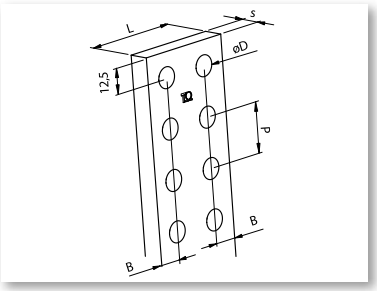




THREADED COPPER BARS - Thickness 2 - 3 - 4 - 5 - 10 mm - Length 1000 and 2000 mm

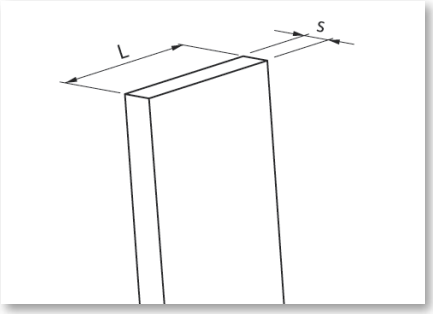
Code	Reference		Weight (Kg)	L (mm)	s (mm)	P (mm)	M
BRF0990	BRF 12X2X1000	10	0,22	12	2	18	M5
BRF0995	BRF 12X3X1000	10	0,32	12	3	18	M5
BRF1000	BRF 12X4X1000	10	0,42	12	4	18	M5
BRF1005	BRF 12X5X1000	10	0,49	12	5	18	M5
BRF1010	BRF 15X5X1000	4	0,64	15	5	25	M6
BRF1015	BRF 20X5X1000	4	0,84	20	5	25	M6
BRF1016	BRF 25X4X1000	4	0,80	25	4	25	M6
NEW **BRF1017**	BRF 25X5X1000	4	1,12	25	5	25	M6
BRF1020	BRF 32X5X1000	4	1,35	32	5	25	M6
BRF1025	BRF 12X4X2000	10	0,84	12	4	18	M5
BRF1030	BRF 15X5X2000	4	1,18	15	5	25	M6
BRF1031	BRF 15X5X2000 PC	4	1,16	15	5	18	M6
BRF1035	BRF 20X5X2000	4	1,66	20	5	25	M6
BRF1040	BRF 30X5X2000	4	2,49	30	5	25	M6
NEW **BRF1042**	BRF 32X5X2000	4	2,85	32	5	25	M8
BRF1041	BRF 32X5X2000-W	4	2,65	32	5	17,5	M6
BRF1045	BRF 30X10X1000	4	2,49	30	10	25	M8





PREPUNCHED COPPER BARS - Thickness 5 - 10 mm - Length 1750 mm

Code	Reference		Weight (Kg)	L (mm)	s (mm)	P (mm)	D Ø (mm)	B (mm)
BRP1000	BRP 25X5	2	1,39	25	5	25	10,5	12,5
BRP1005	BRP 50X5	2	3,39	50	5	25	10,5	12,5
BRP1010	BRP 63X5	2	4,39	63	5	25	10,5	12,5
BRP1015	BRP 80X5	2	5,69	80	5	25	10,5	12,5
BRP1020	BRP 100X5	2	7,24	100	5	25	10,5	12,5
BRP1025	BRP 125X5	2	9,19	125	5	25	10,5	12,5
BRP1030	BRP 50X10	2	6,70	50	10	25	10,5	12,5
BRP1035	BRP 60X10	2	8,79	60	10	25	10,5	12,5
BRP1040	BRP 80X10	2	11,30	80	10	25	10,5	12,5
BRP1045	BRP 100X10	2	14,40	100	10	25	10,5	12,5
BRP1050	BRP 120X10	2	18,30	120	10	25	10,5	12,5



SOLID COPPER BARS - Thickness 5 - 10 mm - Nominal Length 4200 mm

(Tolerance ±100 mm)
(Available upon request)

Code	Reference		Weight (Kg/m)	L (mm)	s (mm)
PRP0990	PRP 12X4	5	0,43	12	4
PRP1000	PRP 20x5	5	0,89	20	5
PRP1005	PRP 25x5	5	1,11	25	5
PRP1010	PRP 30x5	5	1,33	30	5
PRP1015	PRP 40x5	5	1,78	40	5
PRP1020	PRP 50x5	5	2,23	50	5
PRP1025	PRP 60x5	5	2,67	60	5
PRP1030	PRP 80x5	5	3,56	80	5
PRP1035	PRP 100x5	5	4,45	100	5
PRP1040	PRP 125x5	5	5,56	125	5
PRP1045	PRP 30x10	5	2,67	30	10
PRP1050	PRP 40x10	5	3,56	40	10
PRP1055	PRP 50x10	5	4,45	50	10
PRP1060	PRP 60x10	5	5,34	60	10
PRP1065	PRP 80x10	5	7,12	80	10
PRP1070	PRP 100x10	5	8,90	100	10
PRP1075	PRP 120x10	5	10,70	120	10
PRP1080	PRP 160x10	5	14,25	160	10
PRP1085	PRP 200x10	5	17,80	200	10

SOLID ALUMINIUM BARS - Thickness 10 mm - Length 4000 mm

Code	Reference		Weight (Kg/m)	L (mm)	s (mm)
BAP4000	BAP 20x10x4000	1	0,54	20	10
BAP4005	BAP 30x10x4000	1	0,81	30	10
BAP4010	BAP 40x10x4000	1	1,08	40	10
BAP4015	BAP 50x10x4000	1	1,35	50	10
BAP4020	BAP 60x10x4000	1	1,62	60	10
BAP4025	BAP 80x10x4000	1	2,16	80	10
BAP4030	BAP 100x10x4000	1	2,70	100	10
BAP4035	BAP 120x10x4000	1	3,24	120	10

Ampacity (A) table of Copper Bar based on the ΔT
temperature rise as per standard DIN 43671
Reference room temperature Ta = 35°C

THREADED COPPER BARS

Dimensions	Sect. (mm²)	ΔT 30°C	ΔT 50°C
12 x 2	24	108	143
12 x 3	36	120	160
12 x 4	48	160	212
12 x 5	60	183	241
15 x 5	75	218	289
20 x 5	100	274	363
25 x 4	100	288	380
25 x 5	125	327	433
30 x 5	150	379	502
32 x 5	160	400	530
30 x 10	300	573	756

Ampacity (A) table of Copper Bar based on the ΔT
temperature rise as per standard DIN 43671
Reference room temperature Ta = 35°C

PREPUNCHED COPPER BARS

Dimensions	Sect. (mm²)	No. bars in parallel							
		ΔT 30°C				ΔT 50°C			
									
25X5	125	327	586	795	890	433	776	1053	1179
50X5	250	583	994	1260	1411	772	1317	1669	1870
63X5	315	718	1197	1494	1673	951	1586	1980	2217
80X5	400	885	1450	1750	1960	1173	1921	2319	2597
100X5	500	1080	1730	2050	2296	1431	2292	2716	3042
125X5	625	1300	2022	2380	2666	1722	2679	3153	3532
50X10	500	792	1404	1897		1050	1861	2514	
60X10	600	916	1600	2139		1214	2119	2834	
80X10	800	1153	1962	2595		1528	2600	3438	
100X10	1000	1386	2306	3032		1836	3056	4017	
120X10	1200	1618	2660	3478		2144	3524	4609	

SOLID COPPER BARS

Ampacity (A) table of Copper Bar based on the ΔT temperature rise as per standard DIN 43671
Reference room temperature Ta = 35°C

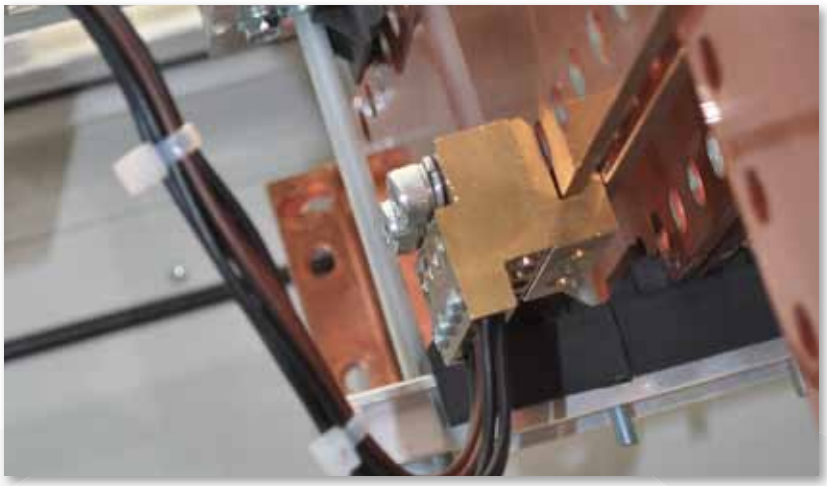
Dimensions	Sect. (mm²)	No. bars in parallel							
		ΔT 30°C				ΔT 50°C			
12 x 4	48	160				212			
12 x 5	60	183	334	460	514	241	440	607	679
15 x 5	75	218	405	567	635	289	537	751	841
20 x 5	100	274	500	690	772	363	663	914	1023
25 x 5	125	327	586	795	890	433	776	1053	1179
30 x 5	150	379	672	896	1003	502	890	1187	1329
32 x 5	160	400	695	931	1043	530	920	1234	1382
40 x 5	200	482	836	1090	1220	639	1108	1444	1617
50 x 5	250	583	994	1260	1411	772	1317	1670	1870
60 x 5	300	688	1150	1440	1613	912	1524	1908	2137
63 x 5	315	718	1197	1494	1673	951	1586	1980	2217
80 x 5	400	885	1450	1750	1960	1173	1921	2319	2597
100 x 5	500	1080	1730	2050	2296	1431	2292	2716	3042
125 x 5	625	1300	2022	2381	2666	1723	2679	3155	3532
20 x 10	200	427	734	959		564	970	1269	
30 x 10	300	573	986	1289		756	1300	1701	
40 x 10	400	715	1230	1609		944	1624	2124	
50 x 10	500	852	1510	2040		1129	2001	2703	
60 x 10	600	985	1720	2300		1305	2279	3048	
80 x 10	800	1240	2110	2790		1643	2796	3697	
100 x 10	1000	1490	2480	3260		1974	3286	4320	
120 x 10	1200	1740	2860	3740		2306	3790	4956	
160 x 10	1600	2220	3590	4680		2942	4757	6201	
200 x 10	2000	2690	4310	5610		3564	5711	7433	

SOLID ALUMINIUM BARS

Ampacity (A) table of Aluminium Bar based on the ΔT temperature rise as per standard DIN 43670
Reference room temperature Ta = 35°C

Dimensions	Sect. (mm²)	No. bars in parallel					
		ΔT 30°C			ΔT 50°C		
20 x 10	200	331	643	942	434	842	1234
30 x 10	300	445	832	1200	583	1090	1572
40 x 10	400	557	1030	1460	730	1349	1913
50 x 10	500	667	1210	1710	874	1585	2240
60 x 10	600	774	1390	1940	1006	1807	2522
80 x 10	800	983	1720	2380	1278	2236	3094
100 x 10	1000	1190	2050	2790	1547	2665	3627
120 x 10	1200	1390	2360	3200	1807	3068	4160

Example of bar choice: for In = 800 A, for Tmax = 85 °C, with 1 bar per phase.
Cf. tables with ΔT = Tmax – Ta =(85-35) = 50 °C with In ≥ 800 A:
- **copper prepunched bar** 63x5 (In = 951 A)
- **solid copper bar:** 63 x 5 (In = 951 A), 40x10 (In = 944 A)
- **solid aluminium bar** 50x10 (In = 874 A)



BOC - Direct hook-up distribution block on copper busbars

Brass distribution block for 5 and 10 mm thick copper bars. Made of:
- 8-output distribution block for direct connection on 25 mm pitch prepunched bars), with hex socket head cap screws
- no-punching connection unit on solid copper bar

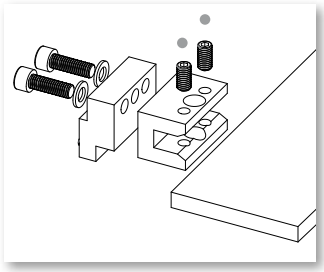
ADVANTAGES

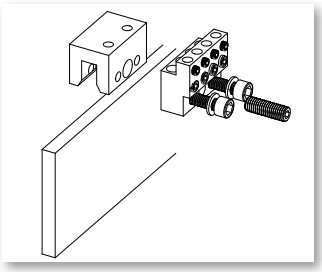
The connection unit can be used as a guide to make punching the 5 and 10 mm thick bars easier. Spacing two or three pre-punched bars becomes simple using the connection unit as a guide. Simple and quick derivations with cables up to 16 and/or 25 mm² (with ferrule) that can be used up to 400 A.

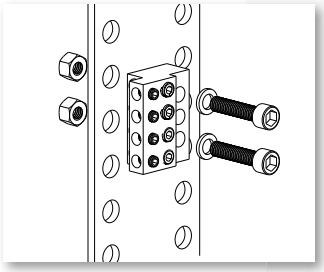
Use with solid bar:
- use both the units
- two mounting possibilities

- Screw sets M8 not included

Use with prepunched bar:
- use only the distribution block unit on single bar phase systems.
- use both units on multi bar phase systems

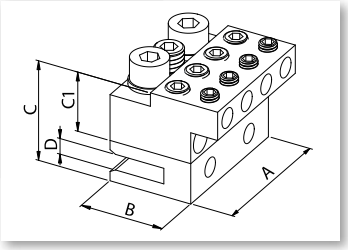




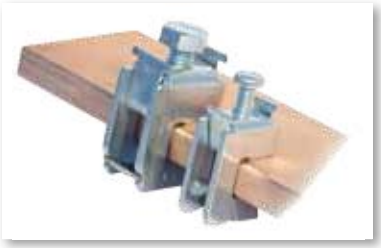


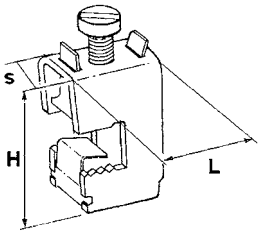
Code	Reference		Weight (kg)	A (mm)	B (mm)	C (mm)	C1 (mm)	D (mm)	(Nm)
BOC1000	BOC RIP 8 *	12	0,22	50	30	-	22	-	
BOC1005	BOC KIT 8 - 5 **	12	0,39	50	30	37	22	5	10
BOC1010	BOC KIT 8 - 10 ***	12	0,51	50	30	52	22	10	10

** 8 output distribution block unit*
*** 8 output distribution block unit + connection unit on 5 mm thick bar*
**** 8 output distribution block unit + connection unit on 10 mm thick bar*



Code	IN/OUT	Stripped cable sect. (mm²)	Cable sect. with ferrule (mm²)	No.	Ø (mm)	(Nm)
BOC1000 BOC1005 BOC1010	⟵ OUT	2,5 ÷ 25	2,5 ÷ 16	4	7	3
	⟵ OUT	4 ÷ 35	4 ÷ 25	4	9	3,5





TECHNICAL FEATURES

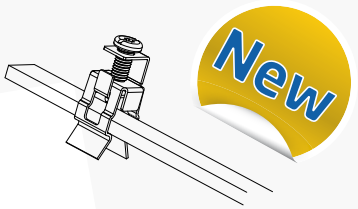
Passivated galvanized steel
Connections on copper bars 5 and 10 mm thick
Suitable for cable cross-sections: from 1.5 to 120 mm²
Screwdriver head for sect. 16 and 35 mm²
Compliant with: EN 60998-1

ADVANTAGES

Easy and quick to use without having to punching.
They allow interventions on already fitted bar systems without having to dismantle them.
The stripped cable is fitted and tightened on the bar by a metal plate, thus preventing the wire from breaking.

TERMINALS FOR CABLE

Code	Reference		H (mm)	L (mm)	S (mm)	Cable cross-section (mm²)	(Nm)
Terminals for 5 mm thick bars							
MCR1000	MCR 5x16	10	26	22	12	1,5 ÷ 16	3
MCR1005	MCR 5x35	10	31	29	16	16 ÷ 35	6 ÷ 8
MCR1010	MCR 5x70	10	39	31	21	35 ÷ 70	10 ÷ 12
MCR1015	MCR 5x120	10	44	34	24	70 ÷ 120	12 ÷ 15
Terminals for 10 mm thick bars							
MCR1020	MCR 10x16	10	31	22	12	1,5 ÷ 16	3
MCR1025	MCR 10x35	10	37	29	16	16 ÷ 35	6 ÷ 8
MCR1030	MCR 10x70	10	43	31	21	35 ÷ 70	10 ÷ 12
MCR1035	MCR 10x120	10	48	34	24	70 ÷ 120	12 ÷ 15



TECHNICAL FEATURES

Passivated galvanized steel
Connections on copper bar 12x4 mm
Suitable for cable cross-sections: from 1.5 to 16 mm²

ADVANTAGES

Easy and quick to use without having to punching.
Mounting clip
The stripped cable is fitted and tightened on the bar by a metal plate, thus preventing the wire from breaking.

TERMINAL WITH CLIP

Code	Reference		Bar cross-section	No. cable	Cable cross-section (mm²)	(Nm)
MCR2000	MCR 4x12	10	12x4	1	1,5 ÷ 16	3

TECHNICAL FEATURES

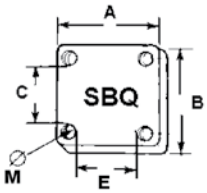
Passivated galvanized steel
Connections: 1 or 2 cables from 1.5 to 10 mm²
Complete with screw M5x12

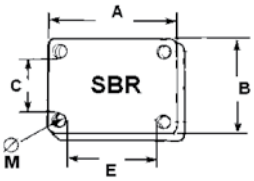
ADVANTAGES

Easy and quick to use.
Indirect tightening thus preventing the wire from breaking.

SPIDER CONNECTOR FOR THREADED BARS

Code	Reference		Bar cross-section	No. cable	Cable cross-section (mm²)	(Nm)
MCR1100	MCR 4xM5	100	12x4 - 12x5	1 ÷ 2	1,5 ÷ 10	3





TECHNICAL FEATURES

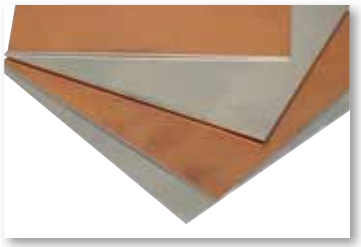
Galvanized steel
Max. tightening thickness 20 mm
(with supplied screws)
Plates thickness 5 mm

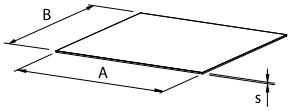
ADVANTAGES

These allow a direct connection without punching and bolting between rigid copper bar systems or with insulated flexible bars. Easy and quick to use, they allow modifications on already fitted bar systems without having to dismantle them to perform the relevant punching.

BUSBAR CLAMPS FOR SOLID AND FLEXIBLE BARS

Code	Reference		E (mm)	C (mm)	A (mm)	B (mm)	Ø - M (mm)	(Nm)
SBR1000	SBR 50x24	4	52	26	77	51	8,5-M8	10
SBR1005	SBR 50x32	4	52	34	77	59	8,5-M8	10
SBR1010	SBR 50x40	4	52	42	77	67	8,5-M8	10
SBR1015	SBR 80x24	4	82	26	107	51	8,5-M8	10
SBR1020	SBR 80x32	4	82	34	107	59	8,5-M8	10
SBR1025	SBR 80x50	4	82	52	107	77	8,5-M8	10
SBQ1000	SBQ 30x30	4	32	32	53	53	6,5-M6	10
SBQ1005	SBQ 40x40	4	42	42	63	63	6,5-M6	10
SBQ1010	SBQ 50x50	4	52	52	77	77	8,5-M8	10
SBQ1015	SBQ 63x63	4	65	65	90	90	8,5-M8	10
SBQ1020	SBQ 80x80	4	82	82	115	115	10,5-M10	10
SBQ1025	SBQ 100x100	4	102	102	135	135	10,5-M10	10





TECHNICAL FEATURES

Bimetallic elements consist of copper plated aluminium plates.
Copper: 30% of the total weight

ADVANTAGES

Secure contact
Corrosion protected connection between copper and aluminum

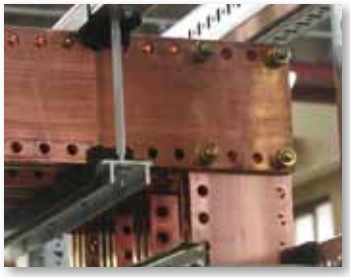
BIMETALLIC (Cu-Al) SHEET

Code	Reference		A (mm)	B (mm)	s (mm)
PBM1000	PBM 100x100	10	100	100	1,0

BIMETALLIC (Cu-Al) WASHERS

Code	Reference		D1 (mm)	D2 (mm)	s (mm)
PBM2000	RBM M6	100	15	6,5	1,0
PBM2005	RBM M8	100	18	8,5	1,0
PBM2010	RBM M10	50	22	10,5	1,5
PBM2015	RBM M12	50	25	12,5	2,0

Bar supports



APPLICATIONS

TEKNOMEGA bar supports make it possible to efficiently and conveniently support all copper and/or aluminium bar systems inside an electrical cabinet

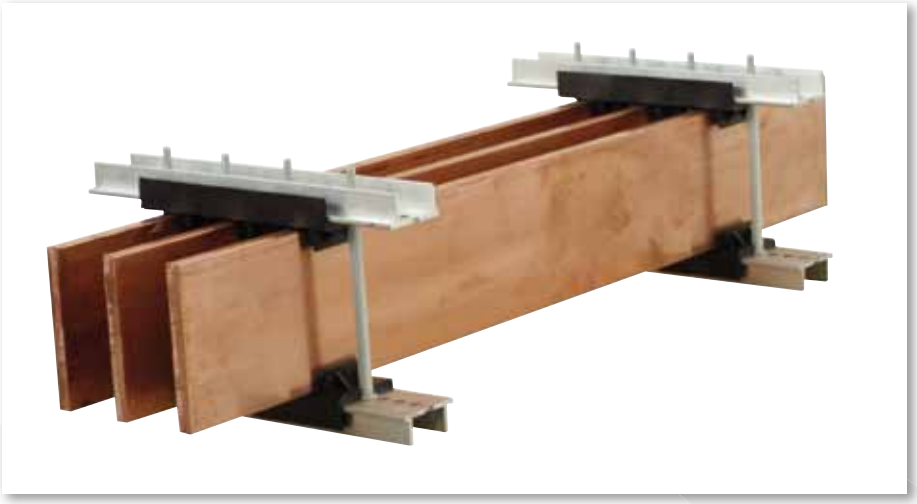
The versatility and universality of our bar supports allows the panel board fitter to easily handle the few references to make a wide range of configurations in any type of panel board metalwork.
TEKNOMEGA dedicated particular attention on the efficiency and safety of these products, carrying out **TYPE TESTS** on all the here indicated references as per the requirements of the reference standards at acknowledged laboratories.

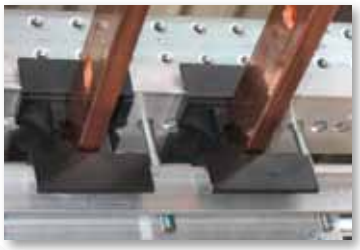
ADVANTAGES

Complete range to support side and flat bars
For copper and aluminium bars
Maximum versatility of use and application
Quick and simplified universal fitting

Can be used on the following thicknesses:
5 and 10 mm

Tested and certified in compliance with standard IEC 61439-2





The Ω TOP bar support is built using two references only:
1) aluminium support and fitting rail.
2) set of blocks/screws with all that is needed to make a bar support.
There are also some pre-assembled bar supports for panel boards 400 and 600 mm depth, as well as accessories such as:
- rilsan tube advised for configurations with minimum spacing between phases
- brackets for horizontal omnibus and vertical busbar (to be used also to compensate the offset between different bar systems).

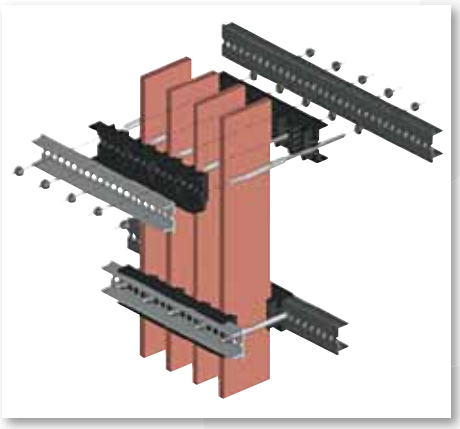
TECHNICAL FEATURES

Adjustable distance between phases
Exceptional resistance to short-circuits
High versatility
Sets of blocks with screws
Prepunched support rail in non-magnetic aluminium
Bar thickness 5 and 10 mm

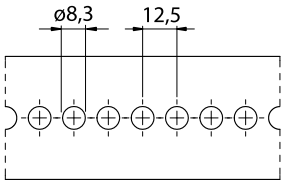
Insulating blocks
Made in PA 66 reinforced 30% Fiberglass
Self-extinguishing UL 94-V0
Colour: black
Halogen Free

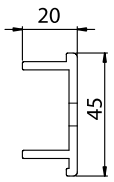
Rail
Non-magnetic aluminium EN AW-6060

Certifications
Compliant with standard IEC 61439-2
Ω TOP was tested in laboratory
ACAE IA01
CERTIFICATES ACAE-LOVAG
No. A 15.001 - A 15.002 - A015.003
Mechanical resistance tests



Ω TOP - Universal bar support



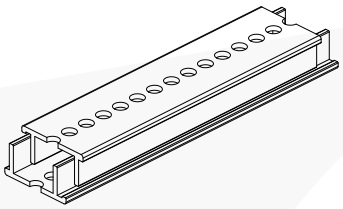


file No. E300607

SUPPORT RAIL

Code	Reference		Weight (Kg)
TOP1000	TOP PR2000	2	1,2

- One code for all configurations
- Made in aluminium, prepunched with 12.5 mm pitch.
- Length 2 meters
- Used in pairs, thanks to the asymmetric shape, it forms a high mechanical resistance structure (for high horizontal loads)



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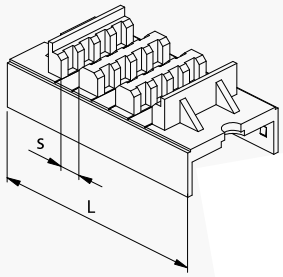

BLOCKS AND SCREW SET

Code	Reference		Type	Total No. blocks	No. tie-rods	No. bars	s (mm)	bar min-max H (mm)	L (mm)
TOP1005	TOP 2/5T	1	T	6	4	1÷2	5	30-125	50
TOP1010	TOP 2/5TN	1	T+N	8	5	1÷2	5	30-125	50
TOP1015	TOP 4/5T	1	T	6	4	1÷4	5	30-125	75
TOP1020	TOP 4/5TN	1	T+N	8	5	1÷4	5	30-125	75
TOP1025	TOP 1/10T	1	T	6	4	1	10	30-120	50
TOP1030	TOP 1/10TN	1	T+N	8	5	1	10	30-120	50
TOP1035	TOP 2/10T	1	T	6	4	1÷2	10	30-120	75
TOP1040	TOP 2/10TN	1	T+N	8	5	1÷2	10	30-120	75
TOP1045	TOP 3/10T	1	T	6	4	1÷3	10	30-120	100
TOP1050	TOP 3/10TN	1	T+N	8	5	1÷3	10	30-120	100

The set is made of insulating blocks for 5 to 10 mm thick bars and of all the screws and tie-rods needed to make T (3-pole) or T+N (3-pole+neutral) configured bar support

Example: to make a bar support in 3-pole+Neutral(TN), with 2 bars per phase, 10 mm thick = 2/10 TN

Select:

Aluminium rail	TOP1000
Set of blocks and screws	TOP1040

file No. E300607

PRE-ASSEMBLED BAR SUPPORTS

Code	Reference		Type
TOP1060	TOP 2/5TN-400	1	T+N
TOP1065	TOP 1/10TN-400	1	T+N
TOP1070	TOP 2/5TN-600	1	T+N
TOP1075	TOP 2/10TN-600	1	T+N

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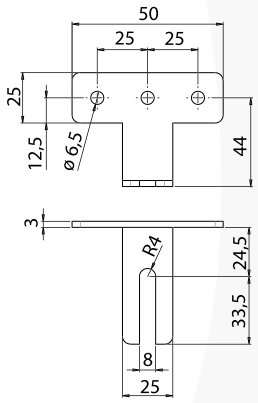
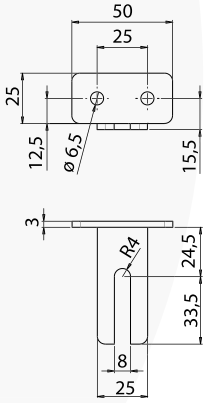
TOP1100



TOP1105



ACCESSORIES

Code	Reference	Description	
TOP1055	TOP TI	Rilsan tube for tie-rod insulation	100
TOP1100	TOP SQ-O	Bracket for horizontal busbar	10
TOP1105	TOP SQ-V	Bracket for vertical busbar	10

Ω TOP - Universal bar support

INFORMATION

** The distances between supports (in mm) are computed considering the yield of copper; the indicated values therefore prevent permanent deformation of the copper bars when stressed by short-circuit conditions.
** The first and last bar support must be assembled at a distance from the bar extremities not exceeding 1/4 of the distance requested between supports.
** For short-circuit resistance values other than or intermediate to the indicated ones:
** For configurations other than the indicated ones:
** For distances between phases intermediate or higher than the indicated ones:
PLEASE CONTACT OUR TECHNICAL OFFICE
** The first indicated value as the "Spacing between phases" is the minimum possible obtainable for the specific configuration of bar supports (values marked in bold in the tables).
** In some configurations with minimum spacing between phases, it might be difficult for the internal phases to insert the screws; one should do one phase at a time.
** In configurations with minimum spacing between phases, one should use the TOP1055 RILSAN tube to insulate the tie-rod.

Important

** For configurations starting from copper 80x10 bar No. 2 or 50x10 bar No. 3 per phase, one should use the DOUBLE aluminium rail (i.e. two coupled rails, one inside the other, to create a kind of square pipe with significant mechanical rigidity)

Distance between supports depending on Icc (short-circuit current)

Icc pk = *Short-circuit current peak value expressed in kA*
Icc rms = *Effective value of short-circuit current, duration equal to 1 second, expressed in kA*

Ω TOP 3 / 10 >> 3 BARS PER PHASE

Icc pk (kA)		53			74			110				143				165				187				220			
Icc rms (kA)		25			35			50				65				75				85				100			
Spacing between phases (mm)		100	125	150	100	125	150	100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175
Bar cross-section H x s	30x10	**900**	900	900	**790**	890	900	**530**	600	650	710	**410**	460	500	540	**350**	400	440	470	**275**	345	380	420	**200**	225	300	350
	40x10	**900**	900	900	**900**	900	900	**620**	690	750	820	**470**	530	580	630	**350**	440	500	540	**275**	345	440	480	**200**	250	300	350
	50x10	**900**	900	900	**900**	900	900	**690**	770	840	900	**470**	590	650	700	**350**	440	530	610	**275**	345	415	480	**200**	250	300	350
	60x10	**900**	900	900	**900**	900	900	**750**	840	900	900	**470**	590	710	770	**350**	440	530	620	**275**	345	415	480	**200**	250	300	350
	80x10	**900**	900	900	**900**	900	900	**870**	900	900	900	**470**	590	710	825	**350**	440	530	620	**275**	345	415	480	**200**	250	300	350
	100x10	**900**	900	900	**900**	900	900	**900**	900	900	900	**470**	590	710	825	**350**	440	530	620	**275**	345	415	480	**200**	250	300	350
	120x10	**900**	900	900	**900**	900	900	**900**	900	900	900	**470**	590	710	825	**350**	440	530	620	**275**	345	415	480	**200**	250	300	350

Ω TOP 2 / 10 >> 2 BARS PER PHASE

Icc pk (kA)		53			74				110				143				165				187			
Icc rms (kA)		25			35				50				65				75				85			
Spacing between phases (mm)		75	100	125	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150
Bar cross-section H x s	30x10	**785**	900	900	**560**	650	720	790	**380**	440	490	530	**270**	335	370	410	**205**	270	320	360	**160**	210	265	310
	40x10	**900**	900	900	**650**	750	840	900	**440**	500	560	620	**270**	365	430	470	**205**	270	340	410	**160**	210	265	320
	50x10	**900**	900	900	**720**	840	900	900	**460**	560	630	690	**270**	365	455	530	**205**	270	340	410	**160**	210	265	320
	60x10	**900**	900	900	**790**	900	900	900	**460**	610	690	750	**270**	365	455	545	**205**	270	340	410	**160**	210	265	320
	80x10	**900**	900	900	**900**	900	900	900	**460**	610	770	870	**270**	365	455	545	**205**	270	340	410	**160**	210	265	320
	100x10	**900**	900	900	**900**	900	900	900	**460**	610	770	900	**270**	365	455	545	**205**	270	340	410	**160**	210	265	320
	120x10	**900**	900	900	**900**	900	900	900	**460**	610	770	900	**270**	365	455	545	**205**	270	340	410	**160**	210	265	320

Ω TOP 1 / 10 >> 1 BAR PER PHASE

Icc pk (kA)		53				74				110				143			
Icc rms (kA)		25				35				50				65			
Spacing between phases (mm)		50	75	100	125	50	75	100	125	50	75	100	125	50	75	100	125
Bar cross-section H x s	30x10	**455**	555	640	720	**325**	400	460	520	**220**	270	310	350	**170**	205	240	265
	40x10	**525**	645	745	835	**375**	460	530	600	**255**	310	360	400	**195**	240	275	310
	50x10	**590**	720	830	935	**420**	515	595	665	**285**	350	400	450	**200**	255	310	345
	60x10	**645**	790	900	900	**460**	565	650	730	**310**	380	440	490	**200**	255	340	380
	80x10	**745**	900	900	900	**535**	650	750	845	**335**	440	505	565	**200**	300	390	435
	100x10	**830**	900	900	900	**590**	730	840	900	**335**	490	565	635	**200**	300	400	490
	120x10	**900**	900	900	900	**650**	790	900	900	**335**	500	620	690	**200**	300	400	500

• *values marked in bold refer to the MINIMUM spacing between phases*

Distance between supports depending on Icc (short-circuit current)

Icc pk = *Short-circuit current peak value expressed in kA*
Icc rms = *Effective value of short-circuit current, duration equal to 1 second, expressed in kA*

Ω TOP 4 / 5 >> 4 BARS PER PHASE

Icc pk (kA)		53				74				110				143				165			
Icc rms (kA)		25				35				50				65				75			
Spacing between phases (mm)		75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150
Bar cross-section H x s	30x5	**550**	640	720	780	**400**	460	510	560	**270**	310	340	380	**210**	240	270	290	**180**	210	230	250
	40x5	**640**	740	830	900	**460**	530	590	650	**310**	360	400	440	**240**	270	310	340	**200**	240	270	290
	50x5	**715**	830	900	900	**510**	590	660	720	**340**	400	440	490	**265**	310	340	370	**200**	265	300	320
	63x5	**800**	900	900	900	**570**	660	740	810	**390**	450	500	550	**265**	340	380	420	**200**	265	330	360
	80x5	**900**	900	900	900	**650**	750	840	900	**440**	500	560	620	**265**	355	430	470	**200**	265	330	400
	100x5	**900**	900	900	900	**720**	840	900	900	**450**	560	630	690	**265**	355	430	530	**200**	265	330	400
	125x5	**900**	900	900	900	**810**	900	900	900	**450**	600	700	770	**265**	355	430	530	**200**	265	330	400

Ω TOP 4 / 5 >> 3 BARS PER PHASE

Icc pk (kA)		53				74				110				143				165			
Icc rms (kA)		25				35				50				65				75			
Spacing between phases (mm)		75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150
Bar cross-section H x s	30x5	**480**	550	620	680	**340**	400	440	490	**230**	270	300	330	**180**	210	230	250	**150**	180	200	220
	40x5	**550**	640	720	780	**400**	460	510	560	**270**	310	340	380	**210**	240	270	290	**175**	210	230	250
	50x5	**620**	720	800	880	**440**	510	570	630	**300**	340	390	420	**230**	270	300	320	**175**	230	260	280
	63x5	**700**	800	900	900	**500**	570	640	700	**330**	390	430	470	**230**	300	330	360	**175**	230	290	320
	80x5	**780**	900	900	900	**560**	650	720	790	**380**	440	490	530	**230**	310	370	410	**175**	230	290	345
	100x5	**880**	900	900	900	**630**	720	810	890	**390**	490	540	600	**230**	310	385	460	**175**	230	290	345
	125x5	**900**	900	900	900	**700**	810	900	900	**390**	520	610	670	**230**	310	385	465	**175**	230	290	345

Ω TOP 2 / 5 >> 2 BARS PER PHASE

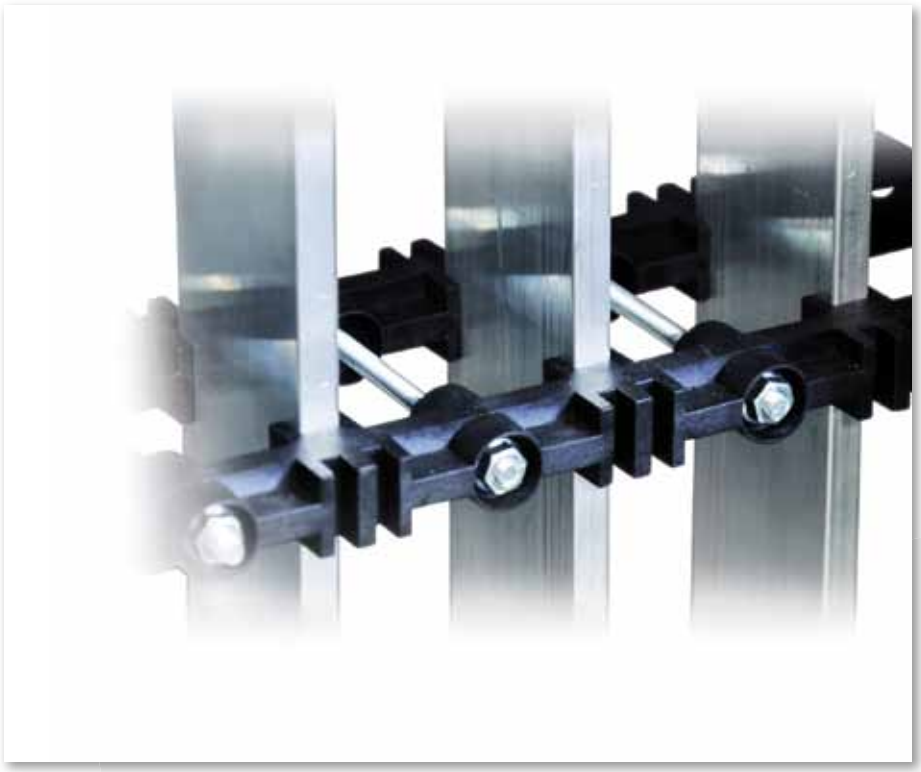
Icc pk (kA)		53				74				110				143			
Icc rms (kA)		25				35				50				65			
Spacing between phases (mm)		50	75	100	125	50	75	100	125	50	75	100	125	50	75	100	125
Bar cross-section H x s	30x5	**320**	390	450	510	**230**	280	320	360	**150**	190	220	240	**120**	150	170	190
	40x5	**370**	450	520	580	**260**	320	370	420	**180**	220	250	280	**140**	170	190	220
	50x5	**410**	510	580	650	**300**	360	420	470	**200**	240	280	310	**150**	190	220	240
	63x5	**460**	570	660	730	**330**	410	470	520	**220**	270	320	350	**170**	210	240	270
	80x5	**520**	640	740	830	**370**	460	530	590	**250**	310	360	400	**165**	240	270	310
	100x5	**580**	720	830	900	**420**	510	590	660	**280**	340	400	440	**165**	250	310	340
	125x5	**650**	800	900	900	**470**	570	660	740	**285**	390	440	500	**165**	250	335	380

Ω TOP 2 / 5>> 1 BAR PER PHASE

Icc pk (kA)		53				74				110				143			
Icc rms (kA)		25				35				50				65			
Spacing between phases (mm)		50	75	100	125	50	75	100	125	50	75	100	125	50	75	100	125
Bar cross-section H x s	30x5	**225**	280	320	360	**160**	200	230	260	**110**	135	155	175	**-***	100	120	130
	40x5	**265**	320	370	415	**190**	230	265	300	**125**	155	180	200	**-***	120	135	155
	50x5	**295**	360	415	465	**210**	260	300	335	**140**	175	200	225	**110**	130	155	170
	63x5	**330**	405	470	525	**235**	290	335	375	**160**	195	225	250	**120**	150	170	195
	80x5	**370**	455	530	585	**265**	325	375	420	**180**	220	255	285	**135**	170	195	220
	100x5	**415**	510	585	655	**300**	365	420	470	**200**	245	285	315	**155**	190	220	245
	125x5	**465**	570	655	735	**335**	405	470	525	**225**	275	315	355	**170**	210	245	275

• *values marked in bold refer to the MINIMUM spacing between phases*
** value less than 100 mm*

Ω TOP JUNIOR - Compact bar support



TECHNICAL FEATURES

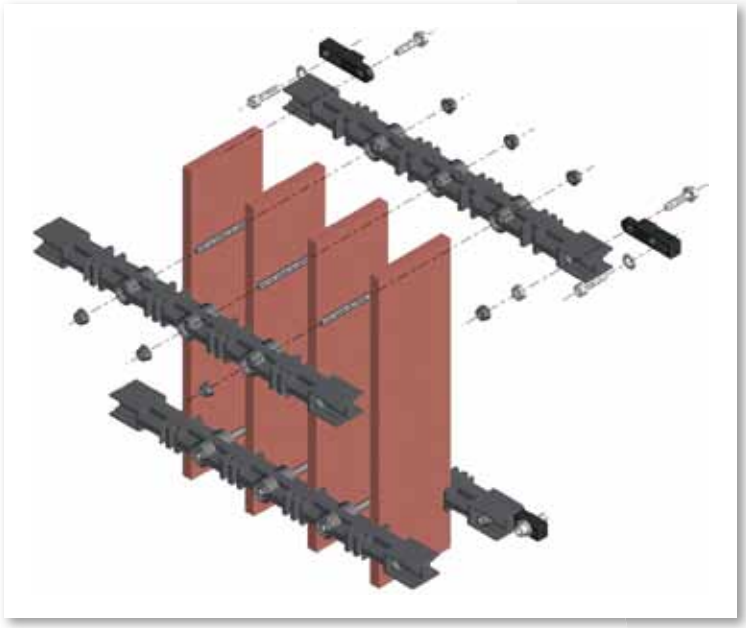
High versatility
Space between phases 70 mm
High resistance to short-circuit
Single reference for use with 5 to 10 mm thick bars
Fitting directly on 400 mm deep panel boards
Adjustable fasteners supplied

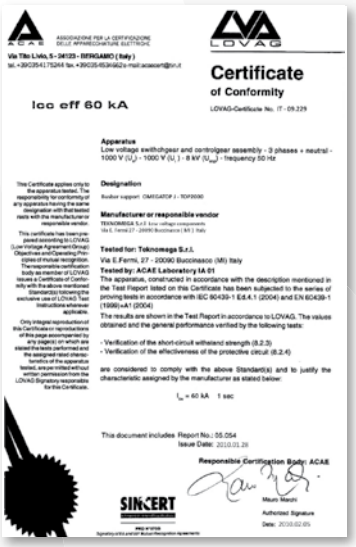
Made of:

Polyamide 6/6 reinforced with 30% fiberglass
Self-extinguishing UL 94-V0
Colour: black
Halogen Free

Certifications:

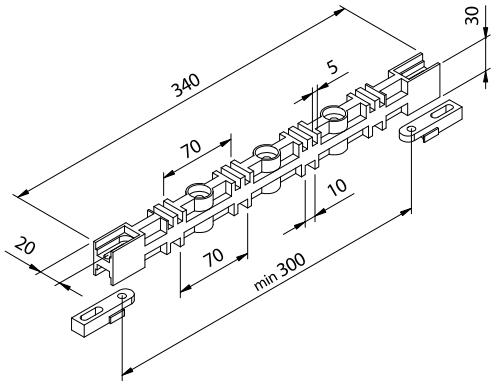
Compliant with standard IEC 61439-2
TESTED in Laboratory ACAE IA01
CERTIFICATE ACAE-LOVAG No. IT 10.004





Certificate
of Conformity

Icc eff 60 kA



Code	Reference		Type		No. tie-rods	No. bars	s (mm)	H min ÷ max (mm)
TOP2000	TOP J 5-10	2	T + N	2 / 5	3	1-2	5	30 ÷ 80
				1 / 10		1	10	30 ÷ 80

Distance between supports depending on Icc (short-circuit current)

Icc pk = Short-circuit current peak value expressed in kA

Icc rms = Effective value of short-circuit current, duration equal to 1 second, expressed in kA

Ω TOP JUNIOR 1 / 10 >> 1 BAR PER PHASE

Icc pk (kA)		53	74	110	132
Icc rms (kA)		25	35	50	60
Spacing between phases (mm)		70			
Bar cross-section H x s	30x10	540	385	260	200
	40x10	620	445	285	200
	50x10	695	495	285	200
	60x10	760	545	285	200
	80x10	870	690	285	200

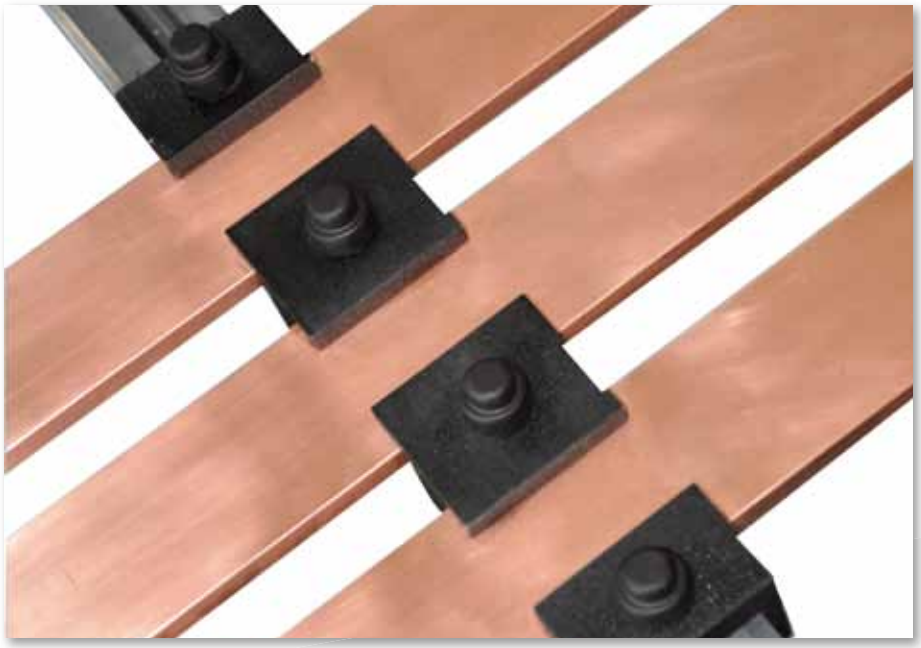
ΩTOP JUNIOR 2 / 5 >> 1 BAR PER PHASE

Icc pk (kA)		53	74	110	132
Icc rms (kA)		25	35	50	60
Spacing between phases (mm)		70			
Bar cross-section H x s	30x5	270	190	130	105
	40x5	310	220	150	125
	50x5	350	250	165	140
	60x5	380	275	180	150
	80x5	390	310	210	170

Ω TOP JUNIOR 2 / 5 >> 2 BARS PER PHASE

Icc pk (kA)		53	74	110	132
Icc rms (kA)		25	35	50	60
Spacing between phases (mm)		70			
Bar cross-section H x s	30x5	380	270	180	115
	40x5	440	310	210	165
	50x5	490	350	235	165
	60x5	540	385	240	165
	80x5	620	445	240	165

Ω FLAT - Bar support

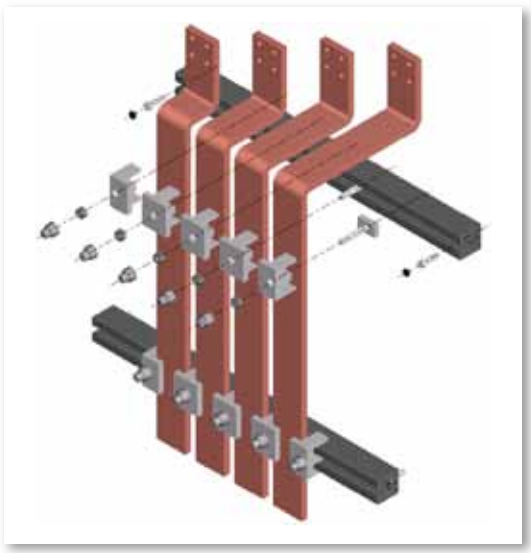


The Ω FLAT bar support is a UNIVERSAL, QUICK and COMPETITIVE solution for all flat supporting requirements, of copper or aluminium bars.
It is mainly made of two elements:
1) supporting and fastening rail
2) set of blocks and screws to tighten the bars

The Ω FLAT bar support can also be used as an anchoring system for flexible insulated bars Ω FLEX and insulated braids Ω LINK

TECHNICAL FEATURES

Universal
Distance between adjustable phases
Bar thickness 5 - 10 mm
High resistance to short-circuits
Air distance between two phases:
20 mm with "T" blocks
40 mm with "L" blocks ", incrementable by spacing the blocks

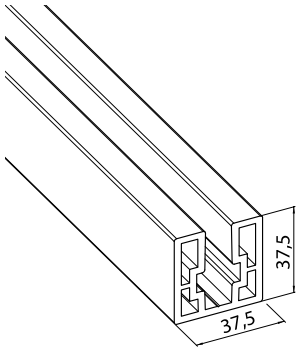


Insulating blocks:
In 6/6 polyamide reinforced with 30% fiberglass
Self-extinguishing UL 94-V0
Black colour
Halogen Free

Support Rail:
Made in extruded PVC
Self-extinguishing UL 94-V0
Black colour

Certifications:
Compliant with standard IEC 61439-2
TESTED in Laboratory ACAE IA01
CERTIFICATE ACAE-LOVAG No. IT 10.003

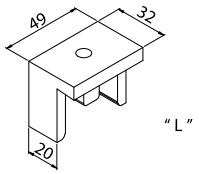

Certificate
of Conformity

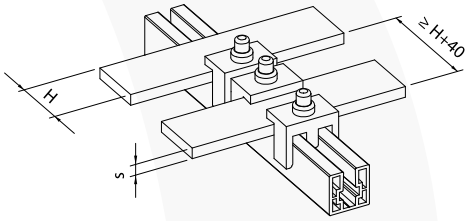


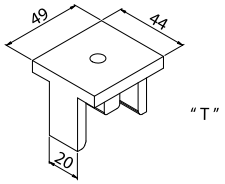
SUPPORT RAIL

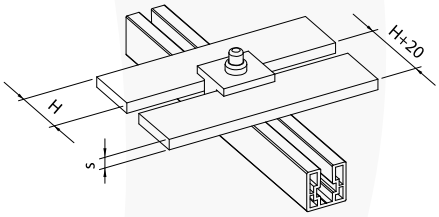
Code	Reference		Weight (Kg)
FLT1000	FLT PR 2000	2	1,90

- One single code for all configurations
- Made in extruded PVC
- 2 meters long
- Working temperature up to 85°C
- Quick fitting to the panel board structure by means of hex socket head cap screws M6x25, to be used after punching the bottom guiding rail









INSULATING BLOCKS AND SCREWS

Code	Reference		Phases	No. "L" blocks	No. "T" blocks	s min-max (mm)	H min-max (mm)	Spacing between phases (mm)
NEW **FLT1015**	FLT LT-T	1	T	2	2	5-10	30-100	H + 20
NEW **FLT1020**	FLT LT-TN	1	T+N	2	3			
NEW **FLT1025**	FLT LL-T	1	T	6	-			≥ H + 40
NEW **FLT1030**	FLT LL-TN	1	T+N	8	-			

The set consists of insulating blocks, hammer head screws M8x45, hexagonal nuts M8 and insulating nut caps.
Complete with hex socket head cap screws M6x25 to fasten rail FLT1000 and plastic caps to insulate the head screws M6x25.

Example:
to make a bar support configuration
3-pole + Neutral (Phases=T+N) at **MINIMUN** distance between phases (=H+20 mm)

Select: Support Rail **FLT1000**
Insulating Blocks and Screws **FLT1020**

Distance between supports depending on Icc (short-circuit current)

Icc pk =Short-circuit current peak value expressed in kA
Icc rms = Effective value of short-circuit current, duration equal to 1 second, expressed in kA

CONFIGURATIONS USING FLT1015 - FLT1020

Icc pk (kA)		53						74						84					
Icc rms (kA)		25						35						40					
Spacing between phases (mm)		50	60	70	80	100	120	50	60	70	80	100	120	50	60	70	80	100	120
BAR WIDTH H (mm)	30	**240**	-	-	-	-	-	**120**	-	-	-	-	-	**95**	-	-	-	-	-
	40	-	**290**	-	-	-	-	-	**150**	-	-	-	-	-	**115**	-	-	-	-
	50	-	-	**335**	-	-	-	-	-	**170**	-	-	-	-	-	**135**	-	-	-
	60	-	-	-	**385**	-	-	-	-	-	**195**	-	-	-	-	-	**150**	-	-
	80	-	-	-	-	**480**	-	-	-	-	-	**245**	-	-	-	-	-	**190**	-
	100	-	-	-	-	-	**575**	-	-	-	-	-	**295**	-	-	-	-	-	**230**

CONFIGURATIONS USING FLT1025 - FLT1030

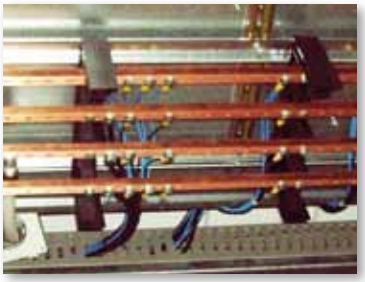
Icc pk (kA)		53							74							84						
Icc rms (kA)		25							35							40						
Spacing between phases (mm)		70	80	90	100	120	140	160	70	80	90	100	120	140	160	70	80	90	100	120	140	160
BAR WIDTH H (mm)	30	**335**	385	430	480	575	675	770	**170**	195	220	245	295	345	390	**135**	150	170	190	230	265	305
	40	-	**385**	430	480	575	675	770	-	**195**	220	245	295	345	390	-	**150**	170	190	230	265	305
	50	-	-	**430**	480	575	675	770	-	-	**220**	245	295	345	390	-	-	**170**	190	230	265	305
	60	-	-	-	**480**	575	675	770	-	-	-	**245**	295	345	390	-	-	-	**190**	230	265	305
	80	-	-	-	-	**575**	675	770	-	-	-	-	**295**	345	390	-	-	-	-	**230**	265	305
	100	-	-	-	-	-	**675**	770	-	-	-	-	-	**345**	390	-	-	-	-	-	**265**	305

NOTE:

- = not possible configuration

Values marked in bold refer to the MINIMUM spacing between phases

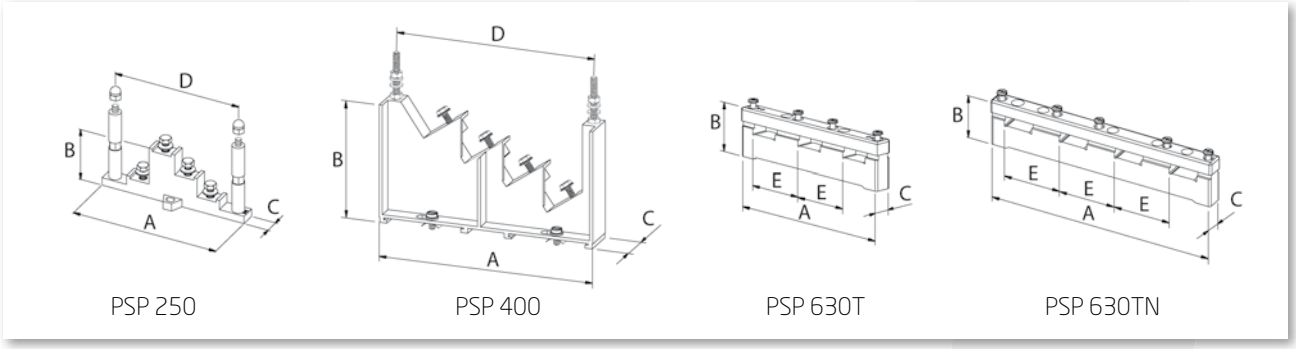
For configurations other than the indicated ones: please contact our technical office



TECHNICAL FEATURES

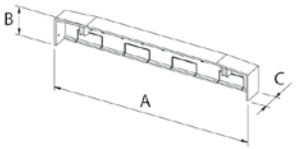
Polyamide 66 reinforced with 30% fiberglass
Self-extinguishing UL 94-V0
Working temperature: -40°C to + 130°C
Continuous working temperature: +125°C
Softening temperature: +250°C
Glow wire test: 960°C
Black colour

M6 screws for bar fastening included for PSP1000 and PSP1005
Protection screen fastening kit included for PSP1000 (cf. code DZP2000) and PSP1005
Direct fastening kit on DIN rail included for PSP1005



REPARTITION SUPPORTS

Code	Reference		Type	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
PSP1000	PSP 250	8	T+N	150	54	15	130	-
PSP1005	PSP 400	2	T+N	216	117	34	200	-
PSP1010	PSP 630T	1	T	180	55	18	-	60
PSP1020	PSP 630TN	1	T+N	240	55	18	-	60



PROTECTION CAPS

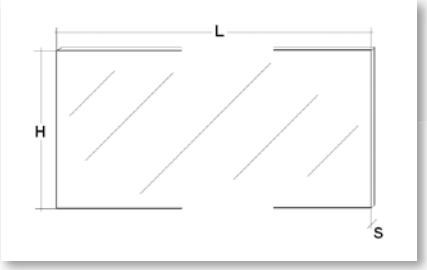
Code	Reference		Type	A (mm)	B (mm)	C (mm)
PSP1015	PSP PRO 630T	1	for support PSP1010	185	36	23
PSP1025	PSP PRO 630TN	1	for support PSP1020	245	36	23

Distance between supports depending on Icc (short-circuit current)

Icc pk = Short-circuit current peak value expressed in kA
Icc rms = Effective value of short-circuit current, duration equal to 1 second, expressed in kA

Code	Bar cross-section	Icc pk (kA)	11,9	13,6	24	30	48,3
		Icc rms (kA)	7	8	12	15	23
		In (A)	Distance (mm)				
PSP1000	15x5	150	561	455	258	150	-
	20x5	250	647	526	266	150	-
PSP1005	15x5	150	682	554	314	250	100
	20x5	250	788	640	363	261	100
	32x5	400	980	980	410	261	100
	20x10	500	980	980	410	261	100
	30x10	630	980	980	410	261	100

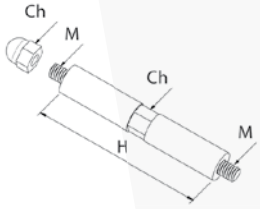
Code	Bar cross-section	Icc pk (kA)	30	34	44,1	50,4	54,6	60,9	75,6
		Icc rms (kA)	15	17	21	24	26	29	36
		In (A)	Distance (mm)						
PSP1010 PSP1020	20x5	250	600		400		200		
	20x10	500		600		400		200	
	30x5	400			600			400	200
	30x10	630			600			400	200



Made in PETG (polyethylene terephthalate)

COLD BENDABLE PROTECTION SCREEN

Code	Reference		Weight (kg)	H (mm)	L (mm)	S (mm)
SCH1000	SCH 1000x2000x3	1	7,00	1000	2000	3
SCH1005	SCH 1000x215x3	5	0,75	1000	215	3
SCH1010	SCH 1000x150x3	5	0,53	1000	150	3



Made of Polyamide 6/6 with fiberglass, black colour

The KIT is made of:
4 qty male/male threaded spacers M6
4 qty female threaded caps M6

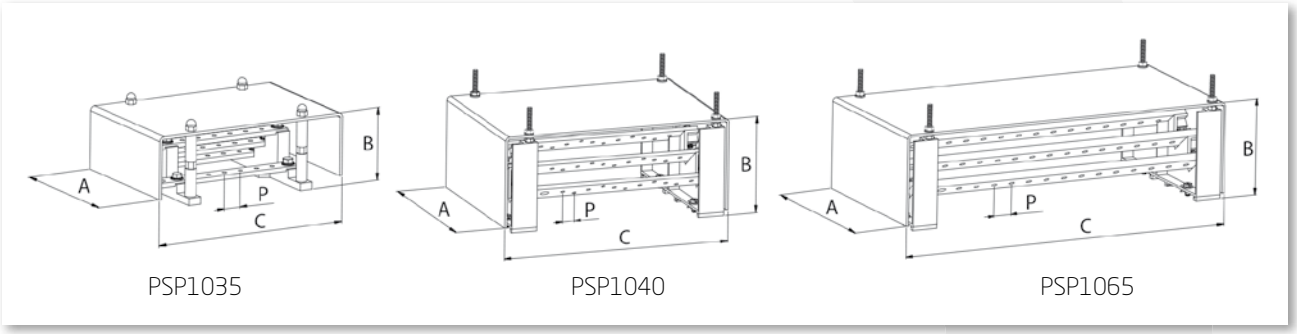
PLASTIC SPACER SUPPORT FOR PROTECTION SCREEN

Code	Reference		H (mm)	M	Ch (mm)
DZP2000	DZP KIT	10	70	M6	10

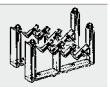
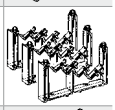
Repartition supports in KIT form include all that is needed to make the distribution unit.

The KIT is made of:

- Copper bars (cross-section, length and nr. of holes as per below table)
- Distribution unit supports
- Support spacers for the protection screen
- Protection screen cut, bent and punched in the suitable dimensions



PSP1035 PSP1040 PSP1065

Code	Reference		In (A)	Icc rms (kA)	Bars cross-section	A (mm)	B (mm)	C (mm)	P (mm)	Number of inputs	Number of outputs	Type of support	No. supports	
PSP1030	PSP 160K-23	1	160	15	15 x 5	150	81	230	20	1 x Ø 8,5	6 x M6	PSP1000	2	
PSP1035	PSP 250K-23	1	250	15	20 x 5	150	81	230	20	1 x Ø 8,5	6 x M6	PSP1000	2	
PSP1036	PSP 250K-43	1	250	10	20 x 5	150	81	430	20	1 x Ø 8,5	10 x M6	PSP1000	2	
PSP1040	PSP 400K-30	1	400	13	32 x 5	216	127	305	17,5-W	1 x Ø 10,5	11 x M6	PSP1005	2	
PSP1050	PSP 400K-48	1	400	15	32 x 5	216	127	480	17,5-W	1 x Ø 10,5	20 x M6	PSP1005	3	
PSP1065	PSP 630K-45	1	630	12	30 x 10	216	127	455	25	1 x Ø 10,5	14 x M8	PSP1005	2	
PSP1070	PSP 630K-55	1	630	15	30 x 10	216	127	555	25	1 x Ø 10,5	17 x M8	PSP1005	3	

The power inputs of distribution units in KIT form can be indifferently placed right or left.

Ω **BLOCK** - Distribution Blocks

The TEKNOMEGA Ω BLOCK is a complete range and includes terminal board distribution units, both single block and compact. This allows making distribution units from 40 A up to 400 A.

Applications for their use include switchboards, automation and command panel boards and distribution panel boards.

Terminal board distribution blocks: from 40 A to 160 A, 2 and 4 pole, for use in applications where the effective short-circuit current value (**Icc eff.**), is kept within 10 kA. Equipped with a transparent protection screen between phases, at the front and bottom of the distribution unit, removable to tighten connections.

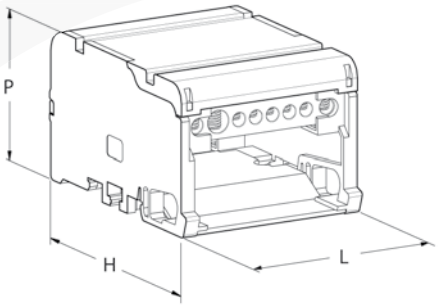
Recently introduced the **4-Pole Modular Up & Down Distribution Block** from **160 A**, these allow the user to simply manage situations where the installer must satisfy articulated mounting needs contained in the dimensions, for example when there are too many wiring inputs and outputs to be placed on one side of the block.

The **new 4-Pole Side Input Distribution Block** from **160 A** makes it possible to connect directly to the switch.

Compact distribution blocks: from 80 A to 400 A, 1 and 3 pole, to use in applications where the effective short-circuit current value (**Icc eff**) is higher than 10 kA. Registered as per UL standard. Wiring is made easy by guided accesses. High electrical insulation value. No protection to remove to tighten the connections.

Quick distribution unit blocks: 76 A, 1 and 2 pole. Quick indirect spring hook-up outputs, efficient and safe.

All the Ω BLOCK distribution range can be fit on DIN rail (omega rail) and/or bottom plate using the specific provisions.



TECHNICAL FEATURES

Brass conductors
Galvanized steel screws included
Insulation between phases
Front removable protection screen
(except RPQ1025)
Self-extinguishing insulating structure : UL 94-V0
Quick hook-up on DIN rails
Compliant with standard IEC 947-7-1
Low voltage auxiliary equipment
terminal boards for copper conductors

2 POLE 40-80-100/125 A

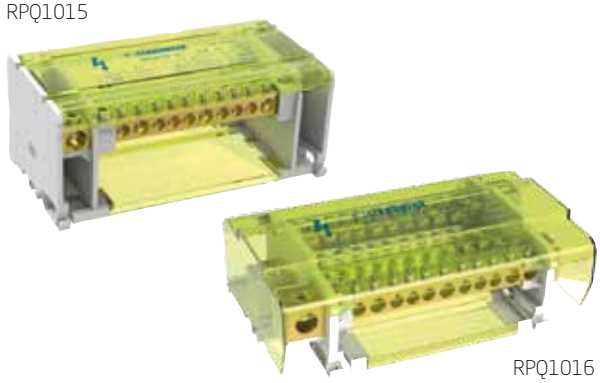
Code	Reference		L (mm)	H (mm)	P (mm)	Fix. hole space (mm)
RPB0990	RPB 40-08	1	66	46	51	45
RPB0995	RPB 80-07	1	66	46	51	45
RPB1000	RPB 125-06	1	66	46	51	45
RPB1005	RPB 125-14	1	132	46	51	112

4 POLE 40-80-100/125 A

Code	Reference		L (mm)	H (mm)	P (mm)	Fix. hole space (mm)
RPQ0980	RPQ 40-08	1	66	84	50	45
RPQ0985	RPQ 40-14	1	100	84	50	80
RPQ0990	RPQ 80-07	1	66	84	50	45
RPQ0995	RPQ 80-12	1	100	84	50	80
RPQ1000	RPQ 125-06	1	66	84	50	45
RPQ1005	RPQ 125-10	1	100	84	50	80
RPQ1010	RPQ 125-14	1	132	84	50	112
RPQ1025	RPQ C-125	1	98	75	49	55

RPQ1025: Compact 4 pole distribution unit 125 A
7 outputs per phase
10 outputs for neutral
easy wiring
IP20

RPQ1015



RPQ1016

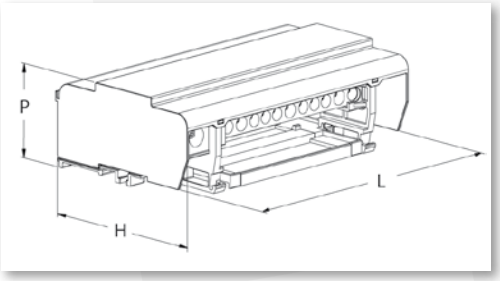
RPQ2017

RPQ1017

RPQ1018

TECHNICAL FEATURES

Brass conductors
Galvanized steel screws included
Insulation between phases
Front removable protection screen
Self-extinguishing insulating structure : UL 94-V0
Quick hook-up on DIN rails
Compliant with standards IEC 947-7-1



ADVANTAGES

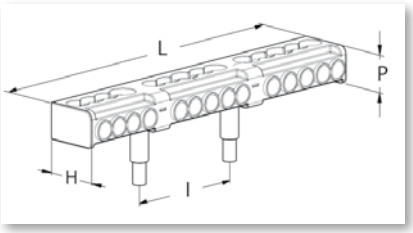
Separate inputs
Forged conductors (except RPQ1015)
Easy wiring: RPQ1015, RPQ1018
Modular depth: RPQ1016, RPQ1017

RPQ1016: Version Up & Down: connection of 2 phases on each side

RPQ1018: Version Side Input: inputs orthogonal to outputs

4 POLE 160 A

Code	Reference		L (mm)	H (mm)	P (mm)	Fix. hole space
RPQ1015	RPQ 160-11	1	168	85	70	150
RPQ1016	RPQ 160-11-U&D	1	176	105	55	163
RPQ1017	RPQ 160-11 MS	1	176	105	55	163
NEW **RPQ1018**	RPQ 160-11 SI	1	154	95	67	135



TECHNICAL FEATURES

Designed for RPQ1017
Brass conductors
Galvanized steel screws included
Self-extinguishing insulating structure: UL 94-V0

ADVANTAGES

Improved wiring capacity
Strong mechanical assembly
Direct electrical connection

NEUTRAL BAR

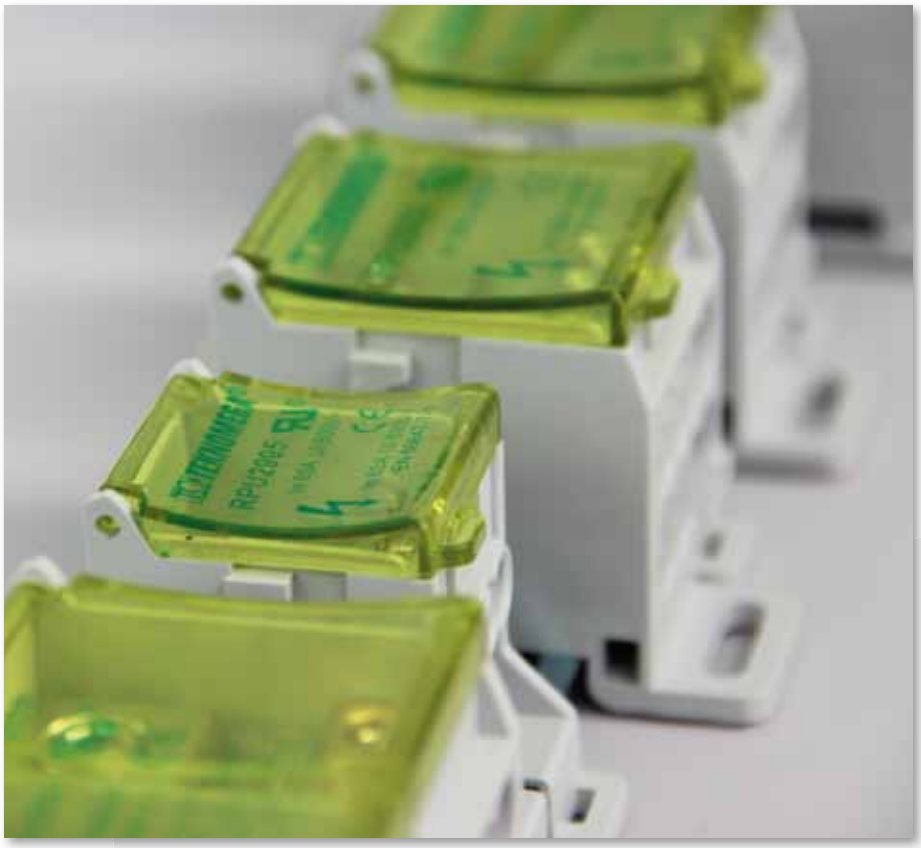
Code	Reference		L (mm)	H (mm)	P (mm)	I (mm)
NEW **RPQ2017***	RPN 160-14	1	161	27	17	57

** Available from July 2015*

TECHNICAL DATA

Code	Type	In (A)	IN/OUT	Stripped wire (mm²)	Wire with ferrule (mm²)	No.	ø (mm)	(Nm)	Icw (kA)	Ipk (kA)	Ui (V)
RPB0990	2 POLE 8 outputs	40	IN →	2,5 ÷ 6	1,5 ÷ 6	1	5,5	2 - 3	4,2	18	500
			← OUT	2,5 ÷ 6	1,5 ÷ 6	1	5,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	4	4	2 - 3			
			← OUT	1,5 ÷ 2,5	1,5 ÷ 2,5	3	3	2 - 3			
RPB0995	2 POLE 7 outputs	80	IN →	10 ÷ 25	6 ÷ 16	1	7,5	2 - 3	4,5	20	500
			← OUT	1,5 ÷ 4	1,5 ÷ 4	5	4,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	2	5	2 - 3			
RPQ0980	4 POLE 8 outputs	40	IN →	2,5 ÷ 6	1,5 ÷ 6	1	5,5	2 - 3	4,2	18	500
			← OUT	2,5 ÷ 6	1,5 ÷ 6	1	5,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	4	4	2 - 3			
			← OUT	1,5 ÷ 2,5	1,5 ÷ 2,5	3	3	2 - 3			
RPQ0985	4 POLE 14 outputs	40	IN →	2,5 ÷ 6	1,5 ÷ 6	1	5,5	2 - 3	4,2	18	500
			← OUT	2,5 ÷ 6	1,5 ÷ 6	1	5,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	7	4,0	2 - 3			
			← OUT	1,5 ÷ 2,5	1,5 ÷ 2,5	6	3	2 - 3			
RPQ0990	4 POLE 7 outputs	80	IN →	10 ÷ 25	6 ÷ 16	1	7,5	2 - 3	4,5	20	500
			← OUT	1,5 ÷ 4	1,5 ÷ 4	5	4,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	2	5	2 - 3			
RPQ0995	4 POLE 12 outputs	80	IN →	10 ÷ 25	6 ÷ 16	1	7,5	2 - 3	4,5	20	500
			← OUT	10 ÷ 25	6 ÷ 16	1	7,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	8	4,5	2 - 3			
			← OUT	1,5 ÷ 4	1,5 ÷ 4	2	5	2 - 3			
			← OUT	4 ÷ 10	2,5 ÷ 6	1	6	2 - 3			
RPB1000	2 POLE 6 outputs	100 / 125	IN →	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3	4,2	20	500
			← OUT	2,5 ÷ 6	1,5 ÷ 6	5	5,5	2 - 3			
			← OUT	10 ÷ 25	6 ÷16	1	7,5	2 - 3			
RPB1005	2 POLE 14 outputs	100 / 125	IN →	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3	4,2	20	500
			← OUT	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3			
			← OUT	2,5 ÷ 6	1,5 ÷ 6	11	5,5	2 - 3			
			← OUT	10 ÷ 25	6 ÷16	2	7,5	2 - 3			
RPQ1000	4 POLE 6 outputs	100 / 125	IN →	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3	4,2	18	500
			← OUT	2,5 ÷ 6	1,5 ÷ 6	5	5,5	2 - 3			
			← OUT	10 ÷ 25	6 ÷16	1	7,5	2 - 3			
RPQ1005	4 POLE 10 outputs	100 / 125	IN →	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3	4,2	18	500
			← OUT	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3			
			← OUT	10 ÷ 25	6 ÷16	2	7,5	2 - 3			
			← OUT	2,5 ÷ 6	1,5 ÷ 6	7	5,5	2 - 3			
RPQ1010	4 POLE 14 outputs	100 / 125	IN →	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3	4,2	18	500
			← OUT	10 ÷ 35	10 ÷ 25	1	9,0	2 - 3			
			← OUT	10 ÷ 25	6 ÷16	2	7,5	2 - 3			
			← OUT	2,5 ÷ 6	1,5 ÷ 6	11	5,5	2 - 3			
RPQ1015	4 POLE 11 outputs	160	IN →	10 ÷ 50	10 ÷ 50	1	11,5	8 -10	6	22	600
			← OUT	10 ÷ 35	10 ÷ 25	3	8,5	2 - 3			
			← OUT	2,5 ÷ 16	1,5 ÷ 16	8	7	2 - 3			
RPQ1016 RPQ1017	4 POLE Modular 11 outputs	160	IN →	10 ÷ 50	10 ÷ 50	1	11,5	8 - 10	9	22	600
			← OUT	10 ÷ 35	10 ÷ 16	3	8,5	2 -3			
			← OUT	2,5 ÷ 16	1,5 ÷ 16	8	7	2 -3			
RPQ2017	NEUTRAL 14 outputs	160	← OUT	10 ÷ 35	10 ÷ 16	4	8,5	2 -3	9	22	600
			← OUT	2,5 ÷ 16	1,5 ÷ 16	10	7	2 -3			
RPQ1018	4 POLE Side Input 11 outputs	160	IN →	10 ÷ 50	10 ÷ 50	1	12	8 - 10	9	22	600
			← OUT	10 ÷ 35	10 ÷ 25	3	8,5	2 - 3			
			← OUT	2,5 ÷ 16	1,5 ÷ 16	8	7	2 - 3			
RPQ1025	4 POLE Compact 7 outputs	100 / 125	IN →	6 ÷ 35	6 ÷ 25	1	8,5	1,5	4,2	24	690
			← OUT	1,5 ÷ 6	1,5 ÷ 6	5	5,5	0,8			
			← OUT	1,5 ÷ 16	1,5 ÷ 10	2	6	1,5			

Icc pk = Short-circuit current peak value expressed in kA
Icw = Effective value of short-circuit current, duration equal to 1 second, expressed in kA as per standard IEC 947-7-1
Ui = Nominal insulation voltage



TECHNICAL FEATURES

Body structure with high dielectric features.
Easy wiring operation by:
- Opening and removing front protection cover
- Guided access of cables.

Milled clamp for input connections by indirect tightening:
- Highly reliable connection
- Flat conductors i.e. flexible and rigid bars are allowed.

Effective tightening by means of hexagonal socket set screws.
Direct mounting on DIN rail or on steel plate by screws.
Unipolar blocks allow adjacent fixing by means of a pre-mounted clip.
Unipolar blocks 125-160 A equipped with clamp for parallel interconnection.
Index Protection: IP20
Compliant with standard EN 60947-7-1
UL 1059 standard recognized.

Materials:

Insulating body: PA 66 UL 94-V0, gray RAL 7035
Cover: PC UL 94-V0, transparent yellow
Conduction block:
- **Tinned copper** (RPU2995-RPU3000-RPU3005-RPU3015)
- **Brass** (RPU3010-RPT3000-RPT3005)

Clamps: Galvanized steel and Al alloy
Screws : Galvanized steel

RANGE

1 pole: 80 - 125 -160 - 250 - 400 A
3 pole: 125 - 160 A

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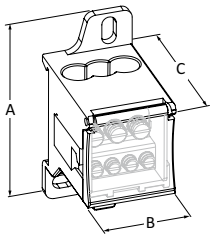
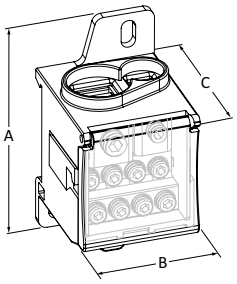
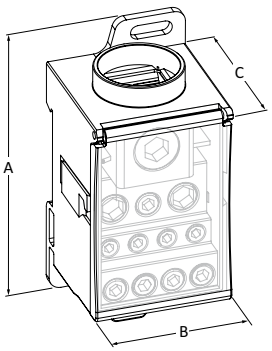


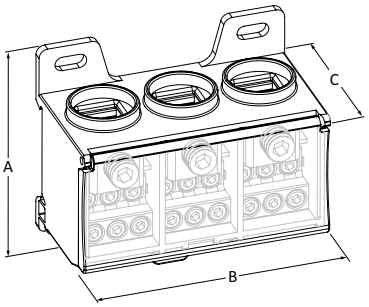
RPU 80-6 S



RPU 125-8 S
RPU 160-8 S



RPU 250-11 S
RPU 400-11 S



RPT 125-6 S
RPT 160-6 S

1 POLE

Code	Reference		In (A)	Weight (Kg)	A (mm)	B (mm)	C (mm)
RPU2995	RPU 80-6 S	1	80	0,071	66	30	46
RPU3000	RPU 125-8 S	1	125	0,162	75	40	48
RPU3005	RPU 160-8 S	1	160	0,166	75	40	48
RPU3010	RPU 250-11 S	1	250	0,331	96	47	50
RPU3015	RPU 400-11 S	1	400	0,358	96	47	50

3 POLE

Code	Reference		In (A)	Weight (kg)	A (mm)	B (mm)	C (mm)
RPT3000	RPT 125-6 S	1	125	0,331	75	85	48
RPT3005	RPU 160-6 S	1	160	0,354	75	85	48

TECHNICAL DATA

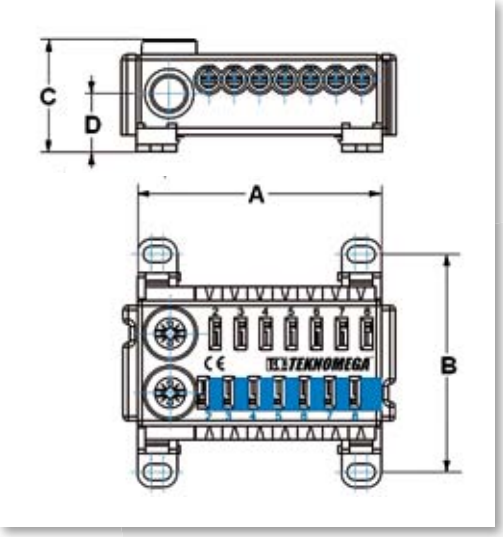
Code	Type	In (A)	IN/OUT	Stripped wire (mm^2)	Wire with ferrule (mm^2)	No.	Dim. (mm)	(Nm)	Icw (kA)	Ipk (kA)	Ui (V)
RPU2995	1 POLE 6 outputs	80	IN	6 ÷ 16	6 ÷ 16	1	ø 6,8	2	3,0	22	690
			OUT	2,5 ÷ 16	2,5 ÷ 16	2	ø 6,8	2			
			OUT	2,5 ÷ 6	2,5 ÷ 6	4	ø 4,5	1			
RPU3000	1 POLE 8 outputs	125	IN	10 ÷ 35	10 ÷ 35	1	11x9	6	4,4	30	690
			IN/OUT	6 ÷ 16	6 ÷ 16	1	8,7x6	3			
			OUT	2,5 ÷ 16	2,5 ÷ 16	8	ø 6,8	3			
RPU3005	1 POLE 8 outputs	160	IN	10 ÷ 70	10 ÷ 50	1	13,5x11,5	10	11	30	690
			IN/OUT	6 ÷ 16	6 ÷ 16	1	8,7x6	3			
			OUT	2,5 ÷ 16	2,5 ÷ 16	8	ø 6,8	3			
RPU3010	1 POLE 11 outputs	250	IN	35 ÷ 120	35 ÷ 95	1	16x14	14	21	51	690
			OUT	6 ÷ 35	6 ÷ 25	2	ø 9	10			
			OUT	2,5 ÷ 16	2,5 ÷ 16	5	ø 6,8	6			
			OUT	2,5 ÷ 10	2,5 ÷ 10	4	ø 6,1	3			
RPU3015	1 POLE 11 outputs	400	IN	95 ÷ 185	95 ÷ 120	1	20,5x16	25	21	51	690
			OUT	6 ÷ 35	6 ÷ 25	2	ø 9	10			
			OUT	2,5 ÷ 16	2,5 ÷ 16	5	ø 6,8	6			
			OUT	2,5 ÷ 10	2,5 ÷ 10	4	ø 6,1	3			
RPT3000	3 POLE 6 outputs	125	IN	10 ÷ 35	10 ÷ 35	1	11x9	6	4,4	30	690
			OUT	2,5 ÷ 16	2,5 ÷ 16	6	ø 6,8	3			
RPT3005	3 POLE 6 outputs	160	IN	10 ÷ 70	10 ÷ 50	1	13,5x11,5	10	11	30	690
			OUT	2,5 ÷ 16	2,5 ÷ 16	6	ø 6,8	3			

Icc pk = Short-circuit current peak value expressed in kA
Icw = Effective value of short-circuit current, duration equal to 1 second, expressed in kA as per standard IEC 947-7-1
Ui = Nominal insulation voltage


RPU5000


RPU5005


RPU5010



TECHNICAL FEATURES

Body made in PA 66
Self-extinguishing: UL 94-V0
Brass bars
Cable tightening:
- for inputs: screws, for output: spring steel system with copper contact
Protection grade IP20
Direct fitting on DIN rails or plate using 4 screws M4
Compliant with standards EN 60998 - EN 60999

ADVANTAGES

Extremely easy wiring
Output with spring tightening
Highly reliable and stable connection with:
- rigid stripped cable
- cable with ferrule

1 POLE

Code	Reference		In (A)	A (mm)	B (mm)	C (mm)	D (mm)
RPU5000	RPU 80-S-14-B	10	76	53	47	24	12
RPU5005	RPU 80-S-14-G	10	76	53	47	24	12

2 POLE

Code	Reference		In (A)	A (mm)	B (mm)	C (mm)	D (mm)
RPU5010	RPB 80-S-7-BG	10	76	53	47	24	12

TECHNICAL DATA

Code	IN/OUT	No.	Cable cross-section (mm²)		(Nm)	Ui (V)
			stripped wire	with ferrule		
RPU5000	IN→	2	1,5 ÷ 25	1,5 ÷ 16	2,5	690
	← OUT	14	0,5 ÷ 4	0,5 ÷ 4	-	
RPU5005	IN →	2	1,5 ÷ 25	1,5 ÷ 16	2,5	690
	← OUT	14	0,5 ÷ 4	0,5 ÷ 4	-	
RPU5010	IN →	1	1,5 ÷ 25	1,5 ÷ 16	2,5	690
	← OUT	7	0,5 ÷ 4	0,5 ÷ 4	-	

The "stand off" insulator is used as an insulating support for active conductors to guarantee excellent electrical insulation capability; it can be used as a support for electrical devices, giving high mechanical resistance values, as well as a spacing and/or stiffening element of a system made of conductor bars (copper and/or aluminium).

The various heights, widths and sizes of the threaded inserts make it possible to select the most suitable reference for the specific installation.

The **TEKNOMEGA** range offers two product types, both with high electrical insulation and mechanical resistance characteristics, obtained using different production processes and materials.

Ω COMPRHEX: RED INSULATORS and SPACING COLUMNS

made of polyester reinforced with fiberglass, molded by compression.

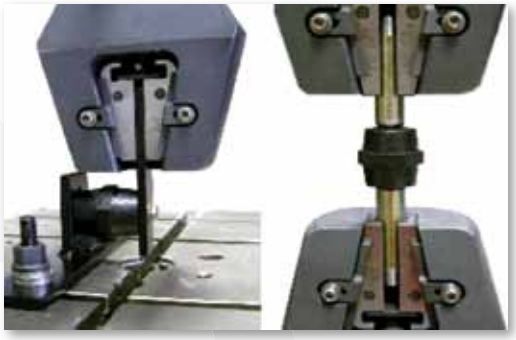
Ω ISO: BLACK INSULATORS and SPACING COLUMNS

made of polyamide reinforced with fiberglass, molded by injection.

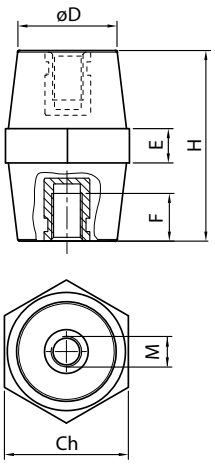
BOTH ranges of **TEKNOMEGA INSULATOR** have passed severe **TESTS** to check their mechanical and electrical resistance.

The values obtained during the tests are indicated in the relevant technical tables.

The tests were carried out in compliance with standards EN 60664-1 and EN 61439-1



Ω COMPRHEX - Insulators in polyester



TECHNICAL FEATURES

Insulation:
Thermosetting Polyester reinforced with 20% fiberglass
Self-extinguishing: V0-UL94
Colour: Red RAL 3031

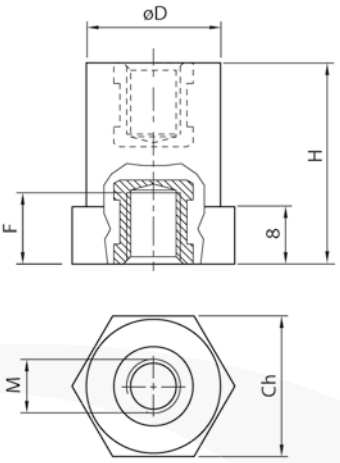
Threaded inserts:
Galvanized steel

Finished product:
Rated voltage: 1000 V AC/1500 V DC
Working temperature: -40 to 130 °C

R.T. = Tensile strength **R.C.** = Compressive strength **R.F.** = Flexural strength

Code	Reference		Weight (Kg)	H (mm)	Ch (mm)	D (mm)	E (mm)	M	F (mm)	(Nm)	R.T. (daN)	R.C. (daN)	R.F. (daN)
CPH2000	CPH 16M4	50	0,007	16	15	12	4	M4	5	3	150	1500	100
CPH2005	CPH 20M4	25	0,014	20	19	16	5	M4	6	3	200	2000	150
CPH2007	CPH 20M5	25	0,014					M5	6	6	200	2000	150
CPH2010	CPH 20M6	25	0,012					M6	6	8	240	2000	240
CPH2015	CPH 25M5	20	0,019	25	22	18	6	M5	9	6	240	2900	220
CPH2020	CPH 25M6	20	0,022					M6	9	10	340	2900	220
CPH2025	CPH 30M6	10	0,064	30	30	25	7	M6	9	10	580	5900	460
CPH2030	CPH 30M8	10	0,062					M8	9	25	580	5900	390
CPH2035	CPH 35M6	10	0,083	35	32	28	10	M6	9	10	710	9000	400
CPH2040	CPH 35M8	10	0,081					M8	10	25	710	9000	510
CPH2045	CPH 35M10	10	0,077					M10	10	50	710	9000	480
CPH2046	CPH 35M8W	10	0,109		41	35	10	M8	10	25	790	13000	670
CPH2048	CPH 35M10W	10	0,108					M10	10	50	790	13000	670
CPH2050	CPH 40M6	10	0,126	40	41	34	12	M6	10	10	900	12000	500
CPH2055	CPH 40M8	10	0,127					M8	10	25	900	12000	500
CPH2060	CPH 40M10	10	0,122					M10	10	50	800	12000	500
CPH2065	CPH 45M6	10	0,173	45	46	39	13	M6	15	10	900	14000	540
CPH2070	CPH 45M8	10	0,166					M8	15	25	900	14000	650
CPH2075	CPH 45M10	10	0,165					M10	15	50	1100	14000	650
CPH2080	CPH 50M6	10	0,178	50	46	37	10	M6	15	10	1100	12000	480
CPH2085	CPH 50M8	10	0,172					M8	15	25	1100	12000	550
CPH2090	CPH 50 M10	10	0,168					M10	20	50	1100	12000	550
CPH2093	CPH 50M12W	10	0,240		50	45	15	M12	15	85	1250	16000	720
CPH2095	CPH 60M8	4	0,330	60	60	49	15	M8	15	25	1400	18000	750
CPH2100	CPH 60M10	4	0,330					M10	15	50	1400	18000	750
CPH2101	CPH 70M10	4	0,409	70	60	52	14	M10	20	50	1500	17000	800
CPH2103	CPH 70M12	4	0,400					M12	20	85	1800	17000	800
CPH2105	CPH 75M12	10	0,299	75	50	38	16	M12	15	85	1400	12000	650
CPH2112	CPH 80M12	3	0,485	80	65	52	16	M12	20	85	1800	> 20000	1000
CPH2115	CPH 100M12	2	0,535	100	65	52	18	M12	25	85	2000	> 20000	900
CPH2117	CPH 100M16	2	0,520					M16	25	200	2000	> 20000	900

Threaded studs for insulators cf. page 71



New

TECHNICAL FEATURES

Insulation:
Thermosetting Polyester reinforced with 20% fiberglass
Self-extinguishing: V0-UL94
Colour: Red RAL 3031

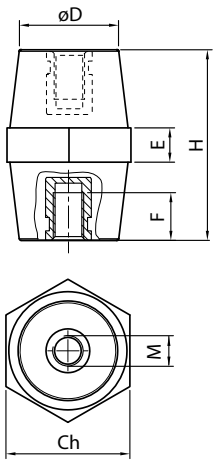
Threaded inserts:
Galvanized steel

Finished product:
Rated voltage: 1000 V AC/1500 V DC
Working temperature: -40 to 130 °C

R.T. = Tensile strength **R.C.** = Compressive strength **R.F.** = Flexural strength

Code	Reference		Weight (Kg)	Ch (mm)	D (mm)	H (mm)	M	F (mm)	(Nm)	R.T. (daN)	R.C. (daN)	R.F. (daN)
CPH2510	CLH 16M5-20	50	0,016	21	20	16	M5	4	6	200	2000	120
CPH2515	CLH 16M6-20	50	0,016				M6	4	6	200	2000	120
CPH2520	CLH 20M5-20	50	0,019			20	M5	6	6	280	2200	170
CPH2525	CLH 20M6-20	50	0,018				M6	6	8	280	2200	170
CPH2530	CLH 25M5-20	50	0,022			25	M5	6	6	300	2200	200
CPH2535	CLH 25M6-20	50	0,022				M6	6	8	300	2200	200
CPH2540	CLH 25M8-20	50	0,021				M8	6	25	300	2200	200
CPH2545	CLH 30M6-20	50	0,026			30	M6	8	10	340	2500	220
CPH2550	CLH 30M8-20	50	0,025				M8	8	25	340	2500	220
CPH2555	CLH 35M6-20	50	0,031			35	M6	8	10	340	2500	150
CPH2560	CLH 35M8-20	50	0,030				M8	8	25	340	2500	150
CPH2565	CLH 40M6-20	50	0,034			40	M6	10	10	370	2300	130
CPH2570	CLH 40M8-20	50	0,033				M8	10	25	370	2300	130
CPH2575	CLH 45M6-20	25	0,037			45	M6	10	10	370	2300	120
CPH2580	CLH 45M8-20	25	0,036				M8	10	25	370	2300	120
CPH2585	CLH 50M6-20	25	0,040			50	M6	10	10	370	2300	100
CPH2590	CLH 50M8-20	25	0,039				M8	10	25	370	2300	100
CPH2610	CLH 30M8-30	50	0,050	30	30	30	M8	9	25	600	4800	450
CPH2615	CLH 35M8-30	50	0,058			35	M8	9	25	600	5000	400
CPH2620	CLH 40M8-30	25	0,069			40	M8	9	25	650	5200	350
CPH2625	CLH 45M8-30	25	0,101			45	M8	16	25	700	5500	280
CPH2630	CLH 50M6-30	25	0,110			50	M6	16	10	700	5500	200
CPH2635	CLH 50M8-30	25	0,108				M8	16	25	800	5500	220
CPH2640	CLH 55M6-30	25	0,117			55	M6	16	10	800	5000	180
CPH2645	CLH 55M8-30	25	0,115				M8	16	25	800	5000	200
CPH2650	CLH 65M6-30	25	0,131			65	M6	16	10	800	4700	170
CPH2655	CLH 65M8-30	25	0,120				M8	16	25	700	4700	170
CPH2660	CLH 70M6-30	25	0,138			70	M6	16	10	700	4500	150
CPH2665	CLH 70M8-30	25	0,136				M8	16	25	700	4500	150

Ω ISO - Insulators in polyamide



file No. 300607

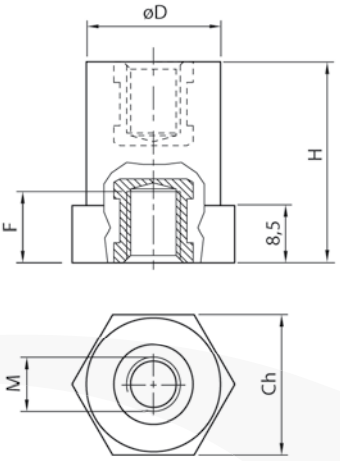
TECHNICAL FEATURES

Insulation:
Polyamide 66 reinforced
with 30% fiberglass
Halogen Free
Self-extinguishing: V0-UL94
Glow wire test: 960° C
Colour: Black
Threaded inserts:
Galvanized steel
Finished product:
Rated voltage: 1000 V AC/1500 V DC
Working temperature: -40÷130 °C

R.T. = Tensile strength **R.C.** = Compressive strength **R.F.** = Flexural strength

Code	Reference		Weight (Kg)	H (mm)	Ch (mm)	Type	D (mm)	E (mm)	M	F (mm)	(Nm)	R.T. (daN)	R.C. (daN)	R.F. (daN)
ISO2000	ISO 15M4 UL	50	0,005	15	14	⬡	12	3	M4	5	3	150	1500	100
ISO2005	ISO 20M4 UL	50	0,011	20	17	⬡	15	4	M4	5	3	200	2000	100
ISO2007	ISO 20M5 UL	50	0,011						M5	5	6	200	2000	150
ISO2010	ISO 20M6 UL	50	0,011						M6	5	8	250	2000	200
ISO2015	ISO 25M5 UL	50	0,013	25	20	⬡	15	5	M5	8	6	400	2500	200
ISO2020	ISO 25M6 UL	50	0,012						M6	8	10	400	2500	200
ISO2025	ISO 30M6 UL	50	0,038	30	30	⬡	26	6	M6	9	10	800	7500	500
ISO2030	ISO 30M8 UL	50	0,035						M8	9	25	800	7500	500
ISO2035	ISO 35M6 UL	50	0,049	35	32	⬡	28	7	M6	11	10	900	6500	570
ISO2040	ISO 35M8 UL	50	0,050						M8	11	25	900	6500	570
ISO2045	ISO 35M10 UL	50	0,058						M10	11	50	900	6500	570
ISO2046	ISO 35M8W UL	25	0,109		40	⬡	40	10	M8	11	25	1100	11000	650
ISO2048	ISO 35M10W UL	25	0,108						M10	11	50	1100	11000	650
ISO2050	ISO 40M6 UL	25	0,056	40	32	⬡	28	8	M6	11	10	1300	7500	500
ISO2055	ISO 40M8 UL	25	0,065						M8	11	25	1300	7500	500
ISO2060	ISO 40M10 UL	25	0,063						M10	11	50	1300	7500	500
ISO2061	ISO 40M8W UL	25	0,108		46	⬡	40	12	M8	11	25	1500	12000	600
ISO2063	ISO 40M10W UL	25	0,108						M10	11	50	1500	12000	600
ISO2065	ISO 45M6 UL	10	0,108	45	41	⬡	33	10	M6	15	10	1600	9000	650
ISO2070	ISO 45M8 UL	10	0,097						M8	15	25	1600	9000	650
ISO2075	ISO 45M10 UL	10	0,097						M10	15	50	1800	9000	700
ISO2076	ISO 45M8W UL	10	0,132		50	⬡	41	10,5	M8	15	25	2000	14000	800
ISO2078	ISO 45M10W UL	10	0,132						M10	15	50	2000	14000	800
ISO2080	ISO 50M6 UL	10	0,094	50	36	⬡	29	11	M6	15	10	1500	10000	400
ISO2085	ISO 50M8 UL	10	0,096						M8	15	25	1600	10000	450
ISO2090	ISO 50M10 UL	10	0,093						M10	15	50	1800	10000	650
ISO2091	ISO 50M10W UL	10	0,145		50	⬡	40	12	M10	15	50	2000	13000	750
ISO2093	ISO 50M12W UL	10	0,145						M12	15	85	2000	13000	850
ISO2094	ISO 55M10 UL	10	0,185	55	55	⬡	45	12	M10	15	50	2200	15000	1000
ISO2095	ISO 60M8 UL	10	0,194	60	54	⬡	42	12	M8	15	25	2200	15000	900
ISO2100	ISO 60M10 UL	10	0,190						M10	15	50	2200	15000	900
ISO2101	ISO 70M10 UL	10	0,335	70	65	⬡	50	13	M10	25	50	2200	18000	900
ISO2103	ISO 70M12 UL	10	0,331						M12	25	85	2500	18000	1200
ISO2105	ISO 75M12 UL	10	0,203	75	50	⬡	35	11,5	M12	25	85	2000	12000	750
ISO2110	ISO 75M16 UL	10	0,246						M16	25	200	2000	12000	750
ISO2112	ISO 80M12 UL	10	0,370	80	65	⬡	50	14	M12	25	85	2500	18000	1200
ISO2115	ISO 100M12 UL	10	0,458	100	65	⬡	50	21	M12	25	85	3000	20000	1000
ISO2117	ISO 100M16 UL	10	0,430						M16	25	200	3000	20000	1000

Threaded studs for insulators cf. page 71



file No. 300607

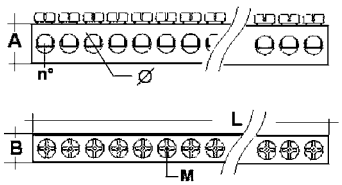
TECHNICAL FEATURES

Insulation:
Polyamide 66 reinforced with 30% fiberglass
Halogen Free
Self-extinguishing: V0-UL94
Glow wire test: 960° C
Colour: Black
Threaded inserts:
Galvanized steel
Finished product:
Rated voltage: 1000 V AC/1500 V DC
Working temperature: -40÷130 °C

R.T. = Tensile strength **R.C.** = Compressive strength **R.F.** = Flexural strength

Code	Reference		Weight (Kg)	Ch (mm)	D (mm)	H (mm)	M	F (mm)	(Nm)	R.T. (daN)	R.C. (daN)	R.F. (daN)
ISO2120	CLN 16M4-20	50	0,014	21	20	16	M4	5	3	200	4200	100
ISO2125	CLN 16M5-20	50	0,014				M5	5	6	300	4200	150
ISO2130	CLN 16M6-20	50	0,014				M6	5	6	350	4200	150
ISO2135	CLN 20M5-20	50	0,015			20	M5	5	6	400	4500	200
ISO2140	CLN 20M6-20	50	0,015				M6	5	8	450	4500	280
ISO2145	CLN 25M4-20	50	0,016			25	M4	5	3	300	4700	150
ISO2150	CLN 25M5-20	50	0,017				M5	5	6	400	4700	200
ISO2155	CLN 25M6-20	50	0,018				M6	5	8	550	4700	350
ISO2160	CLN 25M8-20	50	0,018				M8	5	25	550	4700	350
ISO2165	CLN 30M5-20	50	0,027			30	M5	9	6	700	5000	370
ISO2170	CLN 30M6-20	50	0,026				M6	9	10	700	5000	370
ISO2175	CLN 30M8-20	50	0,024				M8	9	25	700	5000	370
ISO2180	CLN 35M5-20	50	0,030			35	M5	9	6	700	5000	350
ISO2185	CLN 35M6-20	50	0,029				M6	9	10	800	5000	350
ISO2190	CLN 35M8-20	50	0,026				M8	9	25	800	5000	350
ISO2195	CLN 40M5-20	50	0,030			40	M5	9	6	800	5000	300
ISO2200	CLN 40M6-20	50	0,030				M6	9	10	800	5000	300
ISO2205	CLN 40M8-20	50	0,028				M8	9	25	800	5000	300
ISO2210	CLN 45M5-20	25	0,033			45	M5	9	6	800	4700	260
ISO2215	CLN 45M6-20	25	0,031				M6	9	10	800	4700	260
ISO2220	CLN 45M8-20	25	0,030				M8	9	25	800	4700	260
ISO2225	CLN 50M5-20	25	0,032			50	M5	9	6	800	4500	220
ISO2230	CLN 50M6-20	25	0,034				M6	9	10	800	4500	220
ISO2235	CLN 50M8-20	25	0,033				M8	9	25	800	4500	220
ISO2240	CLN 30M6-30	50	0,039	30	30	30	M6	11	10	1000	7000	500
ISO2245	CLN 30M8-30	50	0,037				M8	11	25	1200	8000	550
ISO2250	CLN 35M6-30	50	0,041			35	M6	11	10	1100	7500	500
ISO2255	CLN 35M8-30	50	0,039				M8	11	25	1400	8500	550
ISO2256	CLN 40M6-30	25	0,061			40	M6	11	10	1100	7500	450
ISO2257	CLN 40M8-30	25	0,061				M8	11	25	1400	8500	480
ISO2260	CLN 45M6-30	25	0,082			45	M6	15	10	1200	9000	420
ISO2265	CLN 45M8-30	25	0,078				M8	15	25	1600	9000	420
ISO2266	CLN 50M6-30	25	0,087			50	M6	15	10	1200	8000	380
ISO2267	CLN 50M8-30	25	0,083				M8	15	25	1600	8000	380
ISO2270	CLN 55M6-30	25	0,094			55	M6	15	10	1100	7500	350
ISO2275	CLN 55M8-30	25	0,091				M8	15	25	1300	7500	350
ISO2280	CLN 65M6-30	25	0,104			65	M6	15	10	950	7000	300
ISO2285	CLN 65M8-30	25	0,104				M8	15	25	950	7000	300
ISO2290	CLN 70M6-30	25	0,109			70	M6	15	10	900	6500	280
ISO2295	CLN 70M8-30	25	0,098				M8	15	25	900	6500	280

BRASS TERMINALS

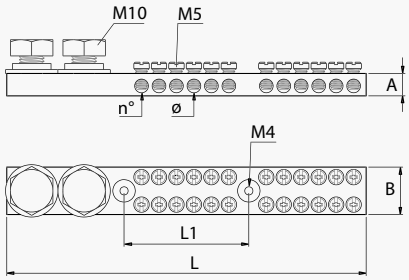


TECHNICAL FEATURES

Brass
Complete with galvanized steel screws
with cross head
1 meter long

EARTHING BARS

Code	Reference		Weight (Kg)	L (mm)	A (mm)	B (mm)	M	Ø holes (mm)	No. holes	Stripped wire (mm²)	Wire with ferrule (mm²)	(Nm)
MRS1500	MRS 8x6	10	0,340	1000	8	6	M4	4,5	153	1,5 ÷ 4	0,75 ÷ 4	2
NEW **MRS1501**	MRS 9x6	10	0,380	1000	9	6	M4	5,2	113	2,5 ÷ 6	1,5 ÷ 6	2
MRS1505	MRS 13x6	10	0,554	1000	13	6	M4	9,5	83	16 ÷ 35	10 ÷ 35	2
NEW **MRS1506**	MRS 12x8	10	0,774	1000	12	8	M5	6,5	116	2,5 ÷ 16	1,5 ÷ 10	3

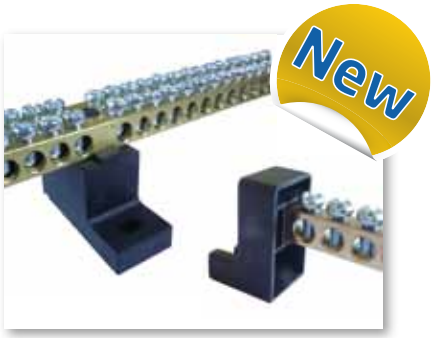


TECHNICAL FEATURES

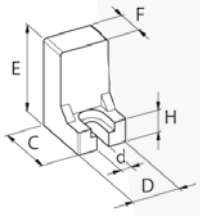
Brass
double connection per hole
dual input up to 50 mm²
Complete with galvanized steel screws

DOUBLE CONNECTION TERMINALS

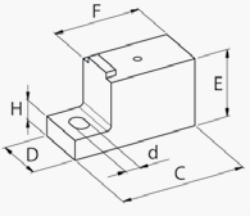
Code	Reference		Weight (Kg)	L (mm)	L1 (mm)	A (mm)	B (mm)	Ø holes (mm)	No. holes	Stripped wire (mm²)	Wire with ferrule (mm²)	(Nm)
MRS3000	MRS 2x6	10	0,170	102	50	9	19	5,5	6	2,5 ÷ 6	1,5 ÷ 6	2
MRS3005	MRS 2x12	10	0,215	144	50	9	19	5,5	12	2,5 ÷ 6	1,5 ÷ 6	2
MRS3010	MRS 2x24	10	0,326	230	120	9	19	5,5	24	2,5 ÷ 6	1,5 ÷ 6	2



MRS7000-MRS7005



MRS7010



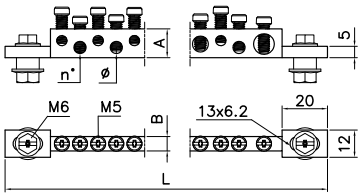
TECHNICAL FEATURES

Polyamide 66
Self-extinguishing: V2-UL94

MRS7010:
with screw fastening the terminal

TERMINAL SUPPORTS

Code	Reference		Terminal cross-section A x B	C (mm)	D (mm)	E (mm)	F (mm)	H (mm)	d (mm)
MRS7000	MRS-S 9x6	50	9 x 6	22	17,5	31	11	8	4,2
MRS7005	MRS-S 12x8	50	12 x 8	22	17,5	31	11	8	4,2
MRS7010	MRS-S 9x19	50	9 x 19	44	19	24	30	7	5,2

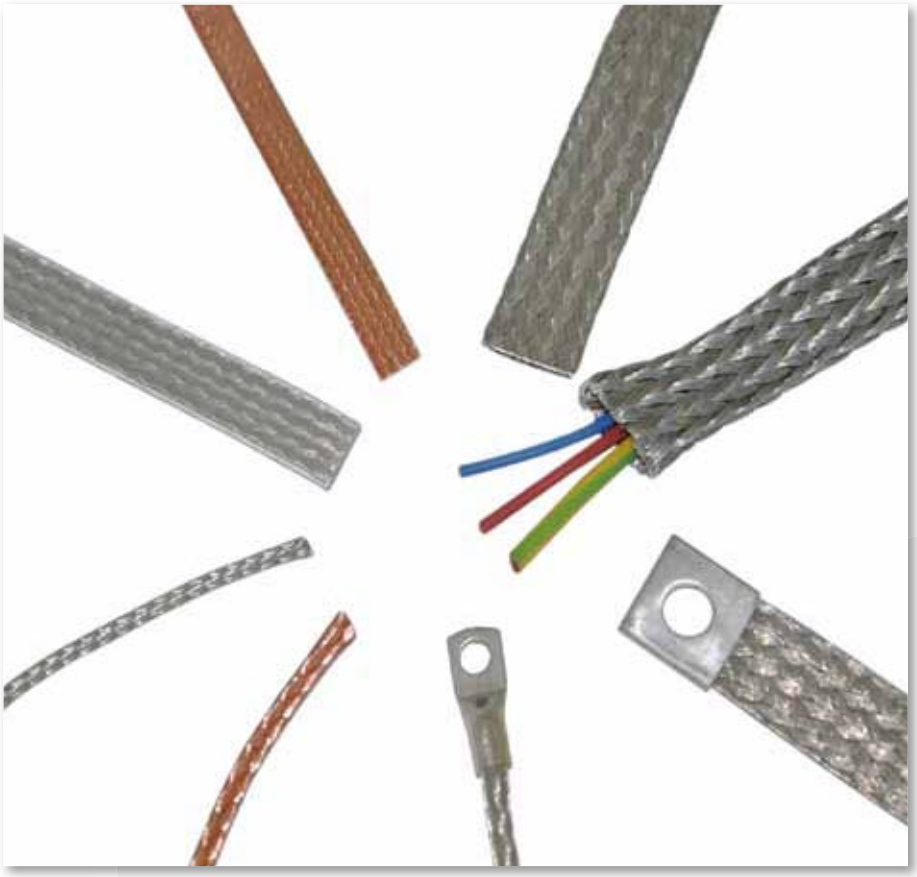


TECHNICAL FEATURES

Universal fixing:
Direct Fixing, Fixing on Copper Bar,
Fixing on Spacers and extension 2 connectors.
High conductivity brass.
Complete with fixings M6 and connection screws M5
in galvanized steel.

EARTHING CONNECTORS

Code	Reference		Weight (Kg)	L (mm)	A (mm)	B (mm)	ø holes (mm)	No. holes	Stripped wire (mm^2)	Wire with ferrule (mm^2)	(Nm)
MRS2000	MRS 13x6-20	25	0,165	215	13	6	9,1	1	16 ÷ 35	10 ÷ 35	2
							7,0	3	4 ÷ 16	2,5 ÷ 16	2
							5,3	8	2,5 ÷ 6	1,5 ÷ 6	1,5
							4,5	8	1,5 ÷ 4	0,75 ÷ 4	1,5
MRS5000	MRS 13x6-50	5	0,353	462	13	6	9,1	1	16 ÷ 35	10 ÷ 35	2
							7,0	6	4 ÷ 16	2,5 ÷ 16	2
							5,3	24	2,5 ÷ 6	1,5 ÷ 6	1,5
							4,5	19	1,5 ÷ 4	0,75 ÷ 4	1,5



The copper braid is used as a super flexible conductor for all electric connection requirements, including power, earthing and equipotential connections.
It results from the use of a number of standard wires with diameter between 0.10 and 0.30 mm, twined together to form a cord.
More cords twined together can produce a small cross-sectioned braid or further secondary cords which, twined again, make it possible to get the desired cross-section.

Three typologies of copper braid:

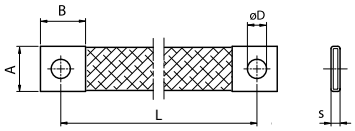
ROUND, made from tightly interwoven cords until they become a full round section.
It is used for power and mass connections, and, when suitably insulated, as an alternative to the cables. In that case, compared to insulated cables, with the same cross-section, it allows more current density and, most of all, extraordinary flexibility.

TUBULAR, made from small interwoven cords until they form a tubular structure, hollow inside. It is used as a protection sleeve for electric cables inserted inside of the braid, thus producing screens and protections against interferences and/or disturbances.

FLAT, made using the same process as in tubular braids, but flattening it between rollers to the desired dimensions.
It is used for power, earthing and equipotential connections.
In power applications, it makes flexible connections which easily compensate offsets between elements to be interconnected, and also provides excellent buffering of vibrations induced by, i.e., connection to a transformer.
With the same cross-section, it can take a higher current density than cables or copper bars.

TECHNICAL FEATURES

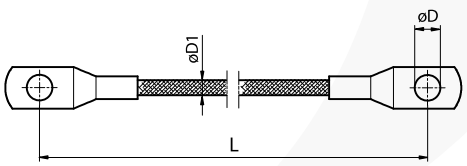
Electrolytic copper Cu-ETP 99.90%
Red and tinned copper
Resistivity at 20°C: 1,7241 Ωmm²/m
Mechanical resistance: min. 200 MPa



* TMS 6, TMS 10, TMS 16, TMS 25
** TMS 35, TMS 50, TMS 75, TMS100

FLAT TINNED COPPER EARTHING BRAIDS

Code	Reference		Weight (Kg)	Current (A)	Sect. (mm^2)	S (mm)	L (mm)	A (mm)	B (mm)	D (mm)
TMS1000	TMS 6-150-6	10	0,010	55	6	2,3	150	12	12	6,5
TMS1005	TMS 6-200-6	10	0,013	55	6	2,3	200	12	12	6,5
TMS1010	TMS 10-150-8	10	0,021	85	10	2,8	150	17	22	8,5
TMS1015	TMS 10-200-8	10	0,025	85	10	2,8	200	17	22	8,5
TMS1020	TMS 10-250-8	10	0,029	85	10	2,8	250	17	22	8,5
TMS1025	TMS 10-300-8	10	0,033	85	10	2,8	300	17	22	8,5
TMS1030	TMS 16-100-8	10	0,023	120	16	3,1	100	17	22	8,5
TMS1035	TMS 16-150-8	10	0,030	120	16	3,1	150	17	22	8,5
TMS1040	TMS 16-200-8	10	0,037	120	16	3,1	200	17	22	8,5
TMS1045	TMS 16-250-8	10	0,046	120	16	3,1	250	17	22	8,5
TMS1050	TMS 16-300-8	10	0,054	120	16	3,1	300	17	22	8,5
TMS1055	TMS 25-150-10	10	0,048	150	25	3,5	150	25	22	10,5
TMS1060	TMS 25-200-10	10	0,059	150	25	3,5	200	25	22	10,5
TMS1065	TMS 25-250-10	10	0,072	150	25	3,5	250	25	22	10,5
TMS1070	TMS 25-300-10	10	0,084	150	25	3,5	300	25	22	10,5
TMS1075	TMS 35-150-10	10	0,061	195	35	3,5	150	22	22	10,5
TMS1080	TMS 35-200-10	10	0,077	195	35	3,5	200	22	22	10,5
TMS1085	TMS 35-250-10	10	0,097	195	35	3,5	250	22	22	10,5
TMS1090	TMS 35-300-10	10	0,110	195	35	3,5	300	22	22	10,5
TMS1095	TMS 50-100-10	10	0,080	250	50	4,8	100	25	25	10,5
TMS1100	TMS 50-150-10	10	0,095	250	50	4,8	150	25	25	10,5
TMS1105	TMS 50-200-10	10	0,129	250	50	4,8	200	25	25	10,5
TMS1110	TMS 50-250-10	10	0,143	250	50	4,8	250	25	25	10,5
TMS1115	TMS 50-300-10	10	0,179	250	50	4,8	300	25	25	10,5
TMS1120	TMS 75-200-10	10	0,185	330	75	5,5	200	30	30	10,5
TMS1125	TMS 75-250-10	10	0,225	330	75	5,5	250	30	30	10,5
TMS1130	TMS 75-300-10	10	0,265	330	75	5,5	300	30	30	10,5
TMS1135	TMS 100-200-12	10	0,250	370	100	6,5	200	30	30	12,5
TMS1140	TMS 100-250-12	10	0,300	370	100	6,5	250	30	30	12,5
TMS1145	TMS 100-300-12	10	0,475	370	100	6,5	300	30	30	12,5



ROUND TINNED COPPER EARTHING BRAIDS

Ring lugs as per DIN 46234

Code	Reference		Weight (Kg)	Current (A)	Sect. (mm^2)	D1 (mm)	L (mm)	D (mm)
TMT1200	TMT 6-150-6	10	0,0125	55	6	4	150	6,5
TMT1205	TMT 6-200-6	10	0,0154	55	6	4	200	6,5
TMT1210	TMT 10-300-6	10	0,0312	85	10	5	300	6,5

Copper **braids** in coils

TECHNICAL FEATURES

Red copper Cu-ETP UNI 5649-71
Tinned copper Cu-ETP UNI 5649-71
Standard wire 0.20 mm (0.15 mm for 6 and 10 mm² cross-sections)

**** Intensity values referred to:**
Room temperature: 35°C
Max. temperature on conductor: 70°C

FLAT BRAIDS

Code	Reference	Code	Reference		Weight (kg/m)	**Current (A)	Sect. (mm²)	S (mm)	L (mm)
Tinned copper		Red copper							
TPS1000	TPS 10-4	**TPR1000**	TPR 10-4	25 m	0,04	40	4	1,0	8,0
TPS1005	TPS 10-6	**TPR1005**	TPR 10-6	25 m	0,06	55	6	1,0	10,0
TPS1010	TPS 20-10	**TPR1010**	TPR 20-10	25 m	0,10	85	10	1,5	10,0
TPS1015	TPS 20-16	**TPR1015**	TPR 20-16	25 m	0,16	120	16	2,0	16,0
TPS1020	TPS 20-25	**TPR1020**	TPR 20-25	20 m	0,25	150	25	2,0	25,0
TPS1025	TPS 20-30	**TPR1021**	TPR 20-30	20 m	0,30	170	30	2,4	25,0
TPS1030	TPS 20-35	**TPR1025**	TPR 20-35	20 m	0,35	195	35	2,8	25,0
TPS1035	TPS 20-40	**TPR1026**	TPR 20-40	20 m	0,40	210	40	3,2	25,0
TPS1040	TPS 20-50	**TPR1030**	TPR 20-50	20 m	0,50	250	50	4,0	25,0
TPS1045	TPS 20-75	**TPR1035**	TPR 20-75	20 m	0,75	330	75	5,0	30,0
TPS1050	TPS 20-100	**TPR1040**	TPR 20-100	15 m	1,00	370	100	5,0	40,0
TPS1055	TPS 20-120	**TPR1045**	TPR 20-120	15 m	1,20	420	120	6,0	40,0

ROUND BRAIDS

Code	Reference	Code	Reference		Weight (kg/m)	**Current (A)	Sect. (mm²)	ø (mm)
Tinned copper		Red copper						
TTS1000	TTS 10-6	**TTR1000**	TTR 10-6	50 m	0,06	55	6	4,0
TTS1005	TTS 20-10	**TTR1005**	TTR 20-10	50 m	0,10	85	10	5,0
TTS1010	TTS 20-16	**TTR1010**	TTR 20-16	50 m	0,16	120	16	6,4
TTS1015	TTS 20-25	**TTR1015**	TTR 20-25	25 m	0,25	150	25	8,0
TTS1020	TTS 20-35	**TTR1020**	TTR 20-35	25 m	0,35	195	35	9,5
TTS1025	TTS 20-50	**TTR1025**	TTR 20-50	25 m	0,50	250	50	11,0
TTS1030	TTS 20-100	**TTR1030**	TTR 20-100	10 m	1,00	370	100	15,0

TECHNICAL FEATURES

Tinned copper Cu-ETP UNI 5649-71
Standard wire 0.20 mm (0.15 mm for 6 and 10 mm² cross-sections)
transparent PVC, 1 mm thickness
Electric insulation: 450V
Max. working temperature: 80°C

**** Intensity values referred to:**
Room temperature: 35°C
Max. temperature on conductor: 70°C

INSULATED BRAIDS IN TINNED COPPER - Flat

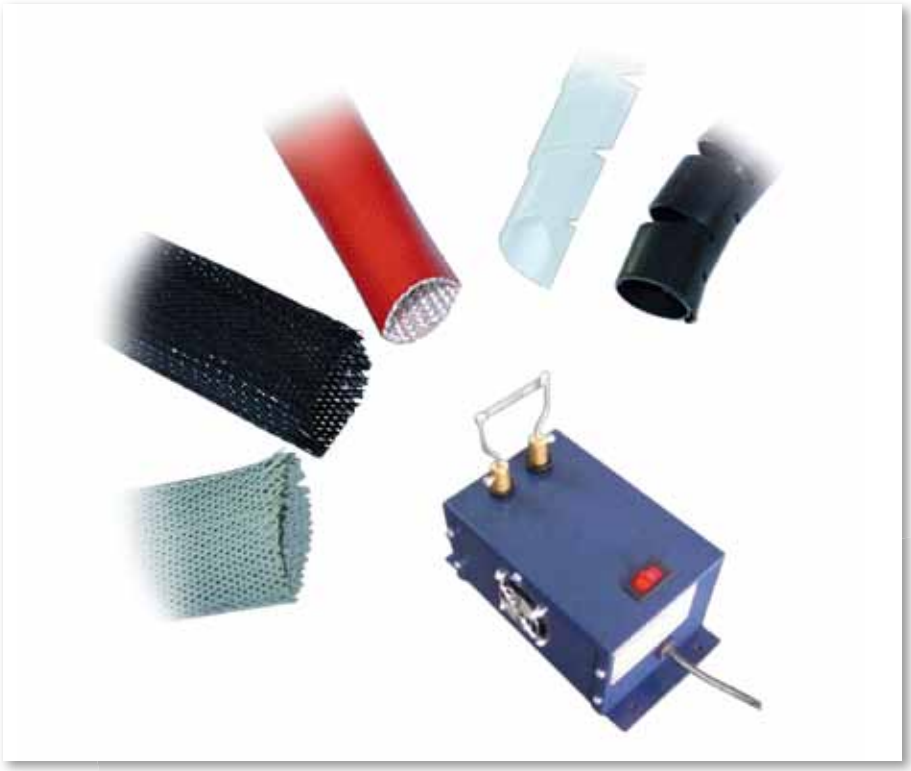
Code	Reference		Weight (kg/m)	**Current (A)	Sect. (mm²)	s (mm)	L (mm)
TPI1000	TPI 20-16	20 m	0,20	120	16	2,0	16,0
TPI1005	TPI 20-25	20 m	0,30	150	25	2,0	25,0
TPI1010	TPI 20-35	20 m	0,40	195	35	3,0	25,0
TPI1015	TPI 20-50	20 m	0,55	250	50	3,3	30,0

INSULATED BRAIDS IN TINNED COPPER - Round

Code	Reference		Weight (kg/m)	**Current (A)	Sect. (mm²)	ø (mm)
TTI1000	TTI 20-16	50 m	0,18	120	16	8,5
TTI1005	TTI 20-25	25 m	0,27	150	25	10
TTI1010	TTI 20-35	25 m	0,4	195	35	12

TUBULAR BRAIDS IN TINNED COPPER

Code	Reference	ø Single wire (mm)		Weight (kg/m)	ø Nom. (mm)	ø Max (mm)
TSC1000	TSC 4	0,20	50 m	0,03	5	10
TSC1005	TSC 10	0,20	50 m	0,06	10	20
TSC1010	TSC 16	0,20	50 m	0,20	20	40
TSC1015	TSC 25	0,20	25 m	0,27	25	50
TSC1020	TSC 35	0,20	25 m	0,34	30	60
TSC1025	TSC 50	0,20	25 m	0,41	35	70



THE RANGE - APPLICATIONS AND ADVANTAGES

Braided polyester sleeve
- made of braided polyester monofilament to form a tubular structure
- for all electric cable wiring applications
- high expandibility value
- limited number of references
- excellent resistance to abrasion and to chemical agents
- excellent mechanical protection of conductors
- halogen-free
- certified UL, RoHS
- **UL 94-V0 also available**

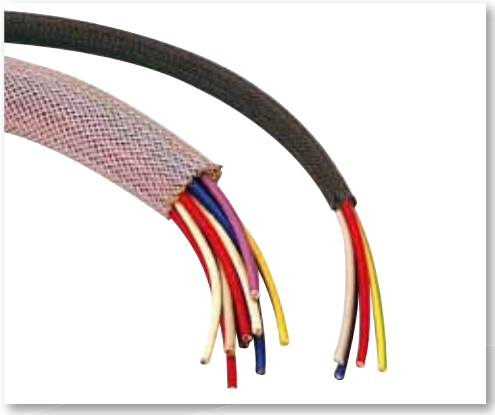
WRAPFLEX Openable braided sleeve
- made of braided polyester monofilament + multifilament
- openable sleeve with "memory effect" for immediate closing back
- allows covering already wired cable bundles
- excellent resistance to abrasion and to chemical agents
- cerified RoHS

Spiral sleeve
- made of polyethylene
- allows covering already wired cable bundles
- certified RoHS

Silicone sleeve
- made of silicone impregnated and/or coated with fiberglass
- for electric cable wiring applications, guaranteeing excellent electric insulation and resistance to high working temperatures
- good expandibility

Fiberglass sleeve
- made of braided fiberglass monofilament to form a tubular structure
- high resistance to and protection against hot temperature
- good mechanical resistance to abrasion and to chemical agents
- fireproof

ZIPP-IN Openable sleeve
- made of polypropylene
- openable sleeve with zipper closing
- allows covering already wired cable bundles
- allows further insertion of cables and their removal
- wiring made extremely easy using a specific inserter



TECHNICAL FEATURES

Colour: Grey or Black
Compliant with RoHS
Halogen-free polyester (PET) monofilament
Diameter 0.22 mm
Density: 1.14 kg/dm³
Working temperature: - 50°C + 150°C
Melting temperature: 230± 5°C
Self-extinguishing: UL 94-V2
Flame retardant
Packaging: coil in cardboard box self-reeling from the center

POLYESTER BRAIDED SLEEVE V2 UL - Grey colour

Code	Reference		ø nom. (mm)
GPG2001	GPG 04G	100 m	4
GPG2000	GPG 06G	100 m	6
GPG2005	GPG 08G	100 m	8
GPG2010	GPG 10G	100 m	10
GPG2015	GPG 12G	50 m	12
GPG2020	GPG 15G	50 m	15
GPG2025	GPG 20G	50 m	20
GPG2029	GPG 25G	50 m	25
GPG2030	GPG 30G	50 m	30
GPG2034	GPG 35G	50 m	35
GPG2035	GPG 40G	50 m	40
GPG2040	GPG 50G	50 m	50
GPG2045	GPG 64G	25 m	64

POLYESTER BRAIDED SLEEVE V2 UL - Black colour

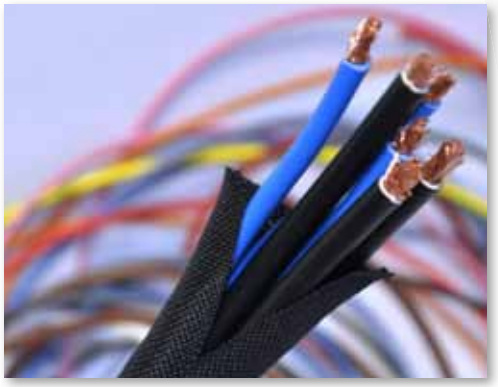
Code	Reference		ø nom. (mm)
GPN2001	GPN 04N	100 m	4
GPN2000	GPN 06N	100 m	6
GPN2005	GPN 08N	100 m	8
GPN2010	GPN 10N	100 m	10
GPN2015	GPN 12N	50 m	12
GPN2020	GPN 15N	50 m	15
GPN2025	GPN 20N	50 m	20
GPN2029	GPN 25N	50 m	25
GPN2030	GPN 30N	50 m	30
GPN2034	GPN 35N	50 m	35
GPN2035	GPN 40N	50 m	40
GPN2040	GPN 50N	50 m	50
GPN2045	GPN 64N	25 m	64

TECHNICAL FEATURES

Black colour with grey identification wire
Compliant with RoHS
Halogen-free polyester (PET) monofilament
Diameter 0.22 mm
Density: 1.14 kg/dm³
Working temperature: - 50°C + 150°C
Melting temperature: 230± 5°C
Self-extinguishing: UL 94-V0
Flame retardant
Packaging: coil in cardboard box self-reeling from the center

POLYESTER BRAIDED SLEEVE V0 UL

Code	Reference		ø nom. (mm)
GPV1000	GPV 06N	100 m	6
GPV1005	GPV 08N	100 m	8
GPV1010	GPV 10N	100 m	10
GPV1015	GPV 12N	50 m	12
GPV1020	GPV 15N	50 m	15
GPV1025	GPV 20N	50 m	20
GPV1030	GPV 30N	50 m	30
GPV1035	GPV 40N	50 m	40
GPV1040	GPV 50N	50 m	50
GPV1045	GPV 64N	25 m	64



TECHNICAL FEATURES

Black colour
Compliant with RoHS
Halogen-free polyester (PET) monofilament + multifilament
Density: 1.38 kg/dm³
Working temperature: -50°C +150°C
Melting temperature: 250± 5°C
Self-extinguishing: UL 94-V0
Flame retardant
Self-closing
Packaging: coil in cardboard box

WRAPFLEX OPENABLE POLYESTER SLEEVE V0

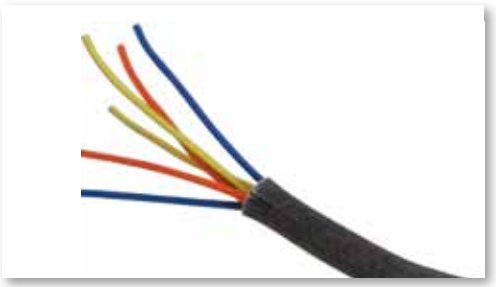
Code	Reference		ø D nom. (mm)
GWF1000	GWF 08	25 m	8
GWF1005	GWF 13	25 m	13
GWF1010	GWF 19	25 m	19
GWF1015	GWF 25	25 m	25
GWF1020	GWF 32	15 m	32

TECHNICAL FEATURES

Red colour
Silicone + internal fiberglass reinforcement
Rated voltage: 500 V
Dielectric rigidity: 2500 V
Working temperature: -60°C +200°C
Max. working temperature for 1 second: +280°C
Good expandibility and elasticity
Packaging: coil with transparent film

SILICONE

Code	Reference		ø nom. (mm)
GSL1000	GSL 04	100 m	4
GSL1005	GSL 06	100 m	6
GSL1010	GSL 08	100 m	8
GSL1015	GSL 10	100 m	10
GSL1020	GSL 12	100 m	12
GSL1025	GSL 16	50 m	16
GSL1030	GSL 20	50 m	20
GSL1035	GSL 24	50 m	24
GSL1040	GSL 30	50 m	30

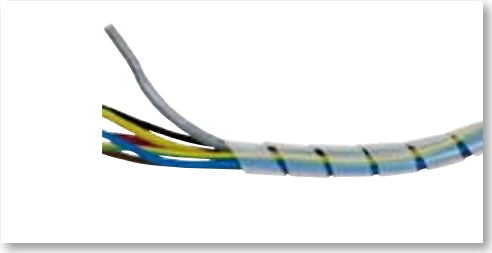


TECHNICAL FEATURES

Black colour
Fiberglass impregnated with siliconic varnish
Working temperature: 200°C
Max. working temperature: 300°C
Good flexibility
Resistant to most chemical agents
Packaging: coil

FIBERGLASS BRAIDED SLEEVE

Code	Reference		ø nom. (mm)
GFV1000	GFV 04	100 m	4
GFV1005	GFV 06	100 m	6
GFV1010	GFV 08	100 m	8
GFV1015	GFV 10	100 m	10
GFV1020	GFV 12	100 m	12
GFV1025	GFV 16	50 m	16
GFV1030	GFV 20	50 m	20



TECHNICAL FEATURES

Colour: transparent (other colours upon request)
Polyethylene
Max. working temperature: 85°C
Packaging: coil in plastic bag

SPIRAL SLEEVE

Code	Reference		ø nom. (mm)
GSP0995	GSP 04	25 m	4,2
GSP1000	GSP 06	25 m	6,4
GSP1002	GSP 09	25 m	9,5
GSP1005	GSP 12	25 m	12,7
GSP1007	GSP 15	25 m	15
GSP1010	GSP 20	25 m	19,1

TECHNICAL FEATURES

Black colour
Polypropylene
Packaging: coil in plastic bag

ZIPP-IN Polypropylene openable sleeve

Code	Reference		for ø nom (mm)
GZP1005	GZP 15	10 m	15
GZP1010	GZP 20	10 m	20
GZP1015	GZP 25	10 m	25
GZP1019	GZP 30	10 m	30

ZIPP-IN TOOLS

Code	Reference		for ø nom (mm)
GZP 1025	GZP TOOL 15	1	15
GZP 1030	GZP TOOL 20	1	20
GZP 1035	GZP TOOL 25	1	25
GZP 1040	GZP TOOL 30	1	30

TECHNICAL FEATURES

Two models to cut braided sleeves
Standard wire cutting and welding
in one single operation
Quick and clean operation

BRAIDED SLEEVE CUTTING TOOL

Code	Reference		Weight (kg)
UTG1000	UTG T	1	1,5
UTG1001	UTG M	1	0,94
UTG1500	UTG T-L	1	Spare blade
UTG1501	UTG M-L	1	Spare blade

UTG1000 hot blade sleeve cutting bench tool
Working temperature: 800°C
Power supply: 230 Volt/50 Hz
Supply cable: 1.5 meters
Spare blade UTG1500

UTG1001 hot blade sleeve cutting hand tool
Working temperature up to 800°C in few seconds
Power supply: 230 Volt/50 Hz
Supply cable: 2.5 meters
Spare blade UTG1501

Steel and/or aluminium DIN rails standardized as per European norms which allows fitting modular electrical devices and others inside electrical panel boards.

Two general DIN rail types:
SYMMETRICAL, also said "Ω", available in three sizes.
ASYMMETRICAL, also said "G".

Steel 30x15 "C" profile
Used to make infrastructures inside the electrical panel board and/or as support for equipment or wiring elements.

TECHNICAL FEATURES

Passivated galvanized steel
Sendzimir galvanized steel
Aluminium
High mechanical resistance
Compliant with standards
EN 60715 - DIN 46277

Available in solid and punched versions
Standard length: 2 meters
Some references available
in 3 meters length

Accessories

Wide range of clips and fasteners making it possible to conveniently fasten equipment with no provision for direct fitting on DIN rail and to fasten or space the same rail inside the panel board.

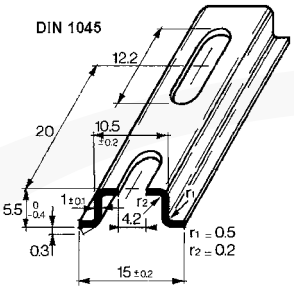
TECHNICAL FEATURES

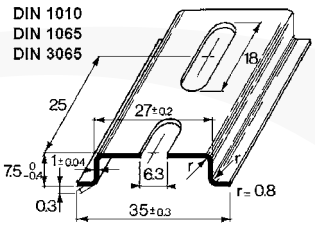
Passivated galvanized steel and plastic
High mechanical resistance

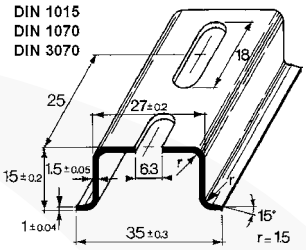
Tools

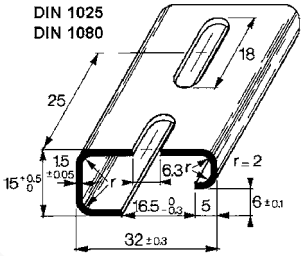
Cutting and punching tools for DIN rail, extremely easy to use. Neat cut without burrs and material waste; supporting rail for accurate cut at 90°, ruler supplied for repeated cuts up to 1 meter.
Maintenance-free.







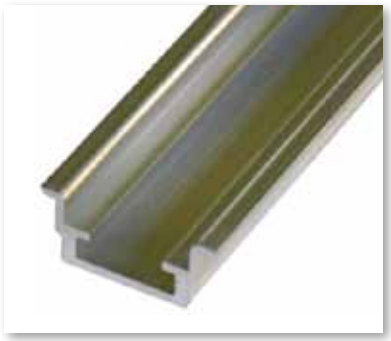


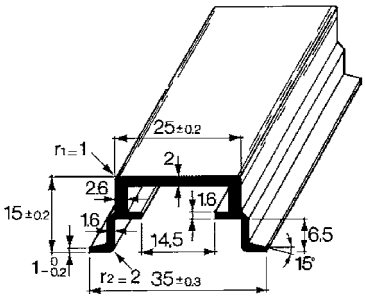
PASSIVATED GALVANIZED STEEL (RoHS)

Code	Reference	Length (m)		Weight (Kg/pc)
Symmetrical solid DIN rail				
DIN1040	DIN NF15H5	2	20	0,33
DIN1000	DIN NF35H7	2	20	0,70
DIN1005	DIN NF35H15	2	10	1,34
Symmetrical punched DIN rail				
DIN1045	DIN F15H5	2	20	0,33
DIN1010	DIN F35H7	2	20	0,60
DIN1015	DIN F35H15	2	10	1,23
Asymmetrical solid DIN rail				
DIN1020	DIN GNF	2	20	1,46
Asymmetrical punched DIN rail				
DIN1025	DIN GF	2	20	1,38

SENDZIMIR GALVANIZED STEEL (RoHS)

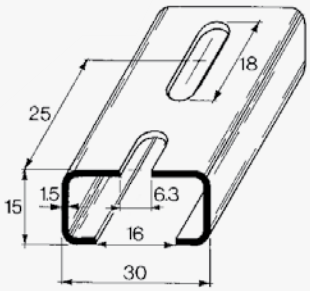
Code	Reference	Length (m)		Weight (Kg/pc)
Symmetrical solid DIN rail				
DIN1055	DIN NF35H7Z	2	20	0,7
DIN1060	DIN NF35H15Z	2	10	1,34
DIN3055	DIN NF35H7Z-3	3	10	1,05
DIN3060	DIN NF35H15Z-3	3	10	2,01
Symmetrical punched DIN rail				
DIN1065	DIN F35H7Z	2	20	0,6
DIN1070	DIN F35H15Z	2	10	1,23
DIN3065	DIN F35H7Z-3	3	10	0,9
DIN3070	DIN F35H15Z-3	3	10	1,84
Asymmetrical solid DIN rail				
DIN1075	DIN ANFZ	2	20	1,46
DIN3075	DIN ANFZ-3	3	10	2,19
Asymmetrical punched DIN rail				
DIN1080	DIN AFZ	2	20	1,38





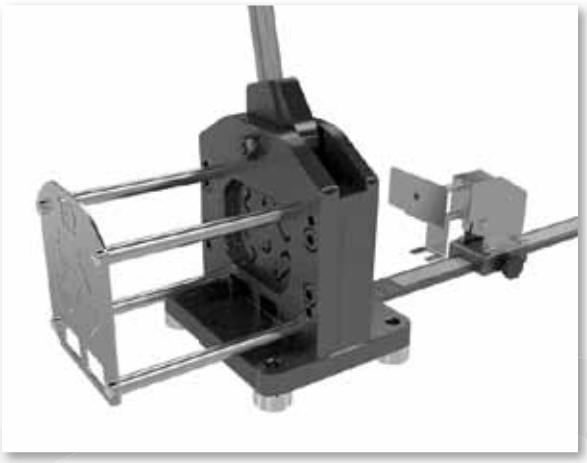
ALUMINIUM

Code	Reference	Length (m)		Weight (Kg/pc)
Symmetrical solid DIN rail				
DIN1085	DIN NFAL	2	20	0,343



C-PROFILE - PASSIVATED GALVANIZED STEEL (RoHS)

Code	Reference	Length (m)		Weight (Kg/pc)
DIN1050	CFT30H15	2	10	1,3



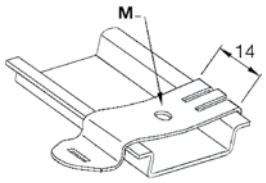
DIN RAIL CUTTING TOOL

Code	Reference		Weight (Kg)
UTD3005	UTD-T-P 03	1	16,5

Cutting:
Symmetrical DIN rails type "Ω" 15x5,5 - 35x7,5 - 35x15
Asymmetrical DIN rail type "G" 32x15
Profile type "C" 30x15

Punching with elongated hole:
Symmetrical DIN rails type "Ω" 35x7,5 - 35x15.
Elongated hole 12x6,4 mm along or perpendicular to the axis of the rail.

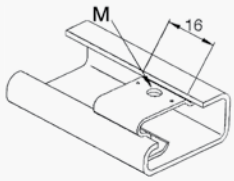
Supplied with rule up to 1000 mm.



Passivated galvanized steel (RoHS)

CLIP FOR SYMMETRICAL DIN RAIL

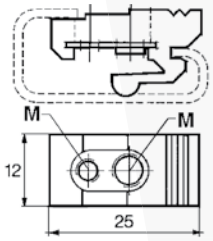
Code	Reference		M
DIN1110	DIN KLIP 4	100	M4
DIN1115	DIN KLIP 5	100	M5



Passivated galvanized steel (RoHS)

CLIP FOR ASYMMETRICAL DIN RAIL

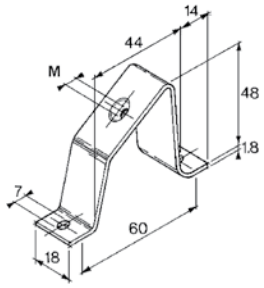
Code	Reference		M
DIN1090	DIN GKLIP 4	100	M4
DIN1095	DIN GKLIP 5	100	M5



Polyamide 66 with insert
in galvanized steel (RoHS)

CLIP FOR ASYMMETRICAL DIN RAIL

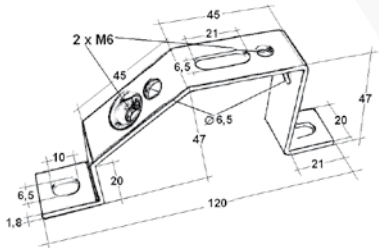
Code	Reference		M
DIN1100	DIN GKLIP 3-5	100	M3 - M5
DIN1105	DIN GKLIP 4-6	100	M4 - M6



Passivated galvanized steel (RoHS)

45° SUPPORTS

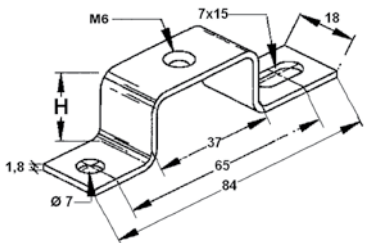
Code	Reference		M
DIN1030	DIN ST5	10	M5
DIN1035	DIN ST6	10	M6



Passivated galvanized steel (RoHS)

FLAT AND 45° SUPPORT

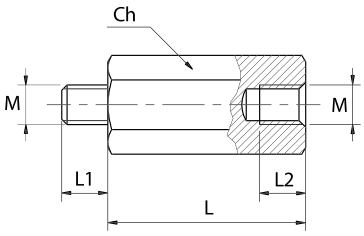
Code	Reference	
DIN1036	DIN ST 45PM6	10



Passivated galvanized steel (RoHS)

FLAT SUPPORTS

Code	Reference		H (mm)
DIN1120	DIN STC 20-6	10	20
DIN1125	DIN STC 25-6	10	25
DIN1130	DIN STC 30-6	10	30
DIN1135	DIN STC 40-6	10	40
DIN1140	DIN STC 50-6	10	50
DIN1145	DIN STC 70-6	10	70
DIN1150	DIN STC 90-6	10	90



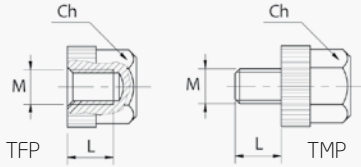
TECHNICAL FEATURES

Material: polystirene
Self-extinguishing: UL 94-V2
Max. working temperature: 90°C
Insulation voltage: 1000V
Inserts M-F: passivated galvanised steel

PLASTIC SPACERS

Code	Reference		M	Ch (mm)	L (mm)	L1 (mm)	L2 (mm)
DZP1005	DZP 15M5	50	M5	13	15	7	7
DZP1010	DZP 20M5	50	M5	13	20	7	7
DZP1015	DZP 30M5	50	M5	13	30	7	7
DZP1020	DZP 45M5	50	M5	13	45	7	7
DZP1025	DZP 55M5	50	M5	13	55	7	7
DZP1030	DZP 70M5	50	M5	13	70	7	7
DZP1035	DZP 85M5	50	M5	13	85	7	7

Code	Reference		M	Ch (mm)	L (mm)	L1 (mm)	L2 (mm)
DZP1040	DZP 120M5	50	M5	13	120	7	7
DZP1045	DZP 15M6	50	M6	13	15	7	7
DZP1050	DZP 20M6	50	M6	13	20	7	7
DZP1055	DZP 30M6	50	M6	13	30	7	7
DZP1060	DZP 45M6	50	M6	13	45	7	7
DZP1065	DZP 70M6	50	M6	13	70	7	7
DZP1070	DZP 120M6	50	M6	13	120	7	7

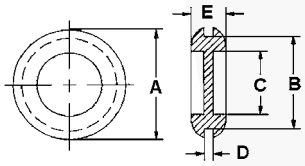


TECHNICAL FEATURES

Material: polystirene
Self-extinguishing: UL 94-V2
Max. working temperature: 90°C
Insulation voltage: 1000V
Male insert: passivated galvanised steel

PLASTIC CAPS

Code	Reference		M	Ch (mm)	L (mm)
TFP1000	TFP M5	50	M5	11	8
TFP1005	TFP M6	50	M6	11	8
TMP1010	TMP M5	50	M5	11	8
TMP1015	TMP M6	50	M6	11	8

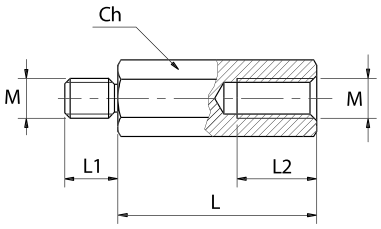


TECHNICAL FEATURES

Material: PVC SR 1700, black colour
Working Temperature: - 35 to +90 °C

GROMMET INSERTS

Code	Reference		A (mm)	B (mm)	C (mm)	D (mm)	E (mm)
IPC1000	IPC DF13	100	17	13	8,5	2	7
IPC1005	IPC DF15,5	100	20	15,5	10,5	2	7,5
IPC1010	IPC DF19	100	24	19	14	2	8
IPC1015	IPC DF20,5	100	26	20,5	15	2	8,5
IPC1020	IPC DF23	100	29	23	18	2,5	8,5
IPC1025	IPC DF28,5	100	35	28,5	22	2,5	9
IPC1030	IPC DF37,5	100	44	37,5	32	2,5	9,5
IPC1035	IPC DF47,5	100	53	47,5	40	2,5	9,5



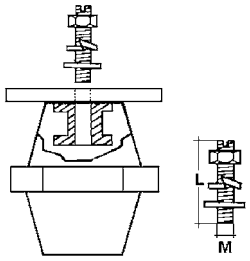
TECHNICAL FEATURES

Galvanized steel
Hexagonal profile
M-F (Male-Female) thread
M3 - M4 - M5 - M6 - M8
As per standard DIN 176
Tensile strength: 500 N/mm²

STEEL SPACERS

Code	Reference		Ch (mm)	L (mm)	M	L1 (mm)	L2 (mm)
DZM0995	DZM 20M3	100	6	20	M3	6	10
DZM1000	DZM 10M4	100	7	10	M4	8	6
DZM1005	DZM 15M4	100	7	15	M4	8	10
DZM1010	DZM 20M4	100	7	20	M4	8	10
DZM1015	DZM 25M4	50	7	25	M4	8	10
DZM1020	DZM 30M4	50	7	30	M4	8	10
DZM1025	DZM 35M4	50	7	35	M4	8	10
DZM1030	DZM 40M4	50	7	40	M4	8	10
DZM1035	DZM 50M4	50	7	50	M4	8	10
DZM1040	DZM 60M4	50	7	60	M4	8	10
DZM1042	DZM 70M4	25	7	70	M4	8	10
DZM1044	DZM 90M4	25	7	90	M4	8	10
DZM1093	DZM 10M5	100	8	10	M5	8	6
DZM1045	DZM 15M5	100	8	10	M5	8	6
DZM1050	DZM 20M5	100	8	20	M5	8	10
DZM1055	DZM 25M5	50	8	25	M5	8	10
DZM1060	DZM 30M5	50	8	30	M5	8	10
DZM1065	DZM 35M5	50	8	35	M5	8	10
DZM1070	DZM 40M5	50	8	40	M5	8	10
DZM1075	DZM 50M5	50	8	50	M5	8	10
DZM1080	DZM 60M5	50	8	60	M5	8	10

Code	Reference		Ch (mm)	L (mm)	M	L1 (mm)	L2 (mm)
DZM1085	DZM 70M5	25	8	70	M5	8	10
DZM1090	DZM 80M5	25	8	80	M5	8	10
DZM1092	DZM 90M5	25	8	90	M5	8	10
DZM1095	DZM 10M6	100	10	10	M6	10	6
DZM1100	DZM 15M6	100	10	15	M6	10	10
DZM1105	DZM 20M6	100	10	20	M6	10	12
DZM1106	DZM 25M6	50	10	25	M6	10	12
DZM1110	DZM 30M6	50	10	30	M6	10	12
DZM1115	DZM 40M6	50	10	40	M6	10	12
DZM1120	DZM 50M6	50	10	50	M6	10	12
DZM1125	DZM 60M6	50	10	60	M6	10	12
DZM1130	DZM 70M6	25	10	70	M6	10	12
DZM1135	DZM 80M6	25	10	80	M6	10	12
DZM1140	DZM 90M6	25	10	90	M6	10	12
DZM1145	DZM 100M6	25	10	100	M6	10	12
DZM1150	DZM 20M8	100	13	20	M8	14	14
DZM1155	DZM 25M8	50	13	25	M8	14	14
DZM1160	DZM 30M8	50	13	30	M8	14	14
DZM1165	DZM 40M8	50	13	40	M8	14	14
DZM1170	DZM 50M8	50	13	50	M8	14	14
DZM1175	DZM 70M8	25	13	70	M8	14	14



TECHNICAL FEATURES

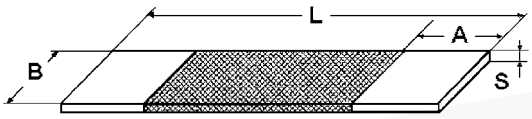
Made of galvanized steel class 8.8
Complete with nut, flat washer and spring lock washer

THREADED STUDS FOR INSULATORS

Code	Reference		M	L
ISO3000	ISO PM5x20	25	M5	20
ISO3005	ISO PM6x30	25	M6	30
ISO3010	ISO PM8x30	25	M8	30
ISO3015	ISO PM8x35	25	M8	35
ISO3020	ISO PM10x40	25	M10	40
ISO3025	ISO PM12x50	25	M12	50

Braided power shunts

Make to order production



TECHNICAL FEATURES

Tinned copper Cu-ETP UNI 5649-71 (red copper upon request)
Standard wire 0.20 mm (0.05 to 0.15 mm upon request)
Max. working temperature: 105°C
Terminals made in tinned copper tube, pressed at high density.
Punching upon request.

For use as parallel shunts
- use the here under indicated derating coefficient
- space shunts at minimum distance equal to shunt thickness for optimal heat dissipation

No. parallel shunts	Derating coefficient
2	1,8
3	2,5
4	3,2
5	3,9

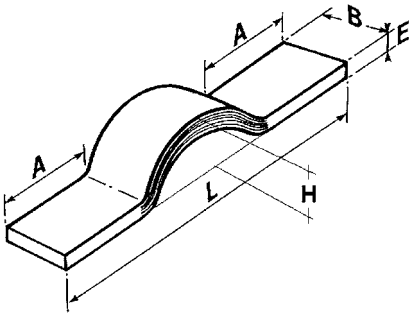
Example: cross-section 1000 mm² with ΔT= 50°C
1 shunt = In 2122 A
3 parallel shunts In= 2122 x 2.5 = 5305 A

Ampacity table based on the ΔT temperature rise

Sect. (mm²)	In (A)	
	ΔT 30°C	ΔT 50°C
100	339	448
120	373	496
150	427	566
200	534	707
250	631	837
300	695	920
400	827	1097
500	889	1180
600	1067	1415
800	1335	1768
1000	1601	2122
1200	1923	2547

Laminated power shunts

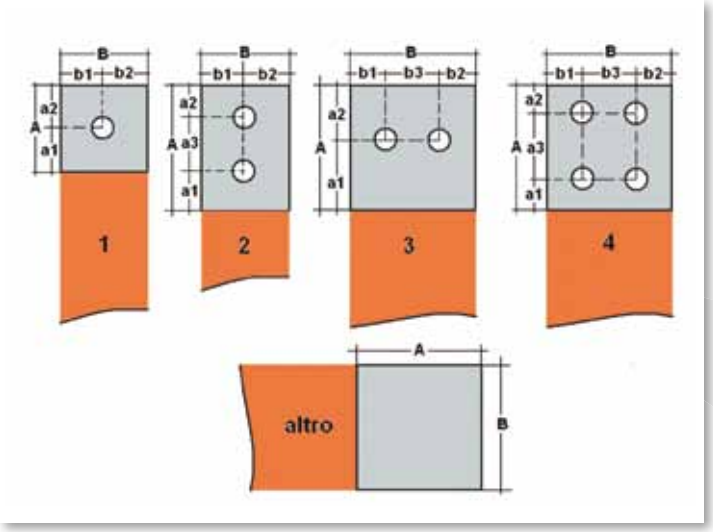
Make to order production



TECHNICAL FEATURES

Copper laminates Cu-OF ISO 1337
(oxygen-free) thickness from 0.1 mm
Red copper, tinned or silver-plated terminals
Press-welded or riveted terminals
Punching upon request
Width from 20 to 200 mm
Terminal thickness from 3 to 20 mm
Cross-sections from 60 to 4000 mm²

CONSTRUCTION CHARACTERISTICS AND DIMENSIONS



TERMINAL TYPE: _____

A = _____ mm
a1 = _____ mm
a2 = _____ mm
a3 = _____ mm

B= _____ mm
b1 = _____ mm
b2 = _____ mm
b3 = _____ mm

Ø holes = _____ mm No. _____ holes

Terminal thickness _____ mm

SHUNT MATERIAL

Conductor type:

COPPER ☐ Red ☐ Tinned

ALUMINIUM ☐

Insulation ☐ Yes ☐ No

Insulation type:

_____

_____

COPPER BRAID

Standard wire Ø, _____ mm

☐ Flat ☐ Round
☐ Pressed copper tube terminals
☐ Red copper terminals
☐ Tinned copper terminals
☐ Aluminium terminals

LAMINATED

No. Laminates _____
Laminate thickness Ø, _____ mm
☐ Press-welded terminals
☐ Riveted terminals
☐ Red copper terminals
☐ Tinned copper terminals
☐ Aluminium terminals

Nominal ampacity _____ A ☐ AC ☐ DC

Cross-section _____ mm^2

Total length _____ mm.

Please, enclose drawing or sketch of the detail to produce

Requested by:

Company:	Referent Mr.
Address:	City:
Tel.:	Fax:
e-mail:	@

Please, FAX to number +39.02.45.70.56.73 or E-mail to info@teknomega.it
web site: www.teknomega.com

Code	Reference	Page
BAP		
BAP4000	BAP 20x10x4000	20
BAP4005	BAP 30x10x4000	20
BAP4010	BAP 40x10x4000	20
BAP4015	BAP 50x10x4000	20
BAP4020	BAP 90x10x4000	20
BAP4025	BAP 80x10x4000	20
BAP4030	BAP 100x10x4000	20
BAP4035	BAP 120x10x4000	20
BFX		
BFX1005	BFX 3X9X0,8	11
BFX1020	BFX 6X9X0,8	11
BFX1021	BFX 9X9X0,8	11
BFX1022	BFX 3X13X0,5	11
BFX1023	BFX 6X13X0,5	11
BFX1024	BFX 10X13X0,5	11
BFX1025	BFX 2X15,5X0,8	11
BFX1035	BFX 4X15,5X08	11
BFX1045	BFX 6X15,5X0,8	11
BFX1050	BFX 10X15,5X0,8	11
BFX1055	BFX 2X20X1	11
BFX1060	BFX 3X20X1	11
BFX1065	BFX 4X20X1	11
BFX1070	BFX 5X20X1	11
BFX1075	BFX 6X20X1	11
BFX1076	BFX 8X20X1	11
BFX1080	BFX 10X20X1	11
BFX1085	BFX 2X24X1	11
BFX1090	BFX 3X24X1	11
BFX1095	BFX 4X24X1	11
BFX1100	BFX 5X24X1	11
BFX1105	BFX 6X24X1	11
BFX1110	BFX 8X24X1	11
BFX1115	BFX 10X24X1	11
BFX1120	BFX 2X32X1	11
BFX1125	BFX 3X32X1	11
BFX1130	BFX 4X32X1	11
BFX1135	BFX 5X32X1	11
BFX1140	BFX 6X32X1	11
BFX1145	BFX 8X32X1	11
BFX1150	BFX 10X32X1	11
BFX1155	BFX 2X40X1	11
BFX1160	BFX 3X40X1	11
BFX1165	BFX 4X40X1	11
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