

Components for low voltage panel boards



Products
Catalog

TEKNOMEGA®



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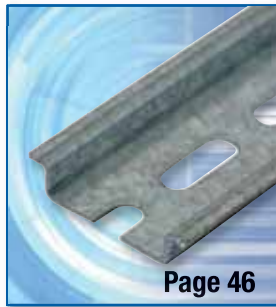
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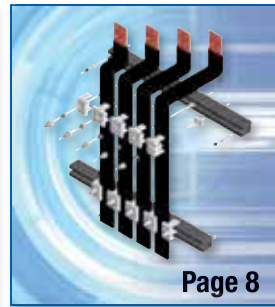
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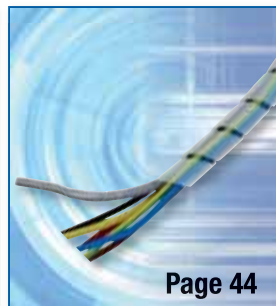
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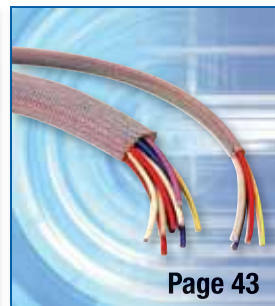
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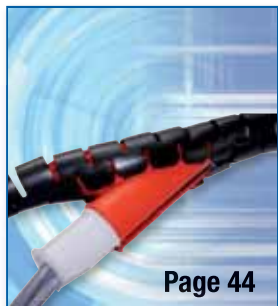
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YOUNG AND SOLID



Maurizio Mercandelli
Chairman and
Managing Director

So young yet so solid: this kind of comment is likely to be heard when our partners mention Teknomega. We issued our first invoice in July 2004, and in 2006 already Teknomega could claim quite a distinguished balance sheet; still growing.

Teknomega's progression optimally couples the versatility and creativity of the Italian people with the professional approach of a new way of doing entrepreneurship.

This comes from the long experiences we gained with multinational companies, and the high level of satisfaction we find in our customers allows us to cultivate a bit of pride.

This satisfaction supports and forges the way we interpret entrepreneurship. A happy customer will encourage us to strive forwards, to risk in the market. We also find motivation in the fact that this approach makes Teknomega a place where it is pleasant to operate, i.e. where this style gives the people who work here valid motivations to work harder and to start every morning with a smile.

Solidity

Entrepreneurship

Professional approach

Customer Satisfaction

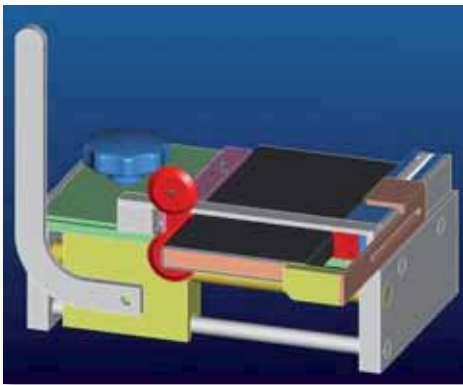
A place where it is pleasant to work

Headquarter and logistics center
in Buccinasco, Milan





A YOUNG HISTORY OF SUCCESS



Quality

The efforts made by Teknomega in regards of quality is not a slogan: it is a style, a bet on the company's very competitiveness. An indispensable asset in Business to Business.



Reactivity

Customer Service is characterized by its personality. People who like their job in the service of their customers, far from the call center logic; people who answer the needs of their interlocutors with sagacity and creativity.



Promptness

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



Capillarity

Partnership with select eddealers and distributors of electrical material makes decentralized and capillary the availability of the product as well as interlocutors and informations.



Updating

Staying "up to date" as to regulations, techniques and technologies, paying attention to the trends of demand, being proponents of innovation is part and parcel of our company luggage.



Presence

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



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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Ω FLEX - Insulated Copper Flexible bars

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

The **fields of use** are all the connections for power transportation inside L.V. electric panel boards, in alternative to cable or rigid copper bars, connection of electric devices (disconnecting switches, circuit breakers, etc.), connections between transformers and/or electric panel boards and busducts.

Insulated flexible bars are the only electric connection system to offer great advantages compared to cable and rigid bar connections. The costs of connections made of flexible bars should be compared to the sum of the costs for cable + connection terminal + crimping time. In the case of rigid bars, the same sum + support systems + bending time.

ADVANTAGES COMPARED TO RIGID BAR

- Increased electric power carriage with equal cross-section, with improved safety.
- Weight and volume savings inside panel boards.
- Easy and quick shaping of the conductor thanks to laminate flexibility.
- Bar support or insulator fitting cost and time saving, since the conductor is insulated.

ADVANTAGES COMPARED TO CABLE

- Increased ampacity with equal cross-section.
- Connection terminal fitting cost and time savings.
- 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

Ω FLEX - Insulated Copper Flexible bars

Ω FLEX



LISTED file n° E300607

TECHNICAL FEATURES

Conductor

Electrolytic copper Cu-ETP 99.90%

Laminate thickness 0.5 ÷ 1 mm

Insulation

Self-extinguishing PVC UL94V0

Fire Class: V0

Thickness: 2 mm

Max. elongation: 365%

Shore hardness: 85 A

Tensile strength: 19.6 MPa

Recyclable

Finished product

Dielectric rigidity: 20Kv/mm

Rated voltage: 1000Vac/1500 Vdc

Working temperature: from -40 to +105°C

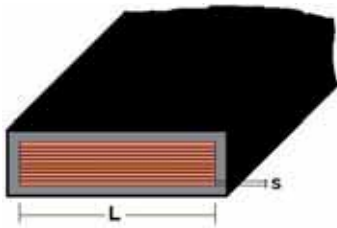
Reference example

BFX 20X4X1

Laminate width: L = 20 mm

Laminate number: 4

Laminate thickness: s = 1 mm



Selection based on temperature

I_n = Rated current A

T_f = Working temperature °C

T_a = Room temperature °C

ΔT = Heat increase °C

For an $I_n = 630$ A at $T_f = 80^\circ\text{C}$

we can use as an example a

BFX 8x32x1 at ΔT 40°C

where:

BFX 8x32x1 = I_n **690 A** with ΔT di 40°C

$T_a = 40^\circ\text{C}$

$T_f = T_a + \Delta T = 40^\circ + 40^\circ = 80^\circ\text{C}$

Icc value (1 second)

(effective short-circuit current)

based on the following calculation

Calculation parameters

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 increase ΔT as per IEC 439-1

Reference room temperature 40°C

INSULATED FLEXIBLE COPPER BARS LENGTH 2 METERS

L	Code	Reference			kg	Sect. mm²	Icc (Amp)	Temperature increase ΔT (°C)				
								65°	50°	40°	30°	20°
								Rated intensity In (Amp)				
9	BFX1005	BFX 3X9X0,8	1	27	0.47	22	1879	190	165	140	120	95
	BFX1020	BFX 6X9X0,8	1	27	0.87	43	3757	295	255	210	175	135
	BFX1021	BFX 9X9X0,8	1	27	1.17	65	5636	385	330	270	225	175
13	BFX1022	BFX 3X13X0,5	1	24	0.43	20	1696	195	170	140	120	80
	BFX1023	BFX 6X13X0,5	1	12	0.80	39	3392	285	250	210	170	130
	BFX1024	BFX 10X13X0,5	1	12	1.33	65	5653	385	330	270	230	180
15.5	BFX1025	BFX 2X15,5X0,8	1	24	0.51	25	2157	230	200	170	140	120
	BFX1035	BFX 4X15,5X0,8	1	24	1.01	50	4314	340	295	245	210	160
	BFX1045	BFX 6X15,5X0,8	1	12	1.46	74	6470	430	375	305	260	200
	BFX1050	BFX 10X15,5X0,8	1	12	2.36	124	10784	590	510	410	345	270
20	BFX1055	BFX 2X20X1	1	20	0.85	40	3479	320	280	230	195	150
	BFX1060	BFX 3X20X1	1	20	1.21	60	5218	400	345	285	240	185
	BFX1065	BFX 4X20X1	1	20	1.58	80	6957	470	410	335	280	215
	BFX1070	BFX 5X20X1	1	10	1.94	100	8697	535	465	375	315	245
	BFX1075	BFX 6X20X1	1	10	2.30	120	10436	595	515	415	350	270
	BFX1076	BFX 8X20X1	1	10	3.00	160	13915	685	585	490	410	320
	BFX1080	BFX 10X20X1	1	10	3.74	200	17394	810	705	560	470	365
24	BFX1085	BFX 2X24X1	1	16	1.02	48	4174	370	320	265	225	175
	BFX1090	BFX 3X24X1	1	16	1.45	72	6262	465	400	330	275	215
	BFX1095	BFX 4X24X1	1	16	1.88	96	8349	545	470	380	320	250
	BFX1100	BFX 5X24X1	1	16	2.32	120	10436	615	535	440	360	280
	BFX1105	BFX 6X24X1	1	8	2.75	144	12523	680	590	475	400	310
	BFX1110	BFX 8X24X1	1	8	3.61	192	16698	810	700	560	470	370
	BFX1115	BFX 10X24X1	1	8	4.48	240	20872	925	800	630	530	410
32	BFX1120	BFX 2X32X1	1	12	1.35	64	5566	475	410	335	280	220
	BFX1125	BFX 3X32X1	1	12	1.92	96	8349	585	510	410	295	270
	BFX1130	BFX 4X32X1	1	12	2.50	128	11132	685	590	480	400	310
	BFX1135	BFX 5X32X1	1	12	3.07	160	13915	775	670	540	450	350
	BFX1140	BFX 6X32X1	1	6	3.65	192	16698	855	735	600	500	385
	BFX1145	BFX 8X32X1	1	6	4.80	256	22264	1000	870	690	580	450
	BFX1150	BFX 10X32X1	1	6	5.95	320	22496	1135	980	780	655	510
40	BFX1155	BFX 2X40X1	1	12	1.67	80	6957	575	495	400	335	260
	BFX1160	BFX 3X40X1	1	12	2.39	120	10436	705	615	490	415	320
	BFX1165	BFX 4X40X1	1	12	3.11	160	13915	820	715	570	480	375
	BFX1170	BFX 5X40X1	1	6	3.83	200	17394	925	805	640	540	420
	BFX1175	BFX 6X40X1	1	6	4.54	240	20872	1020	880	705	590	460
	BFX1180	BFX 8X40X1	1	6	5.94	320	22496	1195	1035	815	685	530
	BFX1185	BFX 10X40X1	1	6	7.41	400	28120	1340	1160	915	770	595
50	BFX1190	BFX 3X50X1	1	10	2.98	150	13045	855	745	590	495	385
	BFX1195	BFX 4X50X1	1	10	3.88	200	17394	990	860	685	575	445
	BFX1200	BFX 5X50X1	1	5	4.77	250	21742	1110	965	770	645	500
	BFX1205	BFX 6X50X1	1	5	5.67	300	22090	1220	1060	840	705	545
	BFX1210	BFX 8X50X1	1	3	7.46	400	28120	1410	1220	970	815	620
	BFX1215	BFX 10X50X1	1	3	9.25	500	35150	1585	1370	1080	905	705
63	BFX1220	BFX 3X63X1	1	8	3.75	189	16437	1050	900	715	600	460
	BFX1225	BFX 4X63X1	1	8	4.87	252	21916	1200	1040	825	680	535
	BFX1230	BFX 5X63X1	1	4	6.00	315	22144	1340	1160	925	775	600
	BFX1235	BFX 6X63X1	1	4	7.13	378	26573	1470	1270	1010	840	650
	BFX1240	BFX 8X63X1	1	4	9.38	504	35431	1680	1460	1160	970	750
	BFX1245	BFX 10X63X1	1	2	11.63	630	44288	1875	1625	1280	1075	830
80	BFX1250	BFX 3X80X1	1	4	4.75	240	20872	1280	1115	870	730	560
	BFX1255	BFX 4X80X1	1	4	6.17	320	22496	1475	1275	1010	865	650
	BFX1260	BFX 5X80X1	1	4	7.60	400	28120	1640	1425	1120	935	725
	BFX1265	BFX 6X80X1	1	4	9.03	480	33744	1780	1550	1220	1025	790
	BFX1270	BFX 8X80X1	1	2	11.89	640	44991	2045	1775	1390	1170	910
	BFX1275	BFX 10X80X1	1	2	14.75	800	56239	2260	1960	1545	1300	1005
100	BFX1280	BFX 4X100X1	1	4	7.71	400	28120	1780	1550	1210	1015	785
	BFX1285	BFX 5X100X1	1	4	9.49	500	35150	1980	1720	1350	1125	875
	BFX1290	BFX 6X100X1	1	2	11.28	600	42179	2150	1870	1455	1225	950
	BFX1295	BFX 8X100X1	1	2	14.85	800	56239	2410	2110	1655	1395	1080
	BFX1300	BFX 10X100X1	1	2	18.42	1000	70299	2680	2325	1830	1545	1190
	BFX1305	BFX 12X100X1	1	2	21.99	1200	84359	3135	2720	2135	1800	1385



LISTED file n° E300607

Table of ampacities (A) based on temperature increase ΔT
as per IEC 439-1
Reference room temperature 40°C

INSULATED FLEXIBLE COPPER BARS LENGTH 3 METERS

L	Code	Reference			kg	Sect. mm²	Icc (Amp)	Temperature increase ΔT (°C)				
								65°	50°	40°	30°	20°
20	BFX3055	BFX 2X20X1-3	1	1.281	1.281	40	3479	320	280	230	195	150
	BFX3060	BFX 3X20X1-3	1	1.821	1.821	60	5218	400	345	285	240	185
	BFX3070	BFX 5X20X1-3	1	2.907	2.907	100	8697	535	465	375	315	245
24	BFX3085	BFX 2X24X1-3	1	1.527	1.527	48	4174	370	320	265	225	175
	BFX3090	BFX 3X24X1-3	1	2.175	2.175	72	6262	465	400	330	275	215
	BFX3095	BFX 4X24X1-3	1	2.823	2.823	96	8349	545	470	380	320	250
	BFX3100	BFX 5X24X1-3	1	3.474	3.474	120	10436	615	535	440	360	280
32	BFX3125	BFX 3X32X1-3	1	2.88	2.88	96	8349	475	410	335	280	220
	BFX3135	BFX 5X32X1-3	1	4.608	4.608	160	13915	775	670	540	450	350
	BFX3145	BFX 8X32X1-3	1	7.194	7.194	256	22264	1000	870	690	580	450
40	BFX3170	BFX 5X40X1-3	1	5.739	5.739	200	17394	925	805	640	540	420
	BFX3185	BFX 10X40X1-3	1	11.121	11.121	400	28120	1340	1160	915	770	595
50	BFX3200	BFX 5X50X1-3	1	7.155	7.155	250	21742	1110	965	770	645	500

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

Derating coefficient for the use of bars in parallel			
Number of bars in parallel		2 bars	3 bars
Coefficient to use		1.8	2.5
			3.2

EXAMPLE FOR BFX 5X100X1	In with ΔT 50°C	= 1720 AMP
BFX 5X100X1 in parallel	= 1720 Amp x 1.8	= 3096 Amp
	= 1720 Amp x 2.5	= 4300 Amp
	= 1720 Amp x 3.2	= 5504 Amp

UPON REQUEST:

Tinned copper or aluminum bars



Insulation for temperatures up to 125°C



Halogen-free insulation



Universal support with Ω FLAT



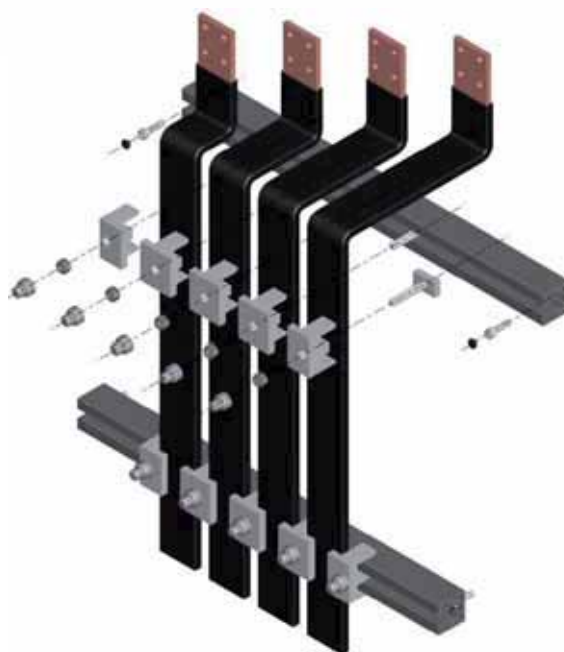
Made of:

- PVC support channel in 2-meter bars
- L-shaped anchoring block with adjustable spacing between phases
- T-shaped anchoring block with minimum allowed spacing between phases
- for flexible bars from 2x24x1 up to 10x120x1
- adjustable distance between phases using the "L" block
minimum air distance between various phases equal to 40 mm
using two opposed "L" blocks
- fixed distance between phases using the "T" block
minimum air distance between various phases equal to 20 mm

Cf. also Ω FLAT technical features on page 26

ADVANTAGES

- for flexible insulated bar cross-sections starting from 2x24x1
- support completely made of insulating material
- PVC channel easy to cut at the desired length
- quick fitting to the panel board structure
by means of six hexagonal lobes M6 screws
- high resistance to short-circuits



Code	Reference	Description	
FLT1000	FLT-PR2000	PVC channel, length 2 meters	2
FLT1005	FLT- BL-L	Kit of 6 L-shaped blocks in PA 6/6 complete with screws	1
FLT1010	FLT- BL-T	Kit of 6 T-shaped blocks in PA 6/6 complete with screws	1

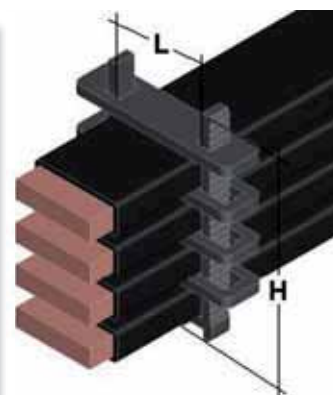
Simple support with spacer

Spacer and overlapping support

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

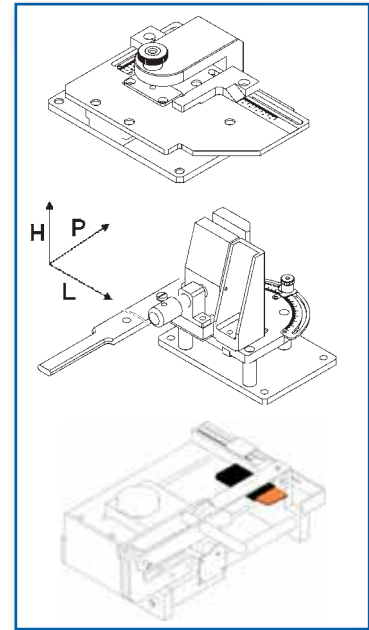
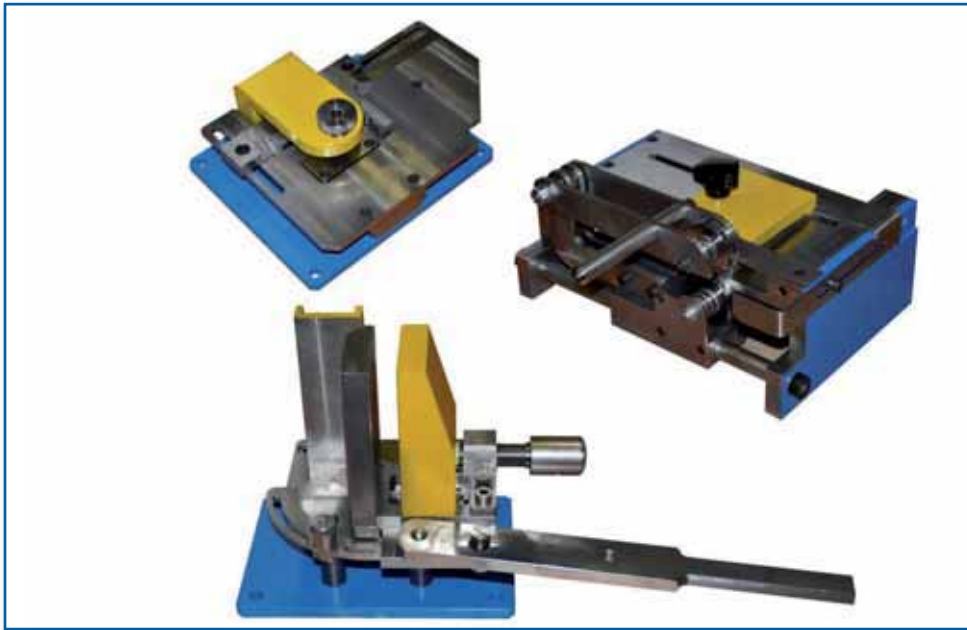
APPLICATIONS and ADVANTAGES

- for insulated flexible bars up to 32x10x1
- possibility to fit up to 4 flexible bars
- fitting to the panel board structure by means of screw (not included) to insert at the spacer base
- accurate and ordered fitting inside the panel board
- excellent heat dissipation thanks to the correct spacing between bars



Code	Reference	Description	sez max Ω Flex	H	L	
DZP3000	DZP 32	Overlapping spacer for BFX	32 x 10 x 1	53	38	10

Ω FLEX - Hand tools for flexible bar



Due to its building characteristics, the **FLEXIBLE INSULATED BAR** is easy to work by hand (bending, torsion, etc.) except for holes, which must be made using a suitable punching or drilling tool, making sure to keep the laminates compacted to prevent their deformation and the formation of burr between laminates.

However, in order to make bending, stripping and punching even easier, as well as to make the serial details dimensions more steady, **TEKNOLOGIA** has developed a series of user-friendly hand tools.

The **bending tool** makes it possible to have optimal bending angles, even with pre-determined and/or repeated angle, and to optimize connection length as well as their overall dimensions.

The **twisting tool**, used together with the bending tool, makes it possible to twist flexible bar to obtaining various planes of connection.

The **stripping tool** makes it possible to quickly, neatly and cleanly remove the PVC insulation on the area destined to the connection terminal; it can easily be set to perform repeated stripping. It is also easy and quick to adjust to modify the dimension of the area from which the insulation must be removed.

The **drilling** 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 each single copper laminate, since the laminate package is conveniently pressed under a special drilling guide.

APPLICATION ADVANTAGES

- 1) simplicity of use of all the tools and higher safety for operators
- 2) quick, accurate work, optimization of connection lengths, reduction of overall dimensions inside the electric panel board

- 3) no need for external power supply
- 4) easy to carry to work "on site" as well
- 5) easy to fit on the workbench or, for UFB only, on vise as well

UPB

Hand tool to bend insulated flexible bars

- 1 - can be used up to 120x10x1 cross-sections
- 2 - easy to fit on workbench
- 3 - quick flexible bar tightening
- 3 - goniometer to set the bending angle
- 4 - blocking for repeated work on the same bending angle
- 5 - no damage to the insulation
- 6 - small effort thanks to the lever

UTB

Hand tool to twist insulated flexible bars

supplied only together with the bending tool

- 1 - can be used up to 120x10x1 cross-sections
- 2 - to be used with the bending tool
- 3 - allows twisting of the insulated flexible bar without damage to the insulation, to get a change in plane of connection

UFB

Hand tool to drill insulated flexible bars

- 1 - for holes from Ø 6.5 mm to 12.5 mm
- 2 - possibility to drill one or more holes on the bar
- 3 - can be used on 20- to 120-mm laminate width
- 4 - quick matrix change for the various hole diameters
- 5 - can be used with column or hand drilling tool

USB

Hand tool to strip insulated flexible bars

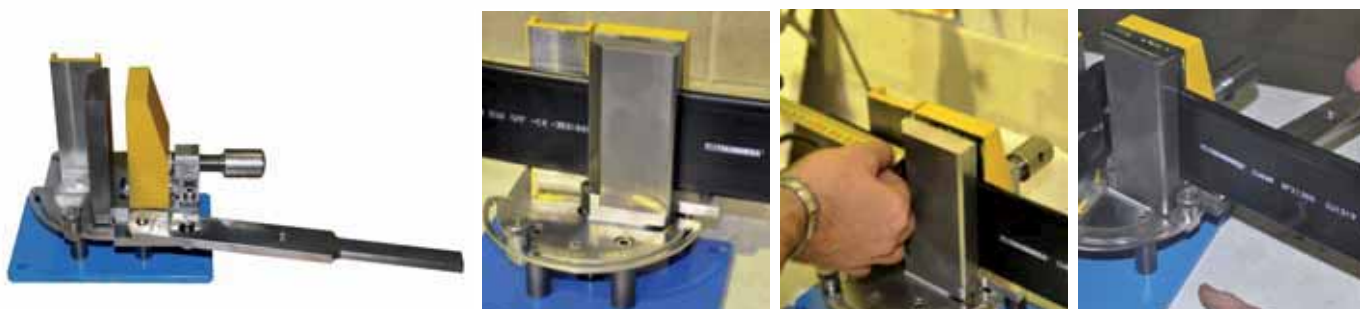
- 1 - can be used on flexible bar cross-sections from 20x2x1 to 120x10x1
- 2 - accurate insulation cut on all 4 sides with two moves only
- 3 - quick and easy determination of the terminal length to be stripped thanks to the millimetric ruler

Code	Reference	Description		Weight Kg	H mm	P mm	L mm
UBF1000	UPB-BFX	Hand bending tool	1	12.80	220	230	220*
UBF1005	UPB-T-BFX	Hand bending tool + twisting tool	1	14.40	220	350	220*
UBF1010	UFB-BFX	Hand drilling tool	1	7.10	65	175	240
UBF1015	USB-BFX	Hand stripping tool	1	12.00	120	280	200
UBF2000	USB-SET	Set of spare laminates for stripping tool	1	-	-	-	-

* UBF 1000 - UBF 1005: the indicated sizes refer to the sole machine body without lever

INSTRUCTIONS FOR USE

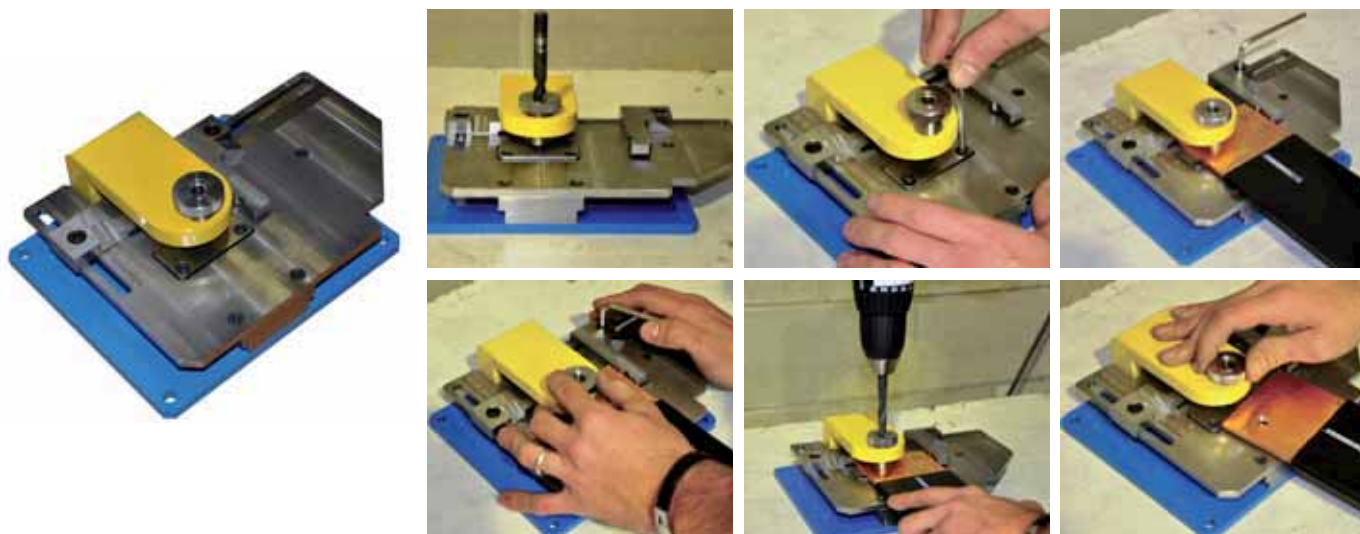
UPB BENDING TOOL FOR INSULATED FLEXIBLE BAR



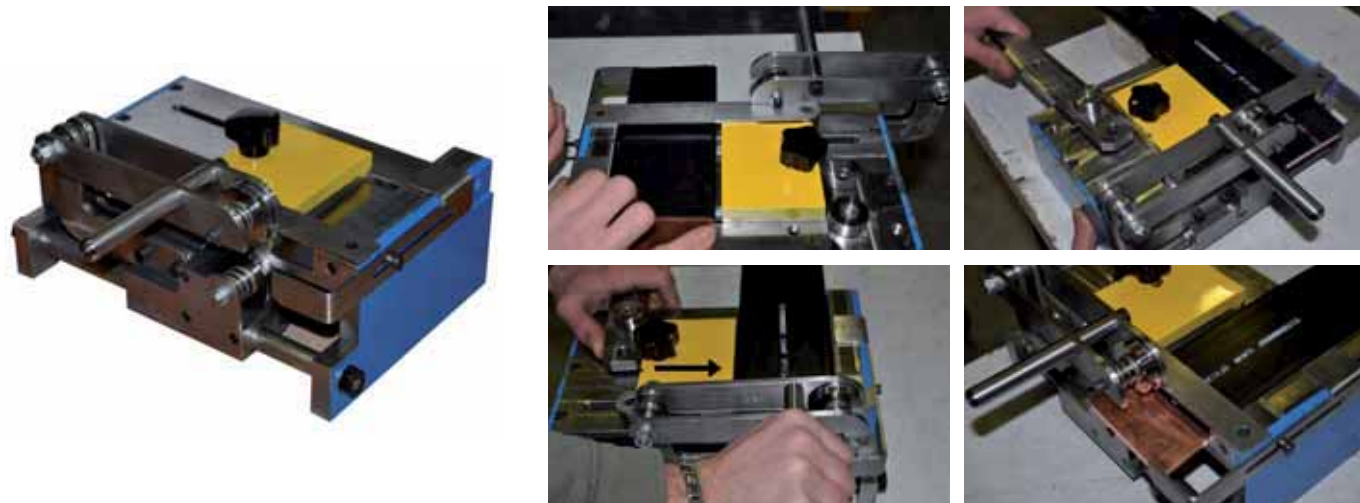
UPB TWISTING TOOL FOR INSULATED FLEXIBLE BAR



UFB DRILLING TOOL FOR INSULATED FLEXIBLE BAR



USB STRIPPING TOOL FOR INSULATED FLEXIBLE BAR



A training video of these tools is available at: <http://www.teknomega.it>

Ω FLEX - Preformed flexible bars as per drawing



TEKNOMEGA makes it possible to receive ΩFLEX INSULATED FLEXIBLE BARS bent and punched as per the specific customer's requirements. This is convenient in the case of the conditions of "series" production of "standard" electric panel boards and/or equipment. The use of PREFORMED INSULATED FLEXIBLE BARS AS PER DRAWING makes it possible to optimize the wirings times and to eliminate the production of wastes and possible unused work scrap.

Ω FLEX - Applications





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 make 125 to 630A electric connections.

The connection terminals are made of pressed tinned copper tube. Their size is designed looking at the poles of the most widespread switchgears on the market, thus making it possible to get the best electric contact possible.

Hole diameter allows, on one side, optimization of the electric contact in relation with the switch pole; on the other end, the possibility to have a universal contact to bar distribution systems.

Made in PVC, the insulation meets all the electric specifications required for use in L.V. environment.

Maximum continuous working temperature is 105°C.

The best alternative to cable connections.

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 ELECTRIC PARAMETERS

- Excellent electric insulation
- Better contact surface
- Better ampacity at equal cross-section compared to a cable and/or reduced cross-section at the same rated current
- Reduced heating due to the lack of crimped connections and to better ampacity
- Excellent short-circuit resistance

RANGE

Cross-sections: from 25 mm² to 240 mm²

Lengths: from 230 mm to 930 mm

Rated ampacity: from 125 A to 630 A



TECHNICAL FEATURES

Insulation

Self-extinguishing PVC UL94V0
Fire Class: V0
Color: black
Thickness: $1.8 \div 2$ mm
Recyclable

HALOGEN-FREE insulation upon request

Finished product

Dielectric rigidity: 20 kV/mm
Rated voltage: 1000Vac-1500Vdc
Working temperature: from -40°C to +105°C

Conductor

Tinned electrolytic copper braid Cu-ETP
99.90%
Standard wire: 0.20 mm
Terminal in tinned copper tube

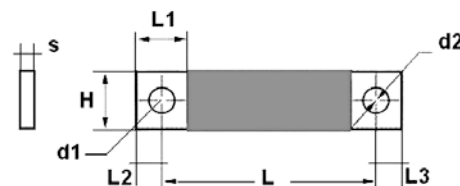


Table of ampacities (A) based on the switch ampacity or on the ΔT temperature increase as per standard IEC 439-1
Reference room temperature 40°C

Code	Reference		Cross-section	Use with switch	Dimensions in mm								Rated intensity based on the ΔT temperature increase °C		
					L	L1	L2	L3	H	d2	d1	s	45°C	35°C	25°C
GTI1000	GTI 25-230	10	25 mm ²		230	20	7.5	7.5	20	10.5	8.5	3	185 A	175 A	145 A
GTI1005	GTI 25-330	10	25 mm ²		330	20	7.5	7.5	20	10.5	8.5				
GTI1010	GTI 25-430	10	25 mm ²		430	20	7.5	7.5	20	10.5	8.5				
GTI1015	GTI 25-530	10	25 mm ²		530	20	7.5	7.5	20	10.5	8.5				
GTI1020	GTI 25-630	10	25 mm ²		630	20	7.5	7.5	20	10.5	8.5				
GTI1025	GTI 35-230	10	35 mm ²		230	20	9	9	20	10.5	8.5	3.5	225 A	205 A	170 A
GTI1030	GTI 35-330	10	35 mm ²		330	20	9	9	20	10.5	8.5				
GTI1035	GTI 35-430	10	35 mm ²		430	20	9	9	20	10.5	8.5				
GTI1040	GTI 35-530	10	35 mm ²		530	20	9	9	20	10.5	8.5				
GTI1045	GTI 35-630	10	35 mm ²		630	20	9	9	20	10.5	8.5				
GTI1050	GTI 50-230	10	50 mm ²		230	20	9	9	20	10.5	8.5	5	280 A	250 A	220 A
GTI1055	GTI 50-330	10	50 mm ²		330	20	9	9	20	10.5	8.5				
GTI1060	GTI 50-430	10	50 mm ²		430	20	9	9	20	10.5	8.5				
GTI1065	GTI 50-530	10	50 mm ²		530	20	9	9	20	10.5	8.5				
GTI1070	GTI 50-630	10	50 mm ²		630	20	9	9	20	10.5	8.5				
GTI1075	GTI 120-330	2	120 mm ²		330	30	11	15	30	10.5	10.5	9	440 A	400 A	335 A
GTI1080	GTI 120-430	2	120 mm ²		430	30	11	15	30	10.5	10.5				
GTI1085	GTI 120-530	2	120 mm ²		530	30	11	15	30	10.5	10.5				
GTI1090	GTI 120-630	2	120 mm ²		630	30	11	15	30	10.5	10.5				
GTI1095	GTI 120-730	2	120 mm ²		730	30	11	15	30	10.5	10.5				
GTI1100	GTI 240-330	2	240 mm ²		330	35	16.5	15	32	10.5	12.5	14	730 A	680 A	565 A
GTI1105	GTI 240-430	2	240 mm ²		430	35	16.5	15	32	10.5	12.5				
GTI1110	GTI 240-530	2	240 mm ²		530	35	16.5	15	32	10.5	12.5				
GTI1115	GTI 240-630	2	240 mm ²		630	35	16.5	15	32	10.5	12.5				
GTI1120	GTI 240-730	2	240 mm ²		730	35	16.5	15	32	10.5	12.5				
GTI1125	GTI 240-830	2	240 mm ²		830	35	16.5	15	32	10.5	12.5				
GTI1130	GTI 240-930	2	240 mm ²		930	35	16.5	15	32	10.5	12.5				

To use GTI in parallel, use the hereunder derating coefficients

Cross-section		
25 mm ²	1.70	2.00
35 mm ²	1.70	2.00
50 mm ²	1.70	1.95
120 mm ²	1.65	1.85
240 mm ²	1.55	1.75

Comparison between the use of cable ** and Ω Link
(** indicative data)

In Amp.	**cable type N07-VK	Ω Link
	Cross-section mm ²	
125 A	35	25
160 A	50 ÷ 70	25 ÷ 35
250 A	95 ÷ 120	50
400 A	185	120
630 A	2 x 150	240

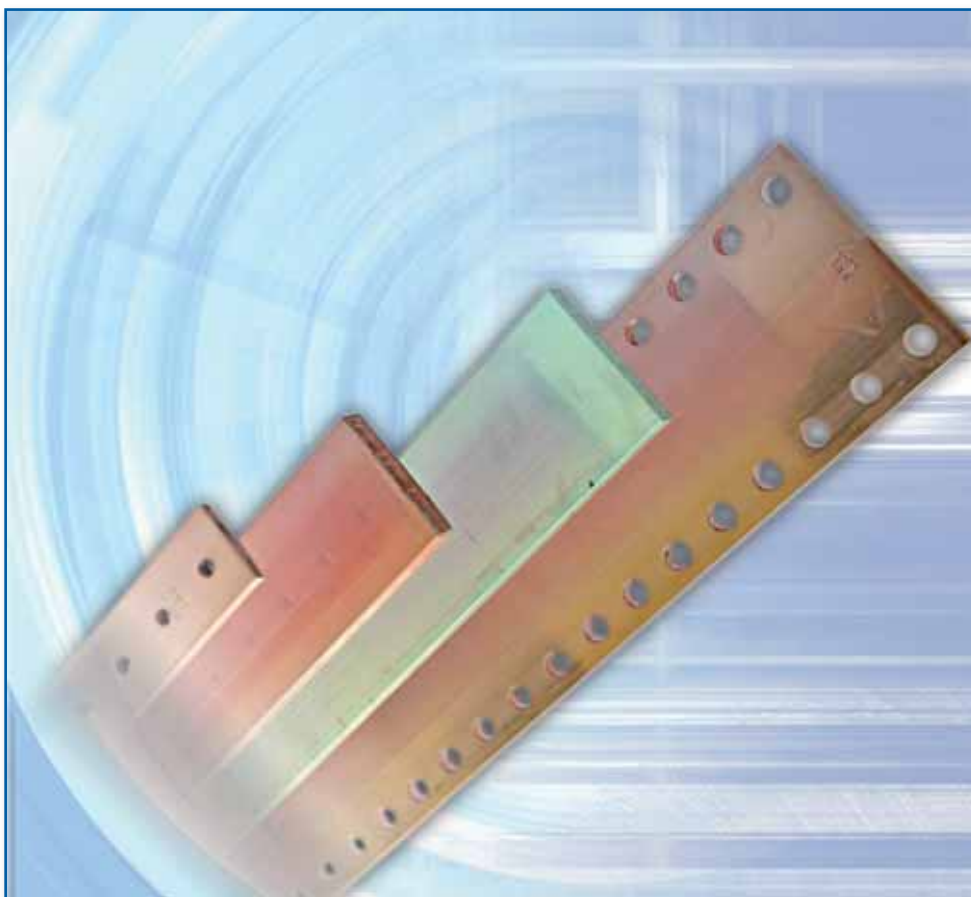
SOLUTIONS FOR THE ANCHORING OF Ω LINK



Ω FLAT
cf. page 26-27



DZP3000
cf. page 8



Copper and Aluminum busbars

Two metals are currently used as conductors in electric panel boards: copper and aluminum

In particular, when in need to define a power distribution inside an electric panel board, one mainly chooses to use drawn bars, using both the above-mentioned metals.

In configuring a bar distribution system, one must consider some parameters, both electrical and mechanical, such as, for example:

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 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 in sq. mm and working temperature, a 100x5 mm bar carries 1.431 Ampere, whereas the same cross-section, with a 50 x 10 mm bar carries 1.129 Amp (cf. ampacity values on page 16, table for solid copper bars, referred to a ΔT 50°C).

ADVANTAGES

Prepunched and threaded copper bars

ready to use
no need of punching tools
wiring time savings

Solid aluminum bars

For the same cross-section with copper bar, a significant weight saving, up to 70% less, with an ampacity reduction of about 30%.
Significant economic advantage 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 / sq.mm
resistivity: 0,0172 Ω / mm² x meter
density: 8.9 kg/cu.dm

Aluminum bars

Aluminum type EN-AW 1350 A
Rounded corners
tensile strength: 80 N/sq.mm
resistivity: 0.0286 Ω / mm² x meter
density: 2.7 kg/cu.dm

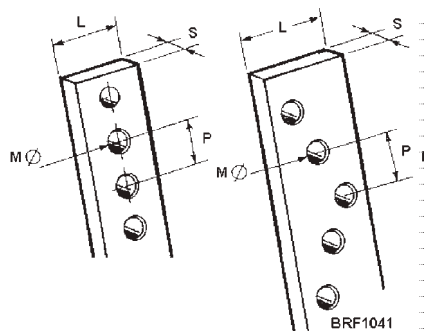
Copper and Aluminum busbars



THREADED COPPER BARS

Thickness 2 - 3 - 4 - 5 - 10 mm

Length 1000 and 2000 mm

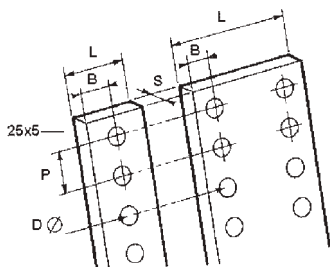


Code	Reference		Weight Kg	L	S	P	M Ø
BRF0990	BRF 12X2X1000	10	0.22	12	2	18	M5
BRF0995	BRF 12X3X1000	10	0.32	12	3	18	M5
BRF1000	BRF 12X4X1000	10	0.42	12	4	18	M5
BRF1005	BRF 12X5X1000	10	0.49	12	5	18	M5
BRF1010	BRF 15X5X1000	4	0.64	15	5	25	M6
BRF1015	BRF 20X5X1000	4	0.84	20	5	25	M6
BRF1016	BRF 25X4X1000	4	0.80	25	4	25	M6
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
BRF1041	BRF 32x5x2000 W	4	2.65	32	5	18	M6
BRF1045	BRF 30X10X1000	4	2.49	30	10	25	M8

PREPUNCHED COPPER BARS

Thickness 5 - 10 mm

Length 1750 mm

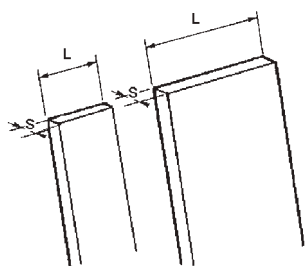


Code	Reference		Weight Kg	L	S	P	D Ø	B
BRP1000	BRP 25X5	2	1.39	25	5	25	10.5	12.5
BRP1005	BRP 50X5	2	3.39	50	5	25	10.5	12.5
BRP1010	BRP 63X5	2	4.39	63	5	25	10.5	12.5
BRP1015	BRP 80X5	2	5.69	80	5	25	10.5	12.5
BRP1020	BRP 100X5	2	7.24	100	5	25	10.5	12.5
BRP1025	BRP 125X5	2	9.19	125	5	25	10.5	12.5
BRP1030	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

Length about 4200 mm

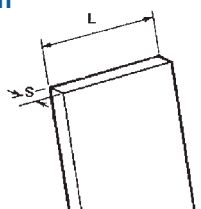


Code	Reference		Weight Kg	L	S
PRP0990	PRP 12X4	1	0.43	12	4
PRP1000	PRP 20x5	1	0.89	20	5
PRP1005	PRP 25x5	1	1.11	25	5
PRP1010	PRP 30x5	1	1.33	30	5
PRP1015	PRP 40x5	1	1.78	40	5
PRP1020	PRP 50x5	1	2.23	50	5
PRP1025	PRP 60x5	1	2.67	60	5
PRP1030	PRP 80x5	1	3.56	80	5
PRP1035	PRP 100x5	1	4.45	100	5
PRP1040	PRP 125x5	1	5.56	125	5
PRP1045	PRP 30x10	1	2.67	30	10
PRP1050	PRP 40x10	1	3.56	40	10
PRP1055	PRP 50x10	1	4.45	50	10
PRP1060	PRP 60x10	1	5.34	60	10
PRP1065	PRP 80x10	1	7.12	80	10
PRP1070	PRP 100x10	1	8.90	100	10
PRP1075	PRP 120x10	1	10.70	120	10
PRP1080	PRP 160x10	1	14.25	160	10
PRP1085	PRP 200x10	1	17.80	200	10

SOLID ALUMINUM BARS

Thickness 10 mm

Length 4000 mm



Code	Reference		Weight Kg/mt	L	S
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

Copper and Aluminum busbars - Ampacities table

Ampacity table Copper bar based on the ΔT temperature increase as per standard DIN 43671
Reference room temperature 35°C

THREADED COPPER BARS



Dimensions	Cross-section mm ²	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
30 x 5	150	379	502
32 x 5	160	400	530
30 x 10	300	573	756

PREPUNCHED COPPER BARS



Dimensions	Cross-section mm ²	Number of bars in parallel							
		ΔT 30°C				ΔT 50°C			
25X5	125	327	586	795	890	433	776	1053	1179
50X5	250	583	940	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

Example of bar choice
for $I_n = 800$ A

for $T_{max} = 85^\circ C$

with copper prepunched bar

63 x 5 $I_n = 951$ Amp

with solid copper bar

63 x 5 $I_n = 951$ Amp

40 x 10 $I_n = 944$ Amp

with solid aluminum bar

50 x 10 $I_n = 874$ Amp

cf. tables with

$\Delta T = 50^\circ C$

where:

T_{max} = max. considered working temperature

T_a = reference room temperature

ΔT = temperature increase in $^\circ C$

$T_{max} = 50^\circ + 35^\circ = 85^\circ C$

Dimensions	Cross-section mm ²	Kg/mt	Number of bars in parallel							
			ΔT 30°C				ΔT 50°C			
12 x 4	48	0.43	160	292	403	451	212	387	534	598
12 x 5	60	0.53	183	334	460	514	241	440	607	679
15 x 5	75	0.67	218	405	567	635	289	537	751	841
20 x 5	100	0.89	274	500	690	772	363	663	914	1023
25 x 5	125	1.11	327	586	795	890	433	776	1053	1179
30 x 5	150	1.33	379	672	896	1003	502	890	1187	1329
32 x 5	160	1.42	400	494	931	1043	530	920	1234	1382
40 x 5	200	1.78	482	836	1090	1220	639	1108	1444	1617
50 x 5	250	2.23	583	994	1260	1411	772	1317	1670	1870
60 x 5	300	2.67	688	1150	1440	1613	912	1524	1908	2137
63 x 5	315	2.80	718	1197	1494	1673	951	1586	1980	2217
80 x 5	400	3.56	885	1450	1750	1960	1173	1921	2319	2597
100 x 5	500	4.45	1080	1730	2050	2296	1431	2292	2716	3042
125 x 5	625	5.56	1300	2022	2381	2666	1723	2679	3155	3532
20 x 10	200	1.78	427	734	959	1151	564	970	1269	1522
30 x 10	300	2.67	573	986	1289	1547	756	1300	1701	2041
40 x 10	400	3.56	715	1230	1609	1931	944	1624	2124	2549
50 x 10	500	4.45	852	1510	2040	2448	1129	2001	2703	3243
60 x 10	600	5.34	985	1720	2300	2760	1305	2279	3048	3658
80 x 10	800	7.12	1240	2110	2790	3124	1643	2796	3697	4140
100 x 10	1000	8.90	1490	2480	3260	3651	1974	3286	4320	4838
120 x 10	1200	10.70	1740	2860	3740	4188	2306	3790	4956	5550
160 x 10	1600	14.25	2220	3590	4680	2942	4757	6201		
200 x 10	2000	17.80	2690	4310	5610	3564	5711	7433		

Ampacity table Aluminum bar based on the ΔT temperature increase as per standard DIN 43670
Reference room temperature 35°C

SOLID ALUMINUM BARS



Dimensions	Cross-section mm ²	Kg/mt	Number of bars in parallel					
			ΔT 30°C			ΔT 50°C		
20 x 10	200	0.54	331	643	942	434	842	1234
30 x 10	300	0.81	445	832	1200	583	1090	1572
40 x 10	400	1.08	557	1030	1460	730	1349	1913
50 x 10	500	1.35	667	1210	1710	874	1585	2240
60 x 10	600	1.62	774	1390	1940	1006	1807	2522
80 x 10	800	2.16	983	1720	2380	1278	2236	3094
100 x 10	1000	2.7	1190	2050	2790	1547	2665	3627
120 x 10	1200	3.24	1390	2360	3200	1807	3068	4160

BOC - Direct hook-up distribution block on copper busbars



Brass distribution block for 5- and 10-mm thick copper bars.

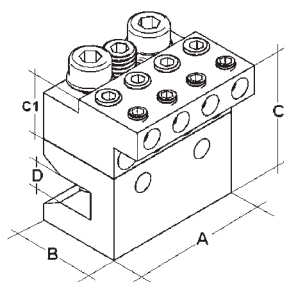
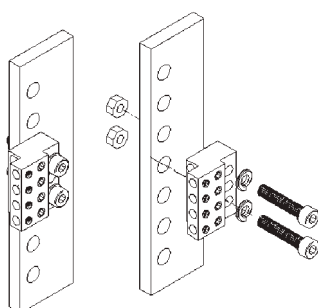
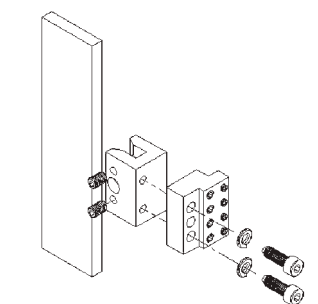
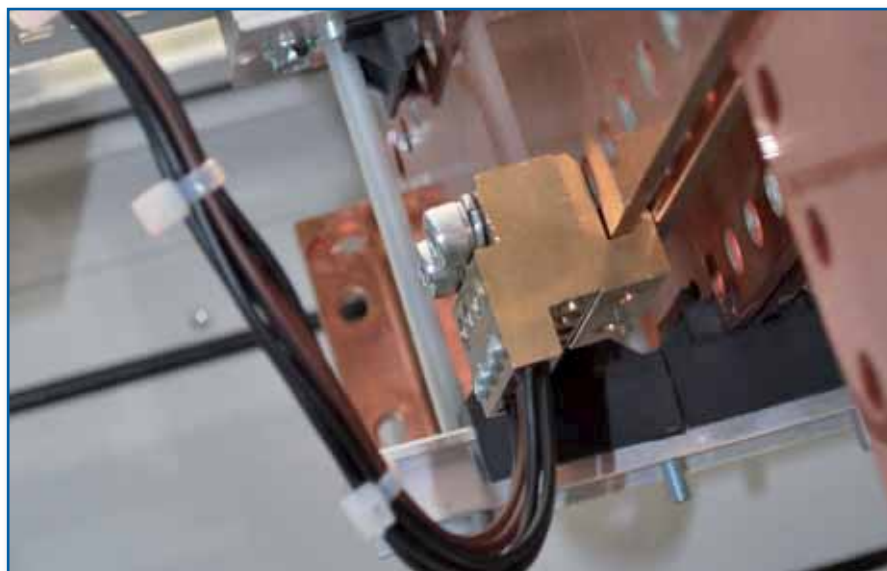
Made of:

- 1) no-punching connection unit on solid copper bar
- 2) 8-output distribution block unit 2.5 to 25 sq.mm cable sect. (direct connection on 25-mm pitch prepunched bars) made of brass with hexagonal tightening screws

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 prepunched bars becomes simple using the connection unit as a guide. Simple and quick derivations with cables up to 16 and/or 25 sq.mm (terminal lug) which can be used up to 400 A.



Use with solid bar:

Use both the units; no punching needed to fit the connection unit directly on the bar side.

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	B	C	D	Nm
BOC1000	BOC RIP 8 *	12	0.22	50	30	12.5-C1	-	
BOC1005	BOC KIT 8 - 5 **	12	0.39	50	30	37	5	10
BOC1010	BOC KIT 8 - 10 **	12	0.51	50	30	52	10	10

* BOC RIP 8

8-output distribution block unit

** BOC KIT 8 - 5

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

** BOC KIT 8 - 10

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

Code	Outputs	Stripped cable sect. mm²	Cable sect. with ferrule mm²	Nr. outputs	Nm
BOC1000	← OUT	2.5 ÷ 25	2.5 ÷ 16	4	3
	← OUT	4 ÷ 35	4 ÷ 25	4	3.5

Connectors for busbars

Terminals for cable

These allow direct connection of a flexible cable, previously stripped, up to the 120 sq.mm cross-section on 5- and 10-mm thick solid copper bars without having to punch them and to use the relevant lug on the cable. The stripped cable is fitted and tightened on the bar by a metal plate, thus preventing the wires to break. Easy and quick to use, they allow interventions on already fitted bar systems without having to dismantle them to perform the relevant punching.

Compliant with standard EN 60998-1:2004 European directive 2006/95/EC Low Voltage equipment Directive RoHS.

TECHNICAL FEATURES

Terminals

Passivated galvanized steel

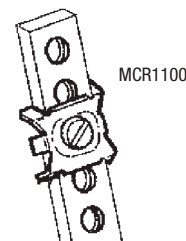
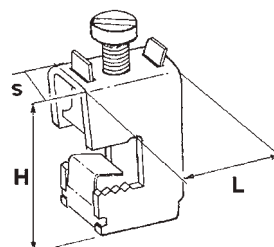
Connections on copper bars 5 and 10 mm thick

Used cable cross-sections: from 1.5 to 120 sq.mm

Screwdriver head for sect. 16 and 35 sq.mm



Code	Reference		H mm	L mm	S mm	Cable cross- section mm ²	 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
Spider connector for threaded bars								
MCR1100	MCR 4xM5		100	for 12x4 and 12x5 mm threaded bars				



Busbar clamps for solid and flexible bars

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

Busbar clamps

Electrolytic galvanized steel

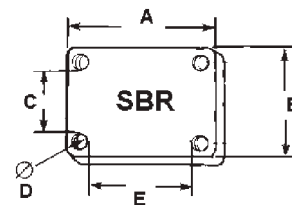
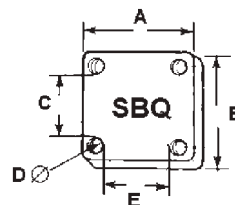
Max. tightening thickness 20 mm

(with supplied screws)

Plate thickness 5 mm



Code	Reference		E mm	C mm	A mm	B mm	Ø / D mm	 Nm
SBR1000	SBR 50x24	4	52	26	77	51	8.5-M8	1 ÷ 2
SBR1005	SBR 50x32	4	52	34	77	59	8.5-M8	1 ÷ 2
SBR1010	SBR 50x40	4	52	42	77	67	8.5-M8	1 ÷ 2
SBR1015	SBR 80x24	4	82	26	107	51	8.5-M8	1 ÷ 2
SBR1020	SBR 80x32	4	82	34	107	59	8.5-M8	1 ÷ 2
SBR1025	SBR 80x50	4	82	52	107	77	8.5-M8	1 ÷ 2
SBQ1000	SBQ 30x30	4	32	32	53	53	6.5-M6	1 ÷ 2
SBQ1005	SBQ 40x40	4	42	42	63	63	6.5-M6	1 ÷ 2
SBQ1010	SBQ 50x50	4	52	52	77	77	8.5-M8	1 ÷ 2
SBQ1015	SBQ 63x63	4	65	65	90	90	8.5-M8	1 ÷ 2
SBQ1020	SBQ 80x80	4	82	82	115	115	10.5-M10	1 ÷ 2
SBQ1025	SBQ 100x100	4	102	102	135	135	10.5-M10	1 ÷ 2



Bimetallic (CU-AL) sheets and washers

SHEET

Code	Reference		A mm	B mm	Thickness mm	
PBM1000	PBM 100x100		10	100	100	1.0



WASHERS

Code	Reference		ØD1 mm	ØD2 mm	Thickness 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

For connections between Copper and Aluminum





Bar supports

APPLICATIONS

TEKNOMEGA bar supports make it possible to support efficiently and conveniently all copper and/or aluminum bar systems to be made inside an electric 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 hereindicated references as per the requirements of the reference standards at acknowledged laboratories.

ADVANTAGES

Complete range to support side and level bars
For copper and aluminum bars
Can be used on the following thicknesses:
5 and 10 mm for side bar support
from 4 to 14 mm for level bar support
For systems up to 3,200 Amp

Maximum versatility of use and application
Quick and simplified Universal fitting

Tested and certified in compliance with standards IEC 439-1

Tested
IEC 439-1



Ω TOP - Universal bar support

TECHNICAL FEATURES

Distance between adjustable phases
Exceptional resistance to short-circuits
High versatility
Sets of blocks with screws
Prepunched support channels in non-magnetic aluminum
Ampacities from 400 to 3,200 Amp
Rod thickness from 5 to 10 mm

Insulating blocks

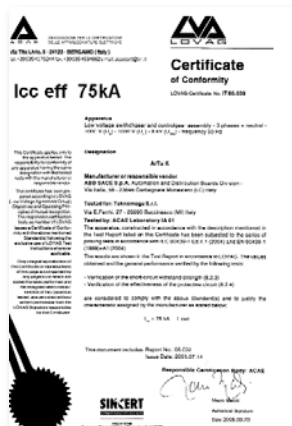
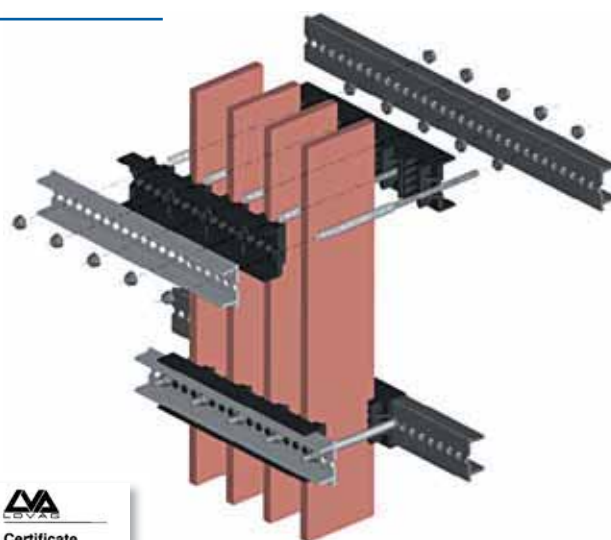
Made in reinforced PA
30% Fiberglass
Self-extinguishing UL 94V0
Color: black

Channel

Non-magnetic in aluminum alloy
EN AW-6060

Certifications:

Ω TOP was tested in laboratory
CERTIFIED ACAE-LOVAG
as per standard IEC 439-1
Mechanical resistance tests on insulating block



Ω TOP - Universal bar support



The Ω TOP bar support is built using two references only:

- 1) aluminum support and fitting channel.
- 2) set of blocks/screws with all that is needed to make a bar support.

There are also some pre-assembled bar support for panel boards 400 and 600 mm depth, as well as accessories such as:

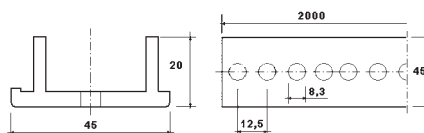
- rilsan tube advised for configurations with minimum spacing between phases
- brackets for horizontal omnibus and vertical busbar (to be used also to compensate the offset between different bar systems.)

SUPPORT CHANNEL

- one single code for all configurations
- made in aluminum, prepunched with 12.5 mm pitch
- length 2 meters

- used, double thanks to the asymmetric shape, it forms a high mechanical resistance structure (for high horizontal loads)

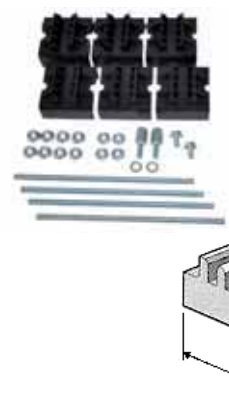
Code	Reference	Weight Kg.
TOP1000	TOP PR 2000	2 1.306



BLOCKS & SCREW SET

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 a T- (3-pole) or T+N-configured (3-pole+neutral) bar support

Example: to make a bar support in 3-pole+Neutral(TN), with 2 bars per phase, 10-mm (2/10) thick = 2/10 TN
 Select: Aluminum channel **TOP1000**
 Set of blocs & screws **TOP1040**



Code	Reference	Type	Total Nr. blocks	Nr. tie-rods	Nr. bars	Thk. mm	bar min-max H mm	L mm
TOP1005	TOP 2/5T	T	6	4	1÷2	5	30-125	50
TOP1010	TOP 2/5TN	T+N	8	5	1÷2	5	30-125	50
TOP1015	TOP 4/5T	T	6	4	1÷4	5	30-125	75
TOP1020	TOP 4/5TN	T+N	8	5	1÷4	5	30-125	75
TOP1025	TOP 1/10T	T	6	4	1	10	30-120	50
TOP1030	TOP 1/10TN	T+N	8	5	1	10	30-120	50
TOP1035	TOP 2/10T	T	6	4	1÷2	10	30-120	75
TOP1040	TOP 2/10TN	T+N	8	5	1÷2	10	30-120	75
TOP1045	TOP 3/10T	T	6	4	1÷3	10	30-120	100
TOP1050	TOP 3/10TN	T+N	8	5	1÷3	10	30-120	100

PRE-ASSEMBLED BAR SUPPORT

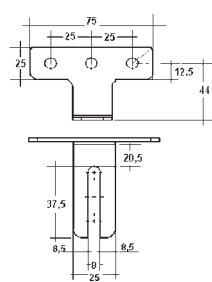
Code	Reference	Type
TOP1060	TOP 2/5TN-400	T+N
TOP1065	TOP 1/10TN-400	T+N
TOP1070	TOP 2/5TN-600	T+N
TOP1075	TOP 2/10TN-600	T+N



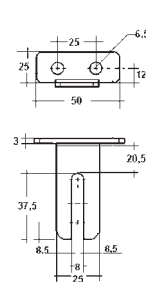
ACCESSORIES

- TOP TI** Rilsan tube for tie-rod insulation
TOP SQ-O Bracket for horizontal busbar
TOP SQ-V Bracket for vertical busbar

Code	Reference	Weight Kg.
TOP1055	TOP TI	100
TOP1100	TOP SQ-O	10
TOP1105	TOP SQ-V	10



TOP1100
TOP SQ-O



TOP1105
TOP SQ-V

Ω TOP - Universal bar support (tables of distances)

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

Icc pk = Short-circuit current peak value of short duration, equal to 200 mseconds, expressed in kAmperes

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

INFORMATION FOR ASSEMBLY

- 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 both supports.
- In some minimum phase spacing configurations, it might be difficult for the internal phases to insert the screws; one should do one phase at a time.
- In minimum phase spacing configurations, one should use the TOP1055 RILSAN tube to insulate the tie-rod.
- In horizontal configurations starting from copper 80x10 bar nr. 2 or 50x10 bar nr. 3 per phase, one should use the DOUBLE aluminum channel (i.e. two coupled channels, one inside the other, to create a kind of square pipe with significant mechanical rigidity (cf. picture on page 21).

Ω TOP 3 / 10 >> 3 BARS PER PHASE

Minimum spacing between phases: 100 mm

Icc kA pk		53				74				110				143				165				187				220			
Icc kA eff. 1s		25				35				50				65				75				85				100			
Spacing between phases mm		100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175	100	125	150	175
BAR CROSS SECTION	30x10	670	700	710	710	490	505	505	505	330	335	340	340	250	260	260	260	220	225	225	225	190	200	200	200	165	170	170	170
	40x10	810	840	860	860	580	610	615	615	385	410	410	410	300	310	315	315	260	270	275	275	230	240	240	240	175	205	205	205
	50x10	930	975	1000	1000	585	700	715	715	450	465	470	480	345	360	370	370	300	315	320	320	245	275	280	280	180	215	240	240
	60x10	1050	1150	1200	1200	780	810	840	850	500	510	520	535	400	420	435	440	325	365	375	380	255	315	330	335	180	225	270	280
	80x10	1300	1200	1200	1200	900	950	975	1000	500	510	525	535	410	470	495	500	335	385	430	455	260	320	360	400	190	230	270	315
	100x10	1300	1400	1400	1400	1200	1200	1200	1200	505	515	525	535	420	480	495	500	350	395	440	480	275	330	375	410	200	240	280	325
	120x10	1300	1400	1400	1400	1200	1200	1200	1200	505	515	525	535	435	485	495	500	360	405	445	480	285	340	380	415	200	240	280	325

Ω TOP 2 / 10 >> 2 BARS PER PHASE

Minimum spacing between phases: 75 mm

		Icc kA pk				53				74				110				143				165				187			
		Icc kA eff.1s				25				35				50				65				75				85			
		Spacing between phases mm				75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150				
		75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150	75	100	125	150				
BAR CROSS SECTION	30x10	530	570	590	590	380	400	425	425	255	275	280	285	190	215	220	220	170	180	190	190	130	155	160	165				
	40x10	620	680	710	720	460	480	500	510	310	330	340	350	220	250	260	270	170	210	225	225	130	170	200	205				
	50x10	740	790	820	840	510	525	540	570	350	380	390	410	235	290	305	315	175	220	265	270	135	175	215	240				
	60x10	860	920	960	1000	510	530	545	630	385	440	460	480	245	310	350	370	180	235	275	300	140	180	220	260				
	80x10	1020	1050	1100	1200	510	530	545	630	395	450	495	495	255	325	375	420	190	240	285	315	150	190	230	270				
	100x10	1230	1300	1350	1400	520	535	555	640	410	470	495	505	275	335	385	425	205	250	305	350	160	200	230	280				
	120x10	1230	1300	1350	1400	520	535	560	650	435	490	495	505	285	345	390	435	215	265	315	360	160	205	235	280				

Ω TOP 1 / 10 >> 1 BAR PER PHASE Minimum spacing between phases: 50 mm

Icc kA pk		53				74				110				143			
Icc kA eff.1s		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	30x10	455	550	560	720	325	400	460	520	220	265	310	350	170	205	240	260
	40x10	530	650	750	835	380	460	530	600	255	310	360	400	195	240	275	310
	50x10	545	720	830	935	425	520	560	670	285	350	400	450	195	265	310	345
	60x10	545	810	940	1050	480	525	560	750	320	390	450	505	195	295	345	390
	80x10	545	915	1055	1210	500	525	560	850	335	440	495	505	195	295	360	410
	100x10	545	1025	1200	1410	500	525	560	955	335	440	495	505	200	275	375	425
	120x10	545	1135	1370	1605	500	525	560	1030	335	440	495	505	200	275	375	425

NB. The distances between supports (in mm) are computed considering the yield stress of copper; the indicated values therefore prevent permanent deformation of the copper bars when stressed by short-circuit conditions.

Ω TOP - Universal bar support (tables of distances)



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

Icc pk = Short-circuit current peak value of short duration, equal to 200 mseconds, expressed in kAmpere

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

Ω TOP 4 / 5 >> 4 BARS PER PHASE

Minimum spacing between phases: 75 mm

Icc kA pk	53				74				110				143				165			
Icc kA eff.1s	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																				
30x5	330	330	330	330	235	235	235	235	155	160	160	160	120	120	120	120	105	105	105	105
40x5	400	410	410	410	285	295	295	295	190	195	195	195	145	150	150	150	125	130	130	130
50x5	465	485	485	485	330	350	350	350	220	235	235	235	170	180	180	180	145	155	155	155
63x5	545	575	585	585	370	390	420	420	260	275	280	280	200	210	215	215	165	185	185	185
80x5	650	685	710	710	375	405	470	510	310	330	340	340	230	250	260	260	170	215	225	225
100x5	770	820	860	890	380	415	600	615	345	350	360	365	245	280	310	315	180	230	260	275
125x5	960	1030	1080	1120	380	445	710	730	345	355	360	365	255	290	320	340	200	235	270	295

Ω TOP 4 / 5 >> 3 BARS PER PHASE

Minimum spacing between phases: 75 mm

Icc kA pk	53				74				110				143				165			
Icc kA eff.1s	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																				
30x5	285	285	285	285	200	200	200	200	135	135	135	135	105	105	105	105	-	-	-	-
40x5	345	355	355	355	245	255	255	255	165	170	170	170	125	130	130	130	110	110	110	110
50x5	405	425	425	425	290	300	300	300	195	200	200	200	150	155	155	155	130	135	135	135
63x5	475	500	510	510	340	360	365	365	230	240	245	245	175	185	190	190	150	160	165	165
80x5	570	600	620	620	375	405	445	450	275	285	295	300	210	220	230	230	175	190	195	200
100x5	675	710	735	755	380	415	525	540	325	340	355	365	245	260	270	280	185	225	235	240
125x5	815	860	910	945	380	445	625	645	345	355	360	365	255	290	320	330	195	235	265	285

Ω TOP 2 / 5 >> 2 BARS PER PHASE

Minimum spacing between phases: 50 mm

Icc kA pk	53				74				110				143			
Icc kA eff.1s	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																
30x5	220	240	245	245	160	170	175	175	105	115	115	115	-	-	-	-
40x5	270	295	310	310	195	210	220	220	130	140	145	150	100	100	100	100
50x5	320	345	365	375	230	250	260	270	150	165	175	180	115	125	135	135
63x5	375	410	430	450	270	295	310	325	180	195	205	215	140	150	160	165
80x5	455	490	515	540	325	350	370	385	215	235	250	260	165	180	190	200
100x5	540	580	610	640	380	420	440	460	260	280	295	305	200	215	225	235
125x5	645	690	730	760	400	450	500	540	310	330	350	365	240	255	270	280

Ω TOP 2 / 5 >> 1 BAR PER PHASE

Minimum spacing between phases: 50 mm

Icc kA pk	53				74				110				143			
Icc kA eff.1s	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																
30x5	225	280	320	360	160	200	230	260	110	135	155	175	-	-	-	-
40x5	265	325	375	415	190	230	265	300	125	155	180	200	-	-	-	-
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	375	455	530	590	265	325	380	425	180	220	255	285	135	170	195	220
100x5	415	510	590	660	300	365	425	475	200	245	285	315	155	190	220	245
125x5	465	570	660	740	335	385	475	530	225	285	315	355	170	210	245	275

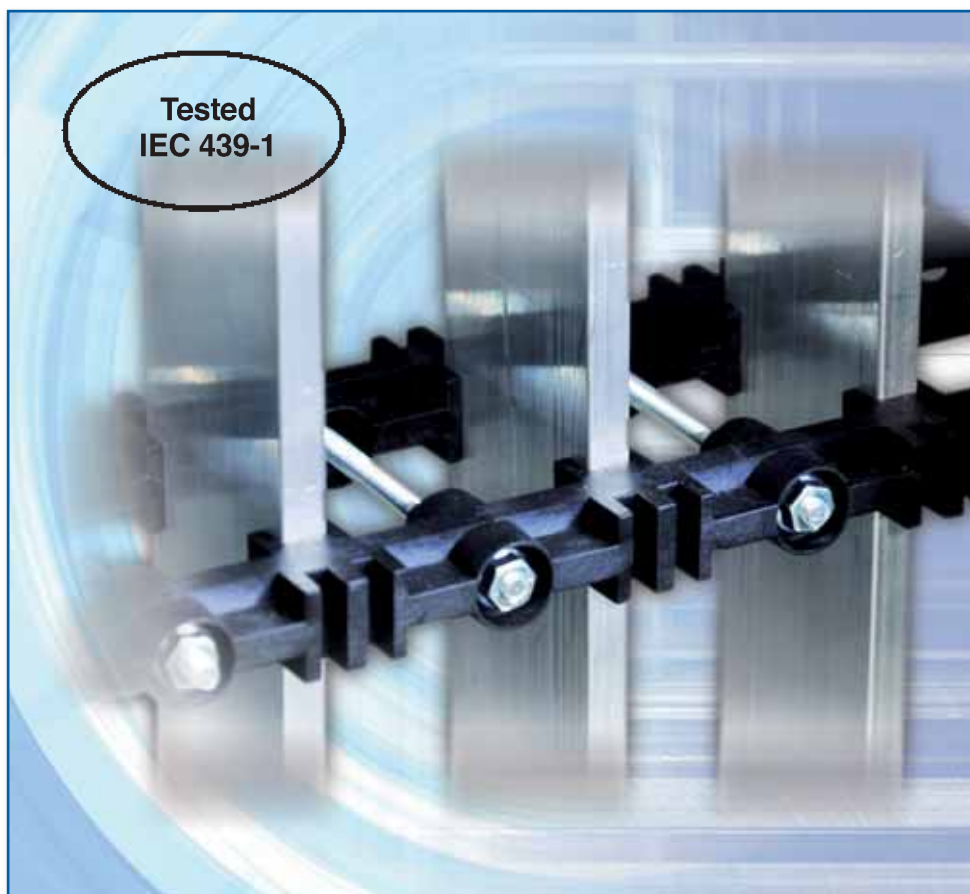
NB. The distances between supports (in mm) are computed considering the yield stress of copper; the indicated values therefore prevent permanent deformation of the copper bars when stressed by short-circuit conditions.

* For short-circuit resistance values other than or intermediate to the indicated ones.

** For configurations other than the indicated ones.

** For spaces between phases intermediate or higher than the indicated ones.

PLEASE, CONTACT OUR TECHNICAL OFFICE



Tested
IEC 439-1



Ω TOP JUNIOR - Compact bar support

TECHNICAL FEATURES

High versatility
Space between phases 70 mm
High resistance to short-circuit
Ampacity from 400 to 1600 Amp
Single reference for use with 5- to 10-mm thick bars
Fitting directly on 400-mm deep panel boards
Adjustable fasteners supplied

Made of:

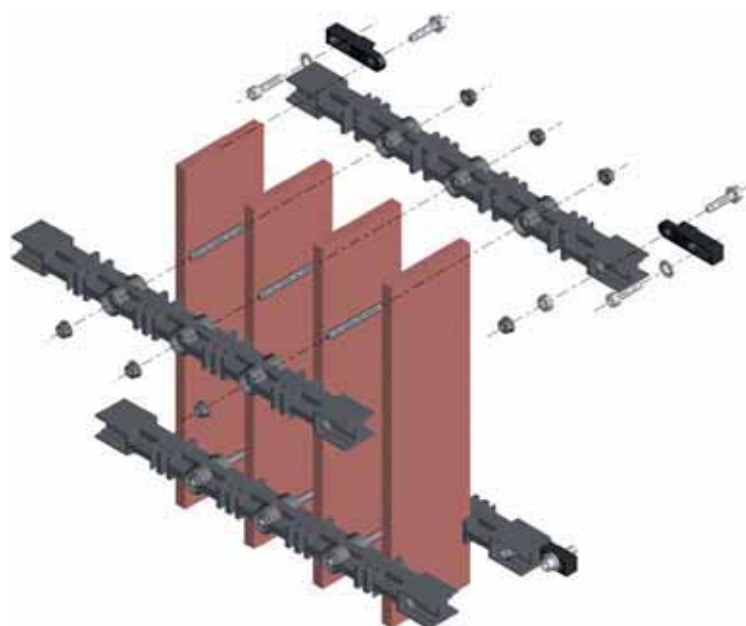
6/6 Polyamide reinforced with 30% fiberglass
Self-extinguishing UL 94V0
Colored black

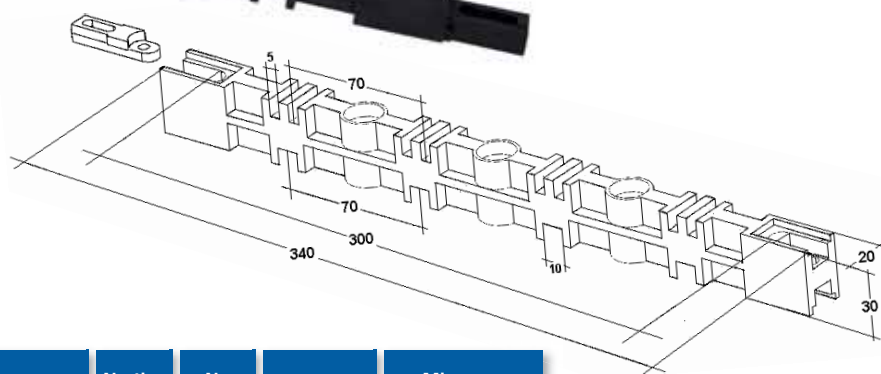
Certifications:

Compliant with standard IEC 439-1

Ω TOP JUNIOR was tested in laboratory

CERTIFIED ACAE-LOVAG as per standard IEC 439-1





Code	Reference		Type	Nr. tie-rods	Nr. bars	Thickness	Min-max H copper bar
TOP2000	TOP-J 5-10	1	T + N	2 / 5 1 / 10	3 1	5 mm 10 mm	30 ÷ 80 mm 30 ÷ 80 mm

Space for fastening screws:

Without fastener	minimum 300 mm	maximum 330 mm
With fastener	minimum 350 mm	maximum 410 mm

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

Icc pk = Short-circuit current peak value of short duration, equal to 200 mseconds, expressed in kAmperes

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

Ω TOP JUNIOR (table of distances)

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

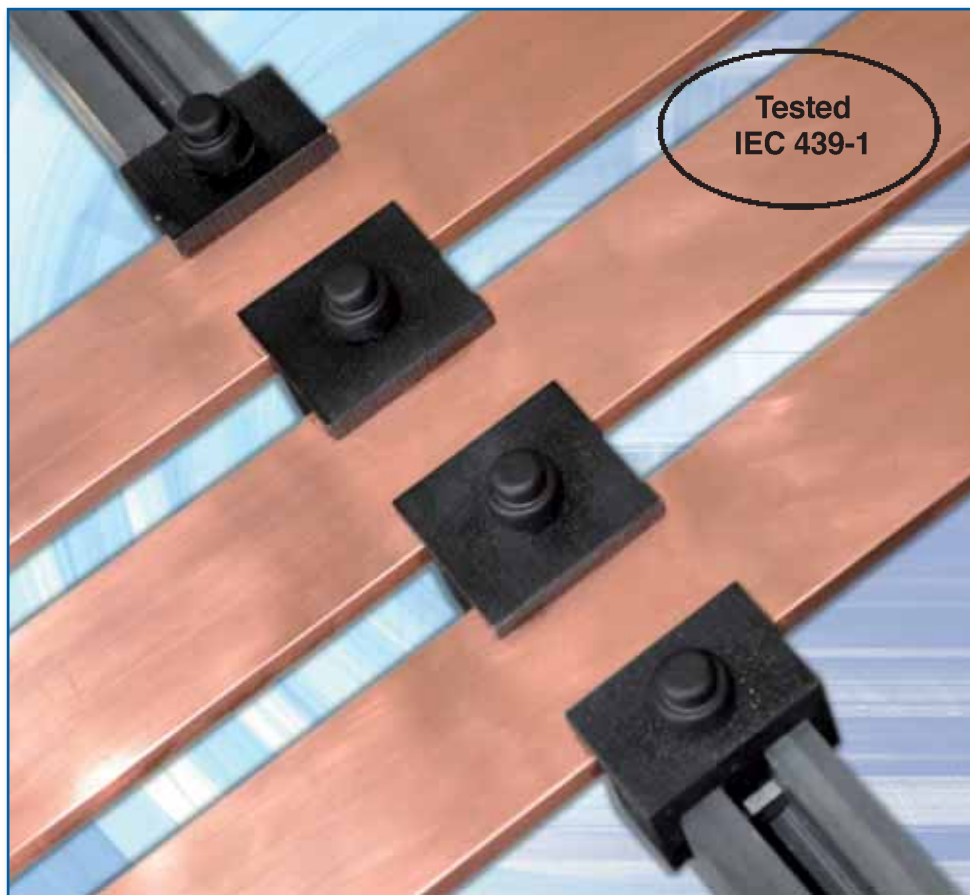
Icc kA pk		53	74	110	132
Icc kA eff. 1s		25	35	50	60
Spacing between phases mm		70			
BAR CROSS SECTION	30x10	530	380	280	190
	40x10	530	440	280	190
	50x10	530	490	285	195
	60x10	530	490	285	195
	80x10	530	490	285	200

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

Icc kA pk		53	74	110	132
Icc kA eff.1s		25	35	50	60
Spacing between phases mm		70			
BAR CROSS SECTION	30x5	235	170	115	-
	40x5	290	205	140	115
	50x5	340	245	165	135
	60x5	390	280	185	150
	80x5	455	345	230	200

Ω TOP JUNIOR 2 / 5 >> 1 BAR PER PHASE

Icc kA pk		53	74	110	132
Icc kA eff.1s		25	35	50	60
Spacing between phases mm		70			
BAR CROSS SECTION	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 FLAT bar support

TECHNICAL FEATURES

Universal

Distance between adjustable phases
Blocks complete with fitting screws
Support channel made of PVC
Bar thickness from 4 to 14 mm
Ampacity from 250 to 1,600 Amp
High resistance to short-circuits

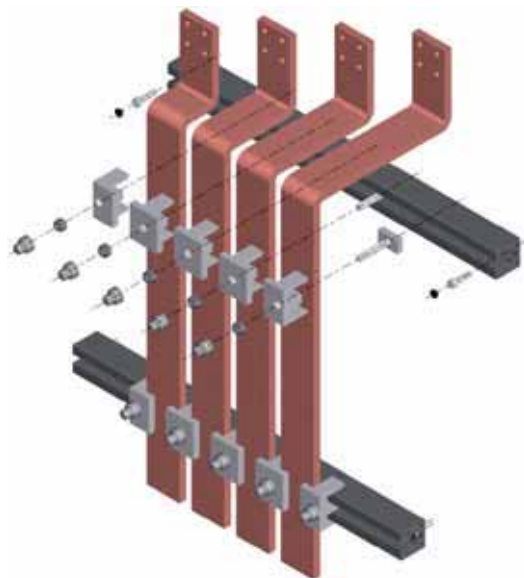
Minimum air distance between two phases 20 mm with "T blocks"
Minimum air distance between two phases 40 mm with "L blocks"

Certifications:

Compliant with standard IEC 439-1

Ω Flat was tested in laboratory

CERTIFIED ACAE-LOVAG as per standard IEC 439-1





The Ω FLAT bar support is a **UNIVERSAL, QUICK** and **COMPETITIVE**, solution for all flat supporting requirements, copper or aluminum bars.

It is mainly made of two elements:

- 1) supporting and fastening channel in extruded PVC
- 2) set of blocks and screws to tighten the bar.

The Ω FLAT bar support can also be used as an anchoring system for flexible insulated bars (cf. page 8).

SUPPORT CHANNEL AND FASTENING SCREWS

- One single code for all configurations
- Made in extruded PVC
- Black color
- Self-extinguishing UL94V0
- 2 meter long
- Working temperature up to 65°C
- M6x25 six lobes screw to fasten the channel to the panel board, to be used after punching the bottom guiding rail of the channel

Code	Reference	Description	
FLT1000	FLT-PR2000	PVC channel 2 meters long	2



INSULATING BLOCKS AND SCREWS

In 6/6 polyamide reinforced with 30% fiberglass
Black color

Self-extinguishing UL 94V0

- insulating "L" block (for adjustable space between phases)
- insulating "T" block (for minimum space between bars = 20 mm)

Code	Reference	Description		Bar thickness in mm	Bar width in mm
FLT1005	FLT-BL-L	Kit of 6 "L" blocks in 6/6 PA complete with screws	1	min 4 max 14	min 20 max 100
FLT1010	FLT-BL-T	Kit of 6 "T" blocks in 6/6 PA complete with screws	1		

Complete with fastening screws and insulating nut cap

- Hammer head screw to insert in channel to fasten block
- hexagonal nut to tighten block
- insulating nut cap
- M6x25 hexagonal screw to fasten channel
- plastic cap to insulate the head screw



Example:

to make a 3-pole + neutral bar support at **MINIMUM distance between phases**

Use:

- n° 1 PVC channel 2 m long
- n° 3 "T" blocks with screws
- n° 2 "L" blocks with screws

to be cut at length requested
for intermediate fastening between bars of different phases
for terminal fastening of the two farthest bars

Select:

- PVC channels 2 m long
- n° 1 kit of "L" blocks complete with screws
- n° 1 kit of "T" blocks complete with screws

FLT1000
FLT1005
FLT1010

Ω FLAT bar support (table of distances)

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

Icc pk = Short-circuit current peak value of short duration, equal to 200 mseconds, expressed in kAmperes

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

		Icc kA pk	53				74				84				110			
		Icc kA eff.1s	25				35				40				50			
BAR CROSS SECTION	30x5	Space between phases in mm	50	70	80	90	50	70	80	90	50	70	80	90	50	70	80	90
		Distance between bar supports in mm	240	330	390	440	120	170	195	220	-	130	150	170	-	-	-	100
	40x5	Space between phases in mm	60	80	90	100	60	80	90	100	60	80	90	100	60	80	90	100
		Distance between bar supports in mm	290	380	425	480	150	190	200	225	115	150	160	180	-	-	100	110
	50x5	Space between phases in mm	70	90	100	110	70	90	100	110	70	90	100	110	70	90	100	110
		Distance between bar supports in mm	335	430	475	525	170	220	240	265	130	170	190	210	100	105	110	120
	60x5	Space between phases in mm	80	100	110	120	80	100	110	120	80	100	110	120	80	100	110	120
		Distance between bar supports in mm	380	480	530	575	190	245	270	290	150	190	210	230	105	115	120	130
	80x5	Space between phases in mm	100	120	130	140	100	120	130	140	100	120	130	140	100	120	130	140
		Distance between bar supports in mm	480	570	625	675	240	295	320	345	190	230	250	265	110	130	145	155
	100x5	Space between phases in mm	120	140	150	160	120	140	150	160	120	140	150	160	120	140	150	160
		Distance between bar supports in mm	590	680	730	780	290	340	370	390	230	265	285	305	130	150	160	185

		Icc kA pk	53				74				84				110			
		Icc kA eff.1s	25				35				40				50			
BAR CROSS SECTION	30x10	Space between phases in mm	50	70	80	90	50	70	80	90	50	70	80	90	50	70	80	90
		Distance between bar supports in mm	240	330	390	440	120	170	195	220	-	130	150	170	-	-	-	100
	40x10	Space between phases in mm	60	80	90	100	60	80	90	100	60	80	90	100	60	80	90	100
		Distance between bar supports in mm	290	380	425	480	150	190	200	225	115	150	160	180	-	-	100	110
	50x10	Space between phases in mm	70	90	100	110	70	90	100	110	70	90	100	110	70	90	100	110
		Distance between bar supports in mm	335	430	475	525	170	220	240	265	130	170	190	210	100	105	110	120
	60x10	Space between phases in mm	80	100	110	120	80	100	110	120	80	100	110	120	80	100	110	120
		Distance between bar supports in mm	380	480	530	575	190	245	270	290	150	190	210	225	100	110	115	130
	80x10	Space between phases in mm	100	120	130	140	100	120	130	140	100	120	130	140	100	120	130	140
		Distance between bar supports in mm	480	570	625	675	240	290	320	345	190	230	250	265	110	130	145	155
	100x10	Space between phases in mm	120	140	150	160	120	140	150	160	120	140	150	160	120	140	150	160
		Distance between bar supports in mm	590	680	730	780	290	340	370	390	230	265	285	305	130	150	160	185

NOTE:

The first space between phases value refers to the use of the "T" block (air distance between two adjacent bars, equal to 20 mm).

The second space between phases value refers to the use back to back "L" blocks (air distance between two adjacent bars, equal to 40 mm).

Further values refer to the use of the "L" blocks only (2 per bar) spaced between each other.

For other distance between phase values, contact our technical office.

- values lower than 100 mm.



3-4-pole repatriation support

TECHNICAL FEATURES

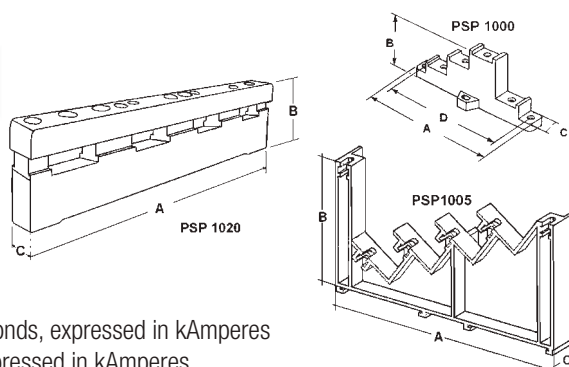
6/6 polyamide reinforced with 30% fiberglass
Self-extinguishing UL94V0
Working temperature: -40°C +130°C
Continuous working temperature: +110°C
Softening temperature: +215°C
Glow wire test: 960°C
Black color

M6 screws for bar fastening ☐ included for PSP1000 and PSP1005
Protection screen fastening kit ☐

Direct fastening kit on DIN rail ☐ included for PSP1005

Protection caps for PSP1010 and 1020 ☐ PSP1015 and 1025 codes

Code	Reference		A mm	B mm	C mm	D mm	Space between phases
PSP1000	PSP250	8	150	54	16	130	42 mm
PSP1005	PSP400/630	2	216	117	34	-	65 mm
PSP1010	PSP 630T	1	180	55	16	-	60 mm
PSP1020	PSP 630TN	1	240	55	16	-	60 mm
PSP1015	PS PRO 630T	1	185	32	23	-	-
PSP1025	PS PRO 630TN	1	245	32	23	-	-



Distance between support depending on lcc (short-circuit current)

lcc pk = Short-circuit current peak value of short duration, equal to 200 mseconds, expressed in kAmperes

lcc rms = Efficient value of short-circuit current, duration equal to 1 second, expressed in kAmperes

Code	Bar cross-section	lcc pk (kA)	11	14	24	32	48
		lcc rms (kA)	7	8	12	15	23
PSP1000	15x5	150A	561	455	258	150	-
	20x5	250A	647	526	266	150	-
PSP1005	15x5	150A	682	554	314	250	100
	20x5	250A	788	640	363	261	100
	32x5	400A	980	809	410	261	100
	20x10	500A	980	980	410	261	100
	30x10	630A	980	980	410	261	100

Code	Bar cross-section	lcc pk (kA)	30.5	34.0	42.6	48.9	54.6	59.6	75.6
		lcc rms (kA)	15.5	17.1	21.6	24.6	26.3	29.1	36.8
PSP1015 PSP1020	20x5	250A	600		400		200		
	20x10	500A		600		400		200	
	30x5	400A			600			400	200
	30x10	630A			600			400	200

Repartition supports

Repartition supports

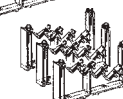
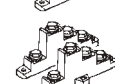
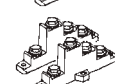
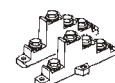


Repartition support in KIT include all that is needed to make the distribution unit.

The KIT is made of:

- copper bars (cross-section, length and nr. of holes as per hereunder table)
- distribution unit supports (cf. range page 29)
- support spacers for the protection screen
- protection screen cut, bent and punched in the suitable dimensions

Code	Reference		in Amp	Icc pk in kA	Bar cross-section	Pitch Length Height			Number of		Type of support	Nr. supports
						Pitch	Length	Height	Inputs	outputs		
PSP1030	PSP160K-23	1	160	15	15 x 5	20	230	78	1 x Ø 8.5	6 x M6	PSP1000	2
PSP1035	PSP250K-23	1	250	15	20 x 5	20	230	78	1 x Ø 8.5	6 x M6	PSP1000	2
PSP1036	PSP250K-43	1	250	10	20 x 5	20	430	78	1 x Ø 8.5	10 x 6	PSP1000	2
PSP1040	PSP400K-30	1	400	13	32 x 5	25	305	162	1 x Ø 10.5	8 x M6	PSP1005	2
PSP1050	PSP400K-48	1	400	15	32 x 5	25	480	162	1 x Ø 10.5	14 x M6	PSP1005	3
PSP1055	PSP630K-25	1	630	36	30 x 10	25	266	60	1 x Ø 10.5	8 x M8	PSP1020	2
PSP1060	PSP630K-40	1	630	29	30 x 10	25	441	60	1 x Ø 10.5	15 x M8	PSP1020	2



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

IMPORTANT:

TEKNOMEGA will make upon request distribution KITS as per your specific application requirements.

Protection screens and spacers

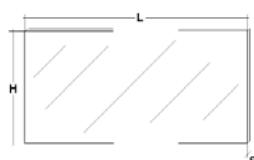
COLD BENDABLE PROTECTION SCREEN

Made in PETG (terephthalate polyethylen), 3-mm thick

PLASTIC SPACER SUPPORT FOR PROTECTION SCREEN

Made of 6/6 polyamide with fiberglass, black color

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



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

The KIT is made of:

- 4 male/male M6 threaded spacers
- 4 female M6 threaded caps





Ω BLOCK - Distribution Blocks

The TEKNOMEGA Ω BLOCK range is quite complete and includes terminal board distribution units, both single block and compact. This allows making distribution units from 40 Amp up to 500 Amp.

Applications range from the use in switchboards, automation and command panel boards, distribution panel boards.

Terminal board distribution blocks: from 100 Amp to 160 Amp, 2- or 4-pole, to use in applications in which the efficient short-circuit current value (**I_{cc} eff.**), is kept within 10 kA.

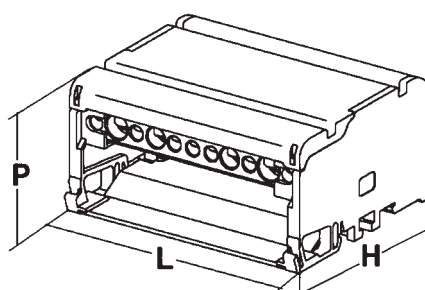
Equipped with a transparent protection screen between phase and phase, at the bottom of the distribution unit, and frontal, removable to tighten connections.

Compact distribution blocks: from 80 Amp to 500 Amp, 1- and 3-pole, to use in applications in which the efficient short-circuit current value (**I_{cc} eff.**) is higher than 10 kA. Registered as per standard UL. Wiring made easy by guided accesses. High electric insulation value. No protection to remove to tighten the connections.

Quick distribution unit blocks: 40 Amp, 1- and 2-pole. Quick indirect spring hook-up outputs, efficient and safe.

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

2- AND 4-POLE 100 AMP 125 AMP 160 AMP



TECHNICAL FEATURES

Brass conductors
Galvanized steel screws included
Insulation between phases
Front removable protection screen
(except RPQ1025)

Self-extinguishing insulating structure UL94V0
Quick hook-up on DIN rails

Compliant with standards IEC 947-1 and IEC 947-7-1

Low voltage auxiliary equipment
terminal boards for copper conductors

IEC 947-1 Low voltage devices
Part 1: general rules
IEC 947-7-1 Low voltage devices
Part 7: Auxiliary equipment
Section One - Terminal boards for copper conductors

2-POLE 100/125A

Code	Reference		L mm	H mm	P mm	Fix. hole space mm
RPB1000	RPB 125-06	1	64	45	50	45
RPB1005	RPB 125-14	1	132	45	50	110

4-POLE 100/125/160A

Code	Reference		L mm	H mm	P mm	Fix. hole space mm
RPQ1000	RPQ 125-06	1	64	90	50	45
RPQ1005	RPQ 125-10	1	100	90	50	80
RPQ1010	RPQ 125-14	1	132	90	50	110
RPQ1015	RPQ 160-11	1	170	90	70	150
RPQ1020	RPQ 160-11 M	1	160	90	50	144
RPQ1025	RPQ C-100	1	98	75	45	55

RPQ 1015: Separate inputs: easy wiring
RPQ 1020: Separate inputs: modular depth

RPB 1005:
RPQ 1005:
RPQ 1010:

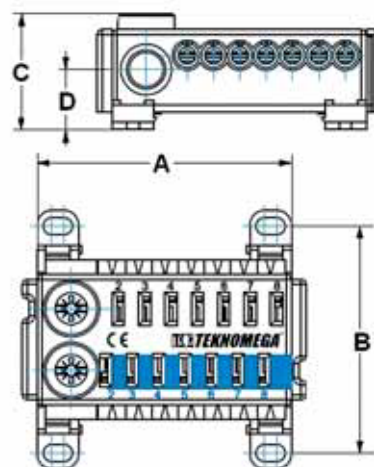


Right or left input

RPQ 1025: Compact 4-pole distribution unit
7 outputs per phase
10 outputs for neutral
easy wiring
IP20



1- AND 2-POLE 80 AMP SPRING TIGHTENING



TECHNICAL FEATURES

Body made in PA 66-V0
Self-extinguishing as per UL94V0
Brass bars
Cable tightening:
- for inputs, output screws, spring steel system with copper contact

Rated intensity: 80 Amp

Protection grade IP20
Direct fitting on DIN rails or plate
using 4 M4 screws

Compliant with standard EN60998 - EN60999

and their subsequent modifications

ADVANTAGES

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

Code	Reference		Pole	A mm	B mm	C mm	D mm
RPU5000	RPU 80-S-14-B	1	1	53	47	24	12
RPU5005	RPU 80-S-14-G	1	1	53	47	24	12
RPU5010	RPB 80-S-7-BG	1	2	53	47	24	12

RPU 5000 - 5005

1-pole 14-output distribution unit
with double input
BLUE or GREY color

RPU5010

2-pole 7-output distribution unit
BLUE and GREY color

Type	IN/OUT	Nr.	Cable cross section mm ²		Torque Nm	Ui
			only cable	with ferrule		
RPU 5000 / 5005	IN →	1	1.5 ÷ 25	1.5 ÷ 25	2.5	600 V
	← OUT	14	0.5 ÷ 4	0.5 ÷ 3.5	-	
RPU 5010	IN →	2	1.5 ÷ 25	1.5 ÷ 25	2.5	600 V
	← OUT	7	0.5 ÷ 4	0.5 ÷ 3.5	-	

Ω BLOCK - Compact Distribution Blocks

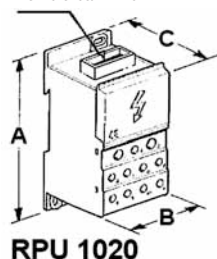
1- AND 3-POLE FROM 80 AMP TO 500 AMP



file n° E302208



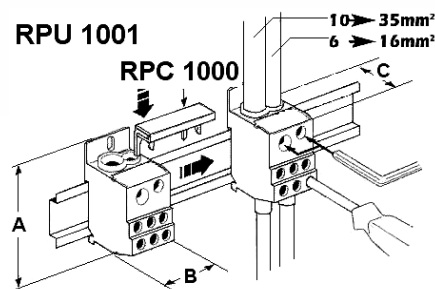
Input with:
copper bar 25x5
flexible bar 24x6x1



RPU 1020

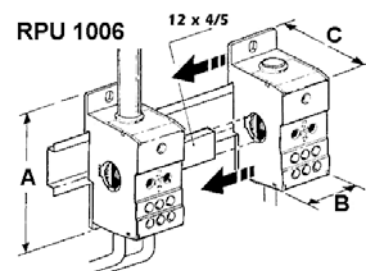


RPU 0995

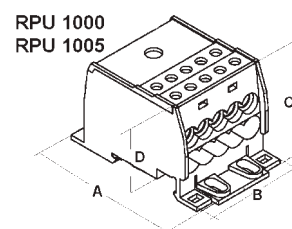


RPU 1001

RPC 1000



RPU 1006



RPU 1000
RPU 1005

TECHNICAL FEATURES

Body made in PA 66-V0
Self-extinguishing as per UL 94V0
Cable tightening using 6 lobes screws
Protection grade IP20
Direct fitting on DIN rail or plate using M4 screws

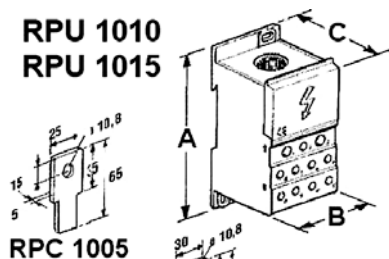
Compliant with standards IEC 947-1 and IEC 947-7-1

Low Voltage auxiliary equipment
terminal boards for copper conductors

1-POLE FROM 80 AMP TO 500 AMP

Code	Reference		In Amp	Pole	Weight Kg	A	B	C	D
RPU0995	RPU 80-6	1	80 A	1	0.07	66	27	45	42.5
RPU1000	RPU 125-10	1	125 A	1	0.23	71	45	43	38.5
RPU1001	RPU 125-6	1	125 A	1	0.14	75	27	45	42.5
RPU1005	RPU 160-10	1	160 A	1	0.23	71	45	43	38.5
RPU1006	RPU 160-6	1	160 A	1	0.24	90	35	50	46.5
RPU1010	RPU 250-11	1	250 A	1	0.43	96	45	50	46.5
RPU1015	RPU 400-11	1	400 A	1	0.44	96	45	50	46.5
RPU1020	RPU 500-11	1	500 A	1	0.45	96	45	50	45.0

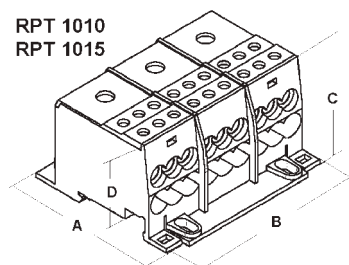
RPU 1010
RPU 1015



RPC 1005

RPC 1010

RPT 1010
RPT 1015



ACCESSORY CONNECTORS

Code	Reference		In Amp	Use
RPC1000	RPC 125 A-2	10	125 A	Comb connector for parallel son RPU1001
RPC1005	RPC 250 A	10	250 A	Connector for rigid or flexible copper bar input on RPU1010
RPC1010	RPC 400 A	10	400 A	Connector for rigid or flexible copper bar on RPU1015

3-POLE FROM 125 AMP TO 160 AMP

Code	Reference		In Amp	Pole	A	B	C	D
RPT1010	RPT 125	1	125 A	3	71	80	43	38.5
RPT1015	RPT 160	1	160 A	3	71	80	43	38.5



Code	Type	in Amp	IN/OUT	Stripped cable mm ²	Cable with ferrule mm ²	Nr.	Ø mm	↻ Nm	Icw kA	Ipk kA	Ui
RPB1000	2-POLE 6 OUTPUTS	100 / 125	IN →	10 ÷ 35	10 ÷ 25	1	9.0	2 - 3	4.2	20	500 V
			← 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 V
			IN - OUT ↔	10 ÷ 35	10 ÷ 25	1	9.0	2 - 3			
			← OUT	2.5 ÷ 6	1.5 ÷ 6	11	5.5	2 - 3			
RPQ1000	4-POLE 6 OUTPUTS	100 / 125	← OUT	10 ÷ 25	6 ÷ 16	2	7.5	2 - 3	4.2	18	500 V
			IN →	10 ÷ 35	10 ÷ 25	1	9.0	2 - 3			
			← OUT	2.5 ÷ 6	1.5 ÷ 6	5	5.5	2 - 3			
RPQ1005	4-POLE 10 OUTPUTS	100 / 125	← OUT	10 ÷ 25	6 ÷ 16	1	7.5	2 - 3	4.2	18	500 V
			← OUT	2.5 ÷ 6	1.5 ÷ 6	7	5.5	2 - 3			
			IN →	10 ÷ 35	10 ÷ 25	1	9.0	2 - 3			
RPQ1010	4-POLE 14 OUTPUTS	100 / 125	IN - OUT ↔	10 ÷ 35	10 ÷ 25	1	9.0	2 - 3	4.2	18	500 V
			← 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	6.0	22	600 V
			← OUT	10 ÷ 35	10 ÷ 25	3	8.5	2 - 3			
			← OUT	2.5 ÷ 16	1.5 ÷ 16	8	7	2 - 3			
RPQ1020	4-POLE 11 OUTPUTS	160	IN →	10 ÷ 50	10 ÷ 35	1	11	2	6.2	20.2	600 V
			← OUT	10 ÷ 35	10 ÷ 25	3	8.5	1.5			
			← OUT	2.5 ÷ 16	1.5 ÷ 16	8	6.4	1.5			
RPQ1025	4-POLE COMPACT 7 OUTPUTS	100 / 125	IN →	6 ÷ 35	6 ÷ 25	1		1.5	4.2	24	690
			← OUT	1.5 ÷ 6	1.5 ÷ 6	5					
			← OUT	1.5 ÷ 16	1.5 ÷ 10	2					

Code	Type	in Amp	IN/OUT	Stripped cable mm ²	Cable with ferrule mm ²	Nr.	Ø mm	↻ Nm	Icw kA	Ipk kA	Ui
RPU0995	1-POLE 6 OUTPUTS	80	IN →	6 ÷ 16	6 ÷ 16	1		1.5	3.0	22	690 V
			← OUT	2.5 ÷ 6	2.5 ÷ 6	4		0.8			
			← OUT	2.5 ÷ 16	2.5 ÷ 16	2		1.5			
RPU1000	1-POLE 10 OUTPUTS	125	IN →	10 ÷ 35	10 ÷ 35	1		6	4.2	25	690 V
			← OUT	2.5 ÷ 16	2.5 ÷ 16	10		3			
			IN →	10 ÷ 35	10 ÷ 35	1		3.5			
RPU1001	1-POLE 6 OUTPUTS	125	IN →	6 ÷ 16	6 ÷ 16	1		3.5	4.2	30	690 V
			← OUT	2.5 ÷ 16	2.5 ÷ 16	6		1.5			
			IN →	10 ÷ 70	10 ÷ 70	1		6			
RPU1005	1-POLE 10 OUTPUTS	160	← OUT	2.5 ÷ 16	2.5 ÷ 16	10		3	8.4	35	690 V
			IN →	10 ÷ 70		1		5			
			IN →	12 x 4	12 x 5	1		2			
RPU1006	1-POLE 6 OUTPUTS	160	← OUT	2.5 ÷ 16	2.5 ÷ 16	6		1.5	11.8	30	690 V
			IN →	35 ÷ 120		1		19			
			← OUT	6 ÷ 35	6 ÷ 25	2		3.5			
RPU1010	1-POLE 11 OUTPUTS	250	← OUT	2.5 ÷ 16	2.5 ÷ 16	5		2	24.5	51	690 V
			← OUT	2.5 ÷ 10	2.5 ÷ 10	4		2			
			IN →	95 ÷ 185		1		25			
RPU1015	1-POLE 11 OUTPUTS	400	← OUT	6 ÷ 35	6 ÷ 25	2		3.5	24.5	51	690 V
			← OUT	2.5 ÷ 16	2.5 ÷ 16	5		2			
			← OUT	2.5 ÷ 10	2.5 ÷ 10	4		2			
RPU1020	1-POLE 11 OUTPUTS	500	IN →	25x5	24x6	1		3.5	24.5	51	690 V
			← OUT	6 ÷ 35	6 ÷ 25	2		3.5			
			← OUT	2.5 ÷ 16	2.5 ÷ 16	5		2			
RPT1010	3-POLE 6 OUTPUT per phase	125	IN →	10 ÷ 35	10 ÷ 35	1 x 3		6	4.2	25	690 V
			← OUT	2.5 ÷ 16	2.5 ÷ 16	6 x 3		3			
			IN →	10 ÷ 70	10 ÷ 70	1 x 3		6			
RPT1015	3-POLE 6 OUTPUT per phase	160	← OUT	2.5 ÷ 16	2.5 ÷ 16	6 x 3		3	8.4	35	690 V
			IN →	10 ÷ 70	10 ÷ 70	1 x 3		6			
			← OUT	2.5 ÷ 16	2.5 ÷ 16	6 x 3		3			

Icc pk = Short-circuit current peak value of short duration, equal to 200 mseconds, expressed in kAmperes
Icw = Maximum short duration admissible current, equal to 200 mps, expressed in kA as per standard IEC 947-7-1
Ui = Insulation voltage



Low Voltage Insulators

The "stand off" insulator is used as insulating support for active conductors to guarantee excellent electric insulation capability; it can be used as a support for electric 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 aluminum.)

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

The TEKNAMEGA range offers two product typologies, both with high electric insulation and mechanical resistance characteristics, yet obtained using different production processes and materials.

Ω ISO: BLACK INSULATORS and SPACER COLUMNS

made of polyamide reinforced with fiberglass, molded by injection.

Ω COMPRHEX: RED INSULATORS

made of polyester reinforced with fiberglass, dough molded.

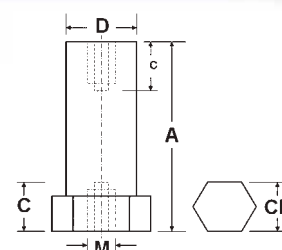
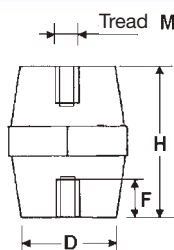
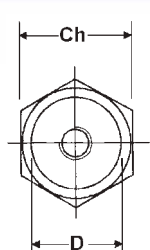
BOTH ranges of **TEKNAMEGA INSULATOR** have passed severe **TEST** to check their mechanical and electric resistance.

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 60439-1**



Ω ISO - Low Voltage Insulators



TECHNICAL FEATURES

Polyamide 6/6 reinforced with 30% fiberglass
Self-extinguishing UL 94V0
Working temperature: -40°C +130°C
Continuous working temperature: +110°C

Galvanized steel insert
Softening temperature: 215°C
Glow wire test: 960°C
Black color

R.T. Tensile strength
R.C. Resistance to compression
R.F. Bending/shearing resistance
1daN ≈ 1 Kg

Tests performed in compliance with standards EN 60664-1 and EN 60439-1

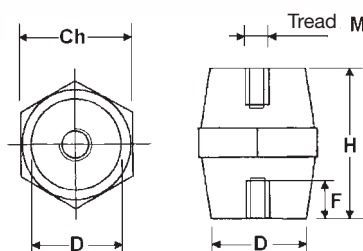
Code	Reference		Weight Kg.	Dimensions in mm							Voltage in Volt		R.T. daN	R.C. daN	R.F. daN
				Ch	type	H	M	F	Ø D		DC	AC			
ISO1000	ISO 15M4	50	0.005	14	Ott	15	M4	4,5	12		1500	1000	250	1150	270
ISO1005	ISO 20M4	50	0.011	17	Esa	20	M4	5	15		1500	1000	250	1150	270
ISO1010	ISO 20M6	50	0.011	17	Esa	20	M6	5	15		1500	1000	390	1800	290
ISO1015	ISO 25M5	50	0.013	19	Esa	25	M5	7	15		1500	1000	370	1400	350
ISO1020	ISO 25M6	50	0.013	19	Esa	25	M6	7	15		1500	1000	390	1800	290
ISO1025	ISO 30M6	50	0.020	30	Esa	30	M6	9	26		1500	1000	390	1800	290
ISO1030	ISO 30M8	50	0.020	30	Esa	30	M8	9	26		1500	1000	840	>2700	900
ISO1035	ISO 35M6	50	0.030	31	Esa	35	M6	10	28		1500	1000	390	>2700	290
ISO1040	ISO 35M8	50	0.030	31	Esa	35	M8	10	28		1500	1000	840	>2700	900
ISO1045	ISO 35M10	50	0.030	31	Esa	35	M10	10	28		1500	1000	1300	>2700	1250
ISO1050	ISO 40M6	25	0.061	32	Esa	40	M6	12	28		1500	1000	390	>2700	290
ISO1055	ISO 40M8	25	0.061	32	Esa	40	M8	12	28		1500	1000	840	>2700	900
ISO1060	ISO 40M10	25	0.061	32	Esa	40	M10	12	28		1500	1000	1300	>2700	1250
ISO1065	ISO 45M6	25	0.071	40	Ott	45	M6	17	34		1500	1000	390	>2700	290
ISO1070	ISO 45M8	25	0.071	40	Ott	45	M8	17	34		1500	1000	8400	>2700	900
ISO1075	ISO 45M10	25	0.071	40	Ott	45	M10	17	41		1500	1000	1300	>2700	1250
ISO1080	ISO 50M6	25	0.075	35	Esa	50	M6	17	29		1500	1000	390	>2700	290
ISO1085	ISO 50M8	25	0.075	35	Esa	50	M8	17	29		1500	1000	840	>2700	900
ISO1090	ISO 50M10	25	0.075	35	Esa	50	M10	17	29		1500	1000	1300	>2700	1250
ISO1095	ISO 60M8	10	0.170	55	Ott	60	M8	17	44		1500	1000	840	>2700	900
ISO1100	ISO 60M10	10	0.170	55	Ott	60	M10	17	44		1500	1000	1300	>2700	1250
ISO1105	ISO 75M12	10	0.185	50	Esa	75	M12	28	36		1500	1000	1800	>2700	2300
ISO1110	ISO 75M16	10	0.185	50	Esa	75	M16	28	36		1500	1000	800	>2700	810
ISO1115	ISO 100M12	10	0.200	65	Esa	100	M12	28	52		1500	1000	1800	>2700	2300

Ω ISO - Spacing columns for low voltage

Code	Reference		Weight Kg	A M C Ø D Ch					Code	Reference		Weight Kg	A M C Ø D Ch				
				Dimensions in mm									Dimensions in mm				
ISO1120	CLN 16M4-21	50	0.013	16	M4	5	20	21	ISO1210	CLN 45M5-21	25	0.045	40	M5	10	20	21
ISO1125	CLN 16M5-21	50	0.013	16	M5	5	20	21	ISO1215	CLN 45M6-21	25	0.045	45	M6	10	20	21
ISO1130	CLN 16M6-21	50	0.014	16	M6	4	20	21	ISO1220	CLN 45M8-21	25	0.045	45	M8	10	20	21
ISO1135	CLN 20M5-21	50	0.025	20	M5	5	20	21	ISO1225	CLN 50M5-21	25	0.048	50	M5	10	20	21
ISO1140	CLN 20M6-21	50	0.025	20	M6	5	20	21	ISO1230	CLN 50M6-21	25	0.048	50	M6	10	20	21
ISO1145	CLN 25M4-21	50	0.030	25	M4	5	20	21	ISO1235	CLN 50M8-21	25	0.048	50	M8	10	20	21
ISO1150	CLN 25M5-21	50	0.030	25	M5	5	20	21	ISO1240	CLN 30M6-31	50	0.042	30	M6	10	30	31
ISO1155	CLN 25M6-21	50	0.030	25	M6	5	20	21	ISO1245	CLN 30M8-31	50	0.042	30	M8	10	30	31
ISO1160	CLN 25M8-21	50	0.028	25	M8	7	20	21	ISO1250	CLN 35M6-31	50	0.048	35	M6	10	30	31
ISO1165	CLN 30M5-21	50	0.032	30	M5	10	20	21	ISO1255	CLN 35M8-31	50	0.048	35	M8	10	30	31
ISO1170	CLN 30M6-21	50	0.032	30	M6	10	20	21	ISO1260	CLN 45M6-31	25	0.060	45	M6	10	30	31
ISO1175	CLN 30M8-21	50	0.031	30	M8	10	20	21	ISO1265	CLN 45M8-31	25	0.060	45	M8	13	30	31
ISO1180	CLN 35M5-21	50	0.035	35	M5	10	20	21	ISO1270	CLN 55M6-31	25	0.078	55	M6	15	30	31
ISO1185	CLN 35M6-21	50	0.035	35	M6	10	20	21	ISO1275	CLN 55M8-31	25	0.078	55	M8	15	30	31
ISO1190	CLN 35M8-21	50	0.035	35	M8	10	20	21	ISO1280	CLN 65M6-31	10	0.095	65	M6	15	30	31
ISO1195	CLN 40M5-21	25	0.040	40	M5	10	20	21	ISO1285	CLN 65M8-31	10	0.095	65	M8	15	30	31
ISO1200	CLN 40M6-21	25	0.040	40	M6	10	20	21	ISO1290	CLN 70M6-31	10	0.105	70	M6	15	30	31
ISO1205	CLN 40M8-21	25	0.038	40	M8	10	20	21	ISO1295	CLN 70M8-31	10	0.105	70	M8	15	30	31

Ω COMPRHEX - Low voltage insulators

Ω COMPRHEX - Low Voltage Insulators



TECHNICAL FEATURES

Heat hardening resin
Polyester reinforced with 20% fiberglass
Self-extinguishing UL94V0.

Continuous working temperature: 90 °C
Brass insert
Red color

R.T. Tensile strength
R.C. Resistance to compression
R.F. Bending/shearing resistance
1daN ≈ 1 Kg

Tests performed in compliance with standards EN 60664-1 and EN 60439-1

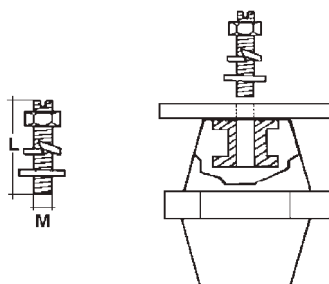
Code	Reference		Weight Kg	Dimensions in mm							Voltage in Volt		R.T.	R.C.	R.F.
				Ch	tipo	H	M	F	Ø D		DC	AC	daN	daN	daN
CPH1000	CPH 15M4	100	0.006	16	Esa	15	M4	6	14		1500	1000	160	810	150
CPH1010	CPH 20M6	100	0.016	19	Esa	20	M6	8	15		1500	1000	250	1200	290
CPH1015	CPH 25M5	100	0.034	26	Esa	25	M5	10	15		1500	1000	250	1200	290
CPH1020	CPH 25M6	100	0.035	26	Esa	25	M6	10	15		1500	1000	250	1200	290
CPH1025	CPH 30M6	100	0.046	33	Esa	30	M6	10	25		1500	1000	250	1200	290
CPH1030	CPH 30M8	100	0.052	33	Esa	30	M8	12.5	25		1500	1000	490	2400	590
CPH1035	CPH 35M6	50	0.058	35	Esa	35	M6	12.5	26		1500	1000	250	2000	290
CPH1040	CPH 35M8	50	0.061	34	Esa	35	M8	12.5	26		1500	1000	490	2400	590
CPH1045	CPH 35M10	50	0.066	35	Esa	35	M10	13	26		1500	1000	750	> 2700	615
CPH1050	CPH 40M6	50	0.093	40	Esa	40	M6	12.5	30		1500	1000	490	2400	590
CPH1055	CPH 40M8	50	0.095	40	Esa	40	M8	12.5	30		1500	1000	490	2400	590
CPH1070	CPH 45M8	50	0.100	40	Esa	45	M8	15	30		1500	1000	490	2400	590
CPH1080	CPH 50M6	50	0.104	45	Esa	50	M6	15	35		1500	1000	490	2400	590
CPH1085	CPH 50M8	50	0.125	45	Esa	50	M8	15	35		1500	1000	490	> 2700	590
CPH1090	CPH 50M10	50	0.140	45	Esa	50	M10	15	35		1500	1000	750	> 2700	615
CPH1095	CPH 60M8	25	0.200	50	Esa	60	M8	15	38		1500	1000	750	> 2700	615
CPH1100	CPH 60M10	25	0.210	50	Esa	60	M10	18	38		1500	1000	750	> 2700	615
CPH1105	CPH 75M12	25	0.245	55	Esa	75	M12	23	38		1500	1000	1300	> 2700	770
CPH1115	CPH 100M12	25	0.546	65	Esa	100	M12	23	52		1500	1000	1500	> 2700	770

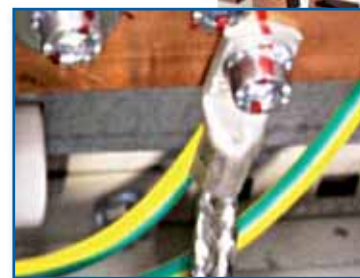
Mounting Bolts for insulators

TECHNICAL FEATURES

Made of class 8.8 galvanized steel
Complete with nut, flat washer and blocking washers

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





Copper braids

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 in sq.mm, 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 in sq.mm, it can take a higher current density than cables or copper bars.

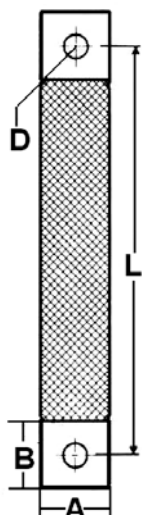
TECHNICAL FEATURES OF COPPER

Electrolytic copper Cu-ETP 99.90%

Red and tinned copper

Resistivity at 20°C: 1.7241 sq.
 $\Omega\text{mm}^2/\text{mt}$

Mechanical resistance: min. 200 Mpa



FLAT TINNED COPPER EARTHING BRAIDS

Code	Reference		Weight Kg.	Intensity A	Cross-sect. mm²	Thck mm	L mm	A mm	B mm	D Ø 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	3.2	150	21	23	10.5
TMS1060	TMS 25-200-10	10	0.059	150	25	3.2	200	21	23	10.5
TMS1065	TMS 25-250-10	10	0.072	150	25	3.2	250	21	23	10.5
TMS1070	TMS 25-300-10	10	0.084	150	25	3.2	300	21	23	10.5
TMS1075	TMS 35-150-10	10	0.061	195	35	3.5	150	21	23	10.5
TMS1080	TMS 35-200-10	10	0.077	195	35	3.5	200	21	23	10.5
TMS1085	TMS 35-250-10	10	0.097	195	35	3.5	250	21	23	10.5
TMS1090	TMS 35-300-10	10	0.110	195	35	3.5	300	21	23	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



Code	Reference		Weight Kg.	Intensity A	Cross-section mm²	Ø braid	L mm	D Ø mm
TMT1200	TMT 6-150-6	10	0.125	55	6	3 mm	150	6.5
TMT1205	TMT 6-200-6	10	0.154	55	6	3 mm	200	6.5
TMT1210	TMT 10-300-6	10	0.312	85	10	4.5 mm	300	6.5

Terminals and ring lugs as per DIN 46234



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- or 10-mm² cross-sections)
For TSC range, cf. values indicated in the table

Round and flat insulated braids:
transparent PVC, 1 mm thickness,
self-extinguishing UL 94V0
electric insulation: 450V
Max. working temperature: 80°C

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

Flat braids



TINNED COPPER RED COPPER

Code	Reference	Code	Reference		Weight Kg.	Intensity A**	Cross-sect. mm ²	Thck mm	Width mm
TPS1000	TPS 20-4	TPR1000	TPR 20-4	25 mt.	0.04	40	4	1.0	8.0
TPS1005	TPS 20-6	TPR1005	TPR 20-6	25 mt.	0.06	55	6	1.0	10.0
TPS1010	TPS 20-10	TPR1010	TPR 20-10	25 mt.	0.10	85	10	1.5	10.0
TPS1015	TPS 20-16	TPR1015	TPR 20-16	25 mt.	0.16	120	16	2.0	16.0
TPS1020	TPS 20-25	TPR1020	TPR 20-25	20 mt.	0.25	150	25	2.0	25.0
TPS1025	TPS 20-30	TPR1021	TPR 20-30	20 mt.	0.30	170	30	2.4	25.0
TPS1030	TPS 20-35	TPR1025	TPR 20-35	20 mt.	0.35	195	35	2.8	25.0
TPS1035	TPS 20-40	TPR1026	TPR 20-40	20 mt.	0.40	210	40	3.2	25.0
TPS1040	TPS 20-50	TPR1030	TPR 20-50	20 mt.	0.50	250	50	4.0	25.0
TPS1045	TPS 20-75	TPR1035	TPR 20-75	20 mt.	0.75	330	75	5.0	30.0
TPS1050	TPS 20-100	TPR1040	TPR 20-100	15 mt.	1.00	370	100	5.0	40.0
TPS1055	TPS 20-120	TPR1045	TPR 20-120	15 mt.	1.20	420	120	6.0	40.0

Round braids



TINNED COPPER RED COPPER

Code	Reference	Code	Reference		Weight Kg.	Intensity A**	Cross-sect. mm ²	Ø mm
TTS1000	TTS 20-6	TTR1000	TTR 20-6	50 mt.	0.06	55	6	4.0
TTS1005	TTS 20-10	TTR1005	TTR 20-10	50 mt.	0.10	85	10	5.0
TTS1010	TTS 20-16	TTR1010	TTR 20-16	50 mt.	0.16	120	16	6.4
TTS1015	TTS 20-25	TTR1015	TTR 20-25	25 mt.	0.25	150	25	8.0
TTS1020	TTS 20-35	TTR1020	TTR 20-35	25 mt.	0.35	195	35	9.5
TTS1025	TTS 20-50	TTR1025	TTR 20-50	25 mt.	0.50	250	50	11.0
TTS1030	TTS 20-100	TTR1030	TTR 20-100	12.5 mt.	1.00	370	100	15.0

Insulated braids in tinned copper



FLAT

Code	Reference		Weight Kg.	Intensity A**	Cross-sect. mm ²	Thck mm	Width mm
TPI1000	TPI 20-16	20 mt.	0.20	120	16	2.0	16.0
TPI1005	TPI 20-25	20 mt.	0.30	150	25	2.0	25.0
TPI1010	TPI 20-35	20 mt.	0.40	195	35	3.0	25.0
TPI1015	TPI 20-50	20 mt.	0.55	250	50	3.3	30.0

ROUND

Code	Reference		Weight Kg.	Intensity A**	Cross-sect. mm ²	Thck mm
TTI1000	TTI 20-16	50 mt.	0.18	120	16	6
TTI1005	TTI 20-25	25 mt.	0.27	150	25	8
TTI1010	TTI 20-35	25 mt.	0.4	195	35	9.4

Tubular braids in tinned copper



Code	Reference	Ø Single wire mm		Weight Kg.	Intensity A**	Cross-sect. mm ²	Ø Nom. mm	Ø Min-Max mm
TSC1000	TSC 4	0.15	50 mt.	0.02	40	4	6	3 - 9
TSC1005	TSC 10	0.15	50 mt.	0.03	85	10	12	7 - 17
TSC1010	TSC 16	0.20	50 mt.	0.05	120	16	16	8 - 21
TSC1015	TSC 25	0.30	25 mt.	0.06	150	25	35	16 - 40
TSC1020	TSC 35	0.30	25 mt.	0.18	195	35	40	19 - 49
TSC1025	TSC 50	0.30	25 mt.	0.26	250	50	50	30 - 70



Wiring sleeves

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 expandability value
- limited number of references
- excellent resistance to abrasion and to chemical agents
- excellent mechanical protection of conductors
- halogen-free
- listed UL CSA RoHS
- **UL 94V0 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
- allows covering already wired cable bundles
- excellent resistance to abrasion and to chemical agents
- listed UL RoHS

Spiral sleeve

- made of polyethylene
- allows covering already wired cable bundles
- listed 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 expandability

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
- non combustible

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

Polyester braided sleeve UL CSA V2

TECHNICAL FEATURES

Grey color

Compliant with RoHS
Halogen-free polyester (PET) monofilament
Density (kg/dm³): 1.14
Working temperature: -50°C +150°C
Melting temperature: 230°C ±5
Self-extinguishing UL 94V0
Flame retardant
Packaging: coil in cardboard box

Code	Reference		Ø nom. mm	Ø max. mm
GPG2000	GPE 06G	100 mt	6.0	11.1
GPG2005	GPG 08G	100 mt	8.0	12.7
GPG2010	GPG 10G	100 mt	10.0	15.9
GPG2015	GPG 12G	50 mt	12.0	19.1
GPG2020	GPG 15G	50 mt	15.0	25.4
GPG2025	GPG 20G	50 mt	20.0	31.8
GPG2030	GPG 30G	50 mt	30.0	44.5
GPG2035	GPG 40G	50 mt	40.0	63.5
GPG2040	GPG 50G	50 mt	50.0	88.9
GPG2045	GPG 64G	25 mt	64.0	114.3



Black color

Features as above

Code	Reference		Ø nom. mm	Ø max. mm
GPN2000	GPE 06N	100 mt	6.0	11.1
GPN2005	GPG 08N	100 mt	8.0	12.7
GPN2010	GPG 10N	100 mt	10.0	15.9
GPN2015	GPG 12N	50 mt	12.0	19.1
GPN2020	GPG 15N	50 mt	15.0	25.4
GPN2025	GPG 20N	50 mt	20.0	31.8
GPN2030	GPG 30N	50 mt	30.0	44.5
GPN2035	GPG 40N	50 mt	40.0	63.5
GPN2040	GPG 50N	50 mt	50.0	88.9
GPN2045	GPG 64N	25 mt	64.0	114.3

Polyester braided sleeve UL CSA V0

TECHNICAL FEATURES

Black color with grey identification wire

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

Code	Reference		Ø nom. mm	Ø max. mm
GPV1000	GPV 06N	100 mt	6.0	11.1
GPV1005	GPV 08N	100 mt	8.0	12.7
GPV1010	GPV 10N	100 mt	10.0	15.9
GPV1015	GPV 12N	50 mt	12.0	19.1
GPV1020	GPV 15N	50 mt	15.0	25.4
GPV1025	GPV 20N	50 mt	20.0	31.8
GPV1030	GPV 30N	50 mt	30.0	44.5
GPV1035	GPV 40N	50 mt	40.0	63.5
GPV1040	GPV 50N	50 mt	50.0	88.9
GPV1045	GPV 64N	25 mt	64.0	114.3



WRAPFLEX openable polyester sleeve UL CSA V0

TECHNICAL FEATURES

Black color

Compliant with RoHS
Halogen-free polyester (PET) monofilament + multifilament
Density (kg/dm³): 1.38
Working temperature: -50°C +150°C
Melting temperature: 230°C ±5
Self-extinguishing UL 94V0
Flame retardant
Self-closing
Packaging: coil in cardboard box

Code	Reference		Ø D nom. mm
GWF1000	GWF 08	25 mt	8
GWF1005	GWF 13	25 mt	13
GWF1010	GWF 19	25 mt	19
GWF1015	GWF 25	25 mt	25
GWF1020	GWF 32	15 mt	32



Silicone

TECHNICAL FEATURES

Red color

Silicone + internal fiberglass reinforcement
 Rated voltage: 500 Volt
 Dielectric rigidity: 2,500 Volt
 Working temperature: -60°C +200°C
 Max. working temperature for 1 second: +280°C
 Good expandibility and elasticity
 Packaging: coil with transparent film

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



Fiberglass braided sleeve

TECHNICAL FEATURES

Black color

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

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



Spiral sleeve

TECHNICAL FEATURES

Color: transparent (other colors upon request)

Polyethylene
 Packaging: coil in plastic bag
 Max. working temperature: 85°C

Code	Reference		Ø nom. mm
GSP0995	GSP 04	10 mt	4.2
GSP1000	GSP 06	10 mt	6.4
GSP1002	GSP 09	10 mt	9.5
GSP1005	GSP 12	10 mt	12.7
GSP1007	GSP 15	10 mt	15
GSP1010	GSP 20	10 mt	19.1



ZIPP-IN Polypropylene openable sleeve

TECHNICAL FEATURES

Black color

Polypropylene
 Packaging: coil in plastic bag

Code	Reference		Ø nom. mm
GZP1005	GZP 15	10 mt	15
GZP1010	GZP 20	10 mt	20
GZP1015	GZP 25	10 mt	25
GZP1019	GZP 30	10 mt	30

INSERITORI PER ZIPP - IN

Code	Reference		per Ø nom.
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



Braided sleeve cutting tool

TECHNICAL FEATURES

Two models to cut braided sleeves

Standard wire cutting and welding in one single operation
 Quick and clean operation

UTG1000 hot blade sleeve cutting bench tool

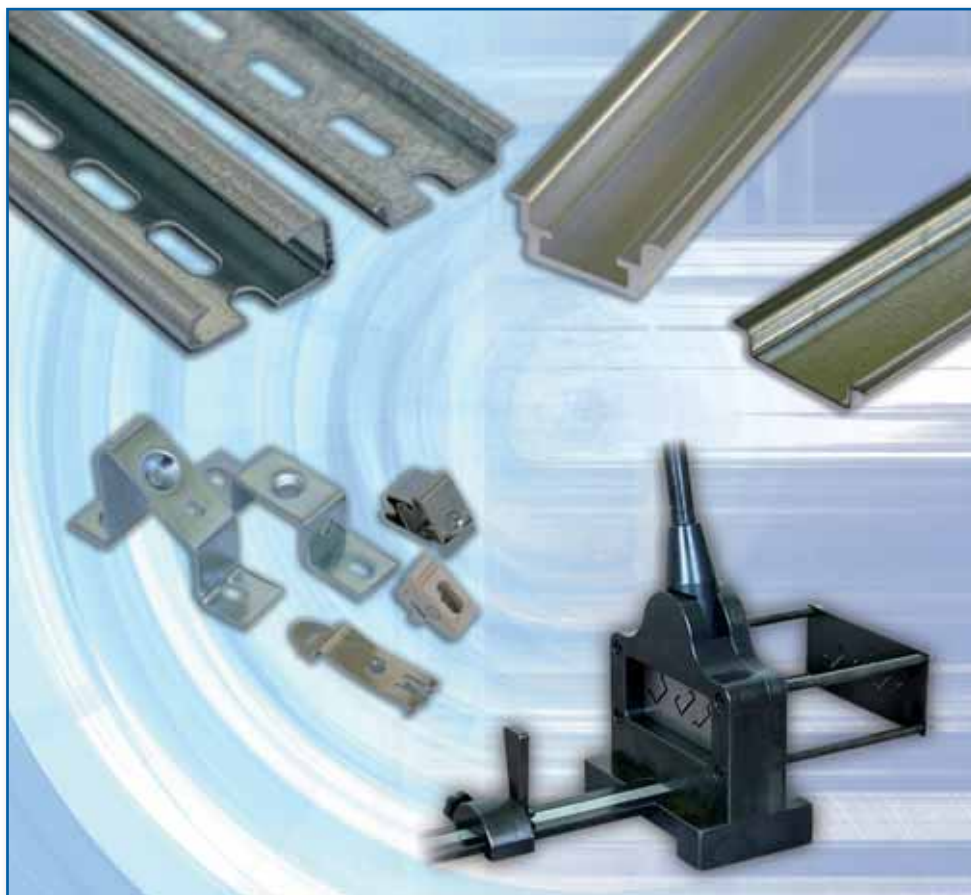
Working temperature: 800°C
 Power feed: 230 Volt/50 Hz
 Feed cable 1.5 meters
Spare blade UTG1500

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

UTG1001 hot blade sleeve cutting hand tool

Working temperature up to 800°C in few seconds
 Power feed: 230 Volt/50 Hz
 Feed cable 2.5 meters
Spare blade UTG1501





DIN rails and profiles

Steel and/or aluminum DIN rails standardized as per European standards which allows fitting modular electric devices and others inside electric panel boards.

Two general DIN rail typologies:

SYMMETRICAL, also said "Ω", available in three dimensions.

ASYMMETRICAL, also said "G".

Steel 30x15 "C" profiles

Used to make infrastructures inside the electric panel board and/or as support for equipment or wiring elements.

FEATURES

Passivated galvanized steel
Electrolytic galvanized steel
Aluminum
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

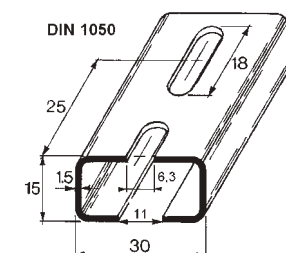
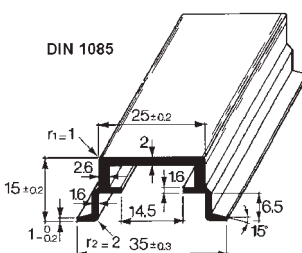
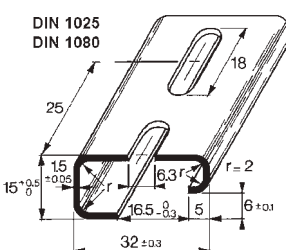
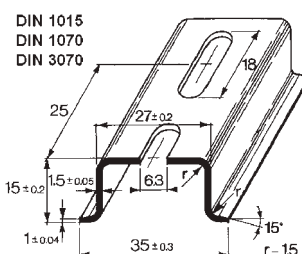
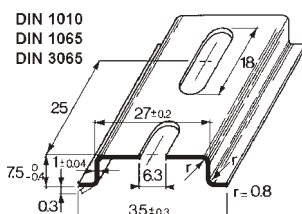
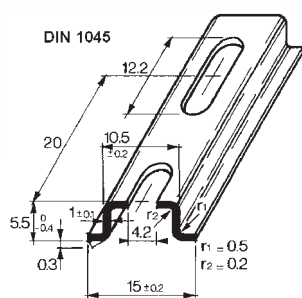
Accessories

Wide range of clips and fasteners which make 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.

Passivated galvanized steel and plastic
High mechanical resistance

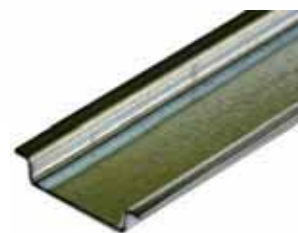
Tools

Cutting and punching tools for DIN rail, extremely easy to use, neat cut without burr and material wastes; 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		Weight kg/pc.
Symmetrical solid DIN rails				
DIN1040	DIN NF15H5	2 meters	20	0.33
DIN1000	DIN NF35H7	2 meters	20	0.70
DIN1005	DIN NF35H15	2 meters	10	1.34
Symmetrical punched DIN rails				
DIN1045	DIN F15H5	2 meters	20	0.33
DIN1010	DIN F35H7	2 meters	20	0.60
DIN1015	DIN F35H15	2 meters	10	1.23
Asymmetrical solid DIN rails				
DIN1020	DIN GNF	2 meters	20	1.46
Asymmetrical punched DIN rails				
DIN1025	DIN GF	2 meters	20	1.38



ELECTROLYTIC GALVANIZED STEEL (RoHS)

Code	Reference	Length		Weight kg/pc.
Symmetrical solid DIN rails				
DIN1055	DIN NF35H7Z	2 meters	20	0.7
DIN1060	DIN NF35H15Z	2 meters	10	1.34
DIN3055	DIN NF35H7Z - 3	3 meters	10	1.05
DIN3060	DIN NF35H15Z - 3	3 meters	10	2.01
Symmetrical punched DIN rails				
DIN1065	DIN F35H7Z	2 meters	20	0.6
DIN1070	DIN F35H15Z	2 meters	10	1.23
DIN3065	DIN F35H7Z - 3	3 meters	10	0.9
DIN3070	DIN F35H15Z - 3	3 meters	10	1.84
Asymmetrical solid DIN rails				
DIN1075	DIN ANFZ	2 meters	20	1.46
DIN3075	DIN ANFZ - 3	3 meters	10	2.19
Asymmetrical punched DIN rails				
DIN1080	DIN AFZ	2 meters	20	1.38



ALUMINUM

Code	Reference	Length		Weight kg/pc.
Aluminum Symmetrical plain DIN rails				
DIN1085	DIN NFAL	2 meters	20	0.343



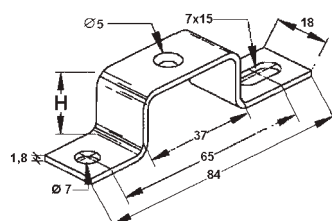
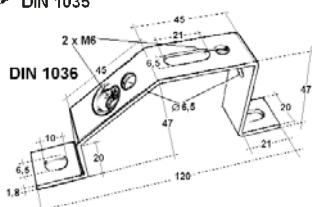
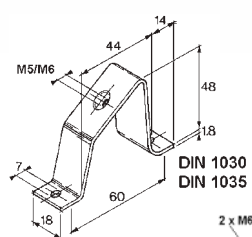
C-CHANNEL

Passivated galvanized steel (RoHS)

Code	Reference	Length		Weight kg/pc.
DIN1050	CFT30H15	2 meters	10	1.3



Technical drawing of a DIN 1030 DIN 1035 bracket. The drawing shows a side view of the bracket with the following dimensions: 14 (top flange width), 44 (top flange length), 48 (total height), 18 (bottom flange width), 60 (total length), 18 (bottom flange thickness), 7 (bottom flange width), and 2 x M6 (bottom flange holes). The bracket is labeled M5/M6 and DIN 1030 DIN 1035.



DIN 1120 DIN 1125 DIN 1130 DIN 1135
DIN 1140 DIN 1145 DIN 1150

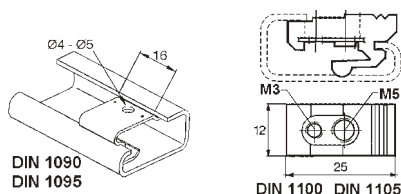
Code	Reference	
DIN1030	DIN ST5	10
DIN1035	DIN ST6	10

Code	Reference	
DIN1030	DIN ST5	10
DIN1035	DIN ST6	10



Code	Reference	
DIN1036	DIN ST 45PM6	10

Code	Reference		H mm
DIN1120	DIN STC 20-6	10	25
DIN 1125	DIN STC 25-6	10	25
DIN 1130	DIN STC 30-6	10	30
DIN 1135	DIN STC 40-6	10	40
DIN 1140	DIN STC 50-6	10	50
DIN 1145	DIN STC 70-6	10	70
DIN 1150	DIN STC 90-6	10	90



DIN 1090
DIN 1095

DIN 1100 DIN 1105

Code	Reference	
CLIP for symmetrical channel		
DIN1110	DIN KLIP 4	100

Code	Reference	
CLIP for symmetrical channel		
DIN1110	DIN KLIP 4	100

DIN1090	DIN1095	100
CLIP for asymmetrical channel		
DIN1090	DIN GKLIP4	100
DIN1095	DIN GKLIP5	100
DIN1100	DIN GKLIP 3-5	100
DIN1105	DIN GKLIP 4-6	100

DIN1090	DIN1095	100
CLIP for asymmetrical channel		
DIN1090	DIN GKLIP4	100
DIN1095	DIN GKLIP5	100
DIN1100	DIN GKLIP 3-5	100
DIN1105	DIN GKLIP 4-6	100



DIN RAIL

Code

UTD2000

UTD2005

Cutting

Code	Reference		Weight Kg
UTD2000	UTD-T - 01	1	9.6
UTD2005	UTD-T-P - 02	1	11.5

Code	Reference		Weight Kg
UTD2000	UTD-T - 01	1	9.6
UTD2005	UTD-T-P - 02	1	11.5



UTD 2000 to cut symmetrical "Ω" DIN rails
(15x5.5 - 35x7.5 - 35x15)

UTD 2005 for symmetrical "Ω" DIN rails and asymmetrical "G" DIN rails
(15x5.5 - 35x7.5 - 35x15 - 32x15)

For solid DIN rails punching with oblong hole 12x6.4 mm longitudinal or perpendicular to rail length

47



Wiring accessories

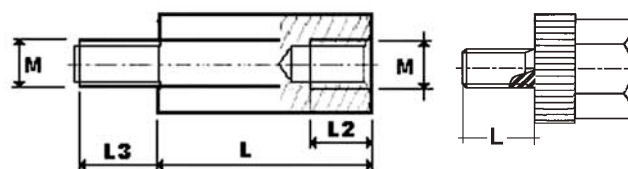
Plastic spacers and caps

PLASTIC SPACERS

Code	Reference		M	CH mm	L mm	L3 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
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

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: polyester

Self-extinguishing UL 94V2

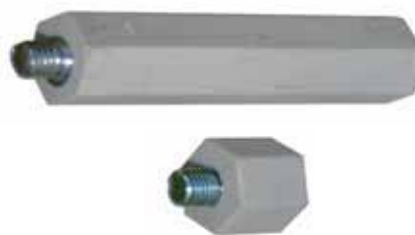
Max. working temperature: 90°C

Insulation voltage: 1000V

Spacers: M-F M5 M6 passivated galvanised steel inserts

Caps: Male M5 M6 passivated galvanised steel inserts

Female M5 M6 plastic insert



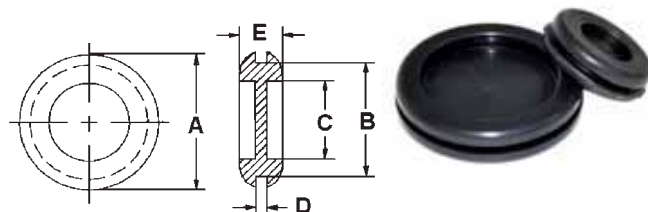
Grommet inserts

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

Material: black PVC SR 1700

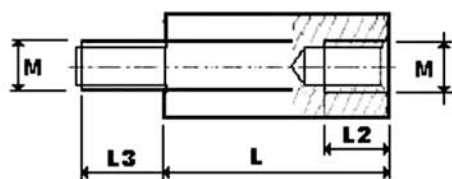
Working temperature: -35 ÷ +90°C



Steel spacers

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



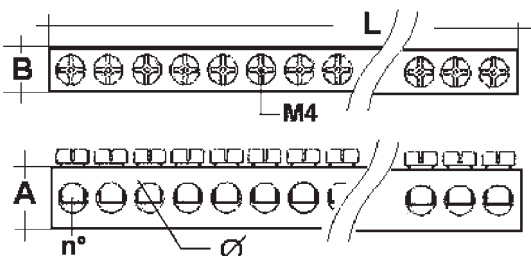
Code	Reference		CH	L	M	L3	L2
DZM0995	DZM 20M3	100	6	20	M3	6	10
DZM1000	DZM 10M4	100	7	10	M4	8	6
DZM1005	DZM 15M4	100	7	15	M4	8	10
DZM1010	DZM 20M4	100	7	20	M4	8	10
DZM1015	DZM 25M4	50	7	25	M4	8	10
DZM1020	DZM 30M4	50	7	30	M4	8	10
DZM1025	DZM 35M4	50	7	35	M4	8	10
DZM1030	DZM 40M4	50	7	40	M4	8	10
DZM1035	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	50	8	10	M5	8	6
DZM1050	DZM 20M5	50	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	25	8	35	M5	8	10
DZM1070	DZM 40M5	25	8	40	M5	8	10
DZM1075	DZM 50M5	25	8	50	M5	8	10
DZM1080	DZM 60M5	25	8	60	M5	8	10
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	50	10	10	M6	10	6
DZM1100	DZM 15M6	50	10	15	M6	10	10
DZM1105	DZM 20M6	50	10	20	M6	10	12
DZM1106	DZM 25M6	50	10	25	M6	10	12
DZM1110	DZM 30M6	25	10	30	M6	10	12
DZM1115	DZM 40M6	25	10	40	M6	10	12
DZM1120	DZM 50M6	25	10	50	M6	10	12
DZM1125	DZM 60M6	25	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	10	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

Brass terminal bars

Code	Reference		Weight Kg	L mm	A mm	B mm	Hole Ø mm	n° holes	IN/OUT	Cable cross-sect. mm ²	Cable with ferrule cross-sect. mm ²	Nm
MRS1500	MRS 8-6	10	0.340	1000	8	6	4.5	153	← OUT	2.5 ÷ 6	1.5 ÷ 6	2 - 3
MRS1505	MRS 13-6	10	0.554	1000	13	6	9.5	83	← OUT	10 ÷ 35	10 ÷ 25	2 - 3

TECHNICAL FEATURES

Brass
Complete with M4 galvanized steel screws
with cross head
1 meter long





Ω POWER - Special connections

Braided power shunts

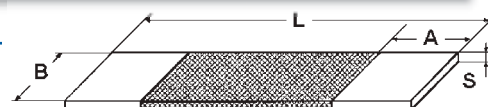
TECHNICAL FEATURES

Tinned copper Cu-ETP UNI 5649-71 (red copper upon request)

Standard wire 0.20 mm (0.05 ÷ 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 hereunder indicated derating coefficient
- space the shunts at a minimum distance equal to shunt thickness for optimal heat dissipation

Nr. parallel shunts	Derating coefficient
2	1.8
3	2.5
4	3.2
5	3.9

Example:

GFT1080 cross-section 1000 mm²
 1 shunt = In 2122 Amp with ΔT 50°
 3 parallel shunts with ΔT 50°
 In 2122x2.5 = 5305 Amp

Code	Reference		Weight Kg.	Cross-sect. mm ²	In Amp ΔT 30°C	In Amp ΔT 50°C	A	B	S	L
GFT1000	GFT 100x250	1	0.51	100	339	448	40	40	7.0	250
GFT1005	GFT 100x500	1	0.84	100	339	448	40	40	7.0	500
GFT1010	GFT 120x250	1	0.56	120	373	496	40	40	7.5	250
GFT1015	GFT 120x500	1	0.96	120	373	496	40	40	7.5	500
GFT1020	GFT 150x250	1	0.84	150	427	566	50	50	8.0	250
GFT1025	GFT 150x500	1	1.20	150	427	566	50	50	8.0	500
GFT1030	GFT 200x250	1	1.01	200	534	707	50	50	9.0	250
GFT1035	GFT 200x500	1	1.60	200	534	707	50	50	9.0	500
GFT1040	GFT 250x300	1	1.37	250	631	837	50	50	10.5	300
GFT1045	GFT 250x600	1	2.36	250	631	837	50	50	10.5	600
GFT1050	GFT 300x400	1	2.04	300	695	920	80	80	11.0	400
GFT1060	GFT 400x400	1	2.93	400	827	1097	80	80	11.0	400
GFT1065	GFT 500x400	1	3.52	500	889	1180	100	100	11.0	400
GFT1070	GFT 600x450	1	4.53	600	1067	1415	100	100	12.0	450
GFT1075	GFT 800x450	1	5.68	800	1335	1768	100	100	15.0	450
GFT1080	GFT 1000x450	1	7.29	1000	1601	2122	100	100	18.0	450
GFT1085	GFT 1200x500	1	9.55	1200	1923	2547	120	120	17.5	500

Laminated power shunts

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

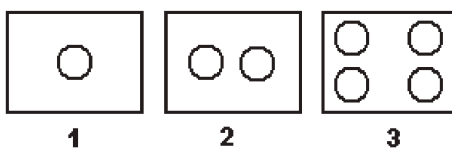
Cross-sections from 60 to 4000 mm²

Dimensions:

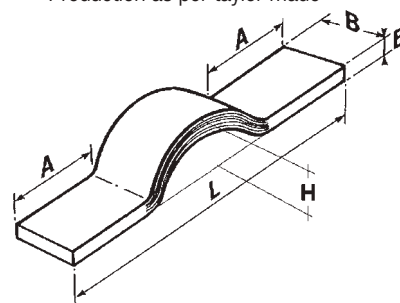
Give dimensions as per sketch below

Standard punching:

as per "typical punching"



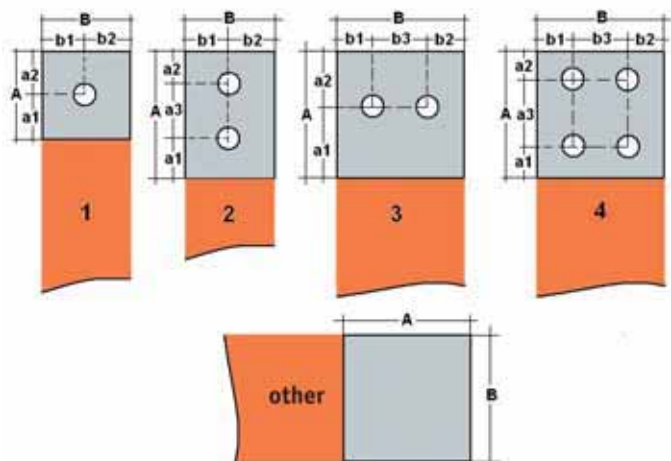
Production as per taylor made





CONSTRUCTION CHARACTERISTICS AND DIMENSIONS

TERMINAL TYPE: _____



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

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

Hole Ø mm = _____ nr. holes _____

Terminal thickness _____ mm

SHUNT MADE BY

Conductor type:

COPPER Red ☐ Tinned ☐

ALUMINUM ☐

Insulation Yes ☐ No ☐

Insulation type:

Nominal ampacity _____ A

COPPER BRAID

Standard wire 0,..... mm

- ☐ Flat ☐ Round
- ☐ Pressed copper tube terminals
- ☐ Red copper terminals
- ☐ Tinned copper terminals
- ☐ Aluminum terminals

☐ AC

☐ DC

LAMINATED

Nr. Laminates

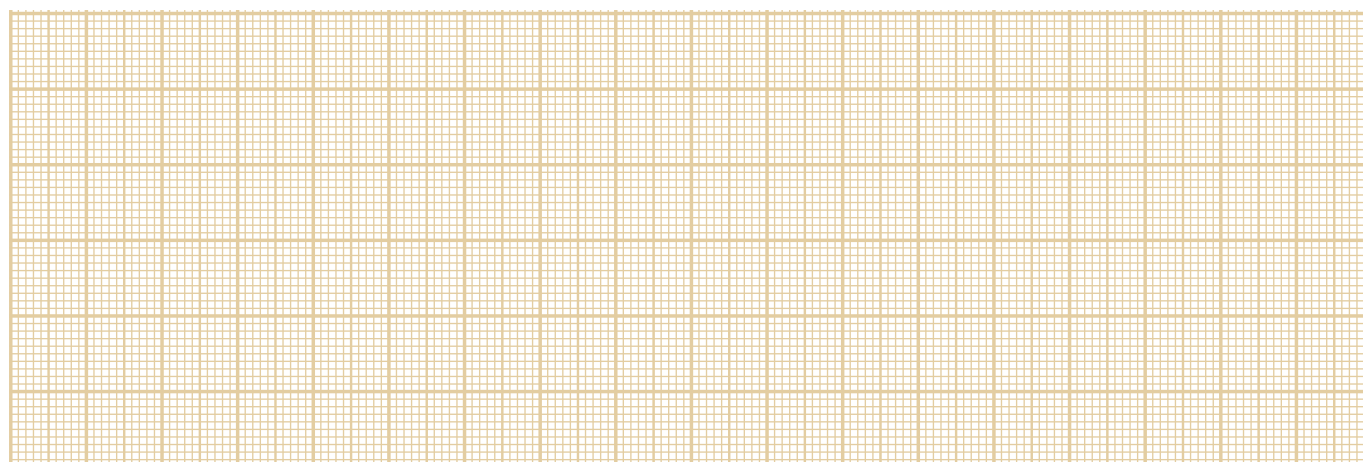
Laminate thickness 0,..... mm

- ☐ Press-welded terminals
- ☐ Riveted terminals
- ☐ Red copper terminals
- ☐ Tinned copper terminals
- ☐ Aluminum terminals

Cross-section _____ mm²

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.it

Code	Reference	Catalog page
BAP		
BAP4000	BAP 20x10x2000	15
BAP4005	BAP 30x10x2000	15
BAP4010	BAP 40x10x2000	15
BAP4015	BAP 50x10x2000	15
BAP4020	BAP 60x10x2000	15
BAP4025	BAP 80x10x2000	15
BAP4030	BAP 100x10x2000	15
BAP4035	BAP 120x10x2000	15
BRF		
BRF1005	BRF 3X9X0,8	6
BRF1020	BRF 6X9X0,8	6
BRF1021	BRF 9X9X0,8	6
BRF1022	BRF 3X13X0,5	6
BRF1023	BRF 6X13X0,5	6
BRF1024	BRF 10X13X0,5	6
BRF1025	BRF 2X15,5X0,8	6
BRF1035	BRF 4X15,5X0,8	6
BRF1045	BRF 6X15,5X0,8	6
BRF1050	BRF 10X15,5X0,8	6
BRF1055	BRF 2X20X1	6
BRF1060	BRF 3X20X1	6
BRF1065	BRF 4X20X1	6
BRF1070	BRF 5X20X1	6
BRF1075	BRF 6X20X1	6
BRF1076	BRF 8X20X1	6
BRF1080	BRF 10X20X1	6
BRF1085	BRF 2X24X1	6
BRF1090	BRF 3X24X1	6
BRF1095	BRF 4X24X1	6
BRF1100	BRF 5X24X1	6
BRF1105	BRF 6X24X1	6
BRF1110	BRF 8X24X1	6
BRF1115	BRF 10X24X1	6
BRF1120	BRF 2X32X1	6
BRF1125	BRF 3X32X1	6
BRF1130	BRF 4X32X1	6
BRF1135	BRF 5X32X1	6
BRF1140	BRF 6X32X1	6
BRF1145	BRF 8X32X1	6
BRF1150	BRF 10X32X1	6
BRF1155	BRF 2X40X1	6
BRF1160	BRF 3X40X1	6
BRF1165	BRF 4X40X1	6
BRF1170	BRF 5X40X1	6
BRF1175	BRF 6X40X1	6
BRF1180	BRF 8X40X1	6
BRF1185	BRF 10X40X1	6
BRF1190	BRF 3X50X1	6
BRF1195	BRF 4X50X1	6
BRF1200	BRF 5X50X1	6
BRF1205	BRF 6X50X1	6
BRF1210	BRF 8X50X1	6
BRF1215	BRF 10X50X1	6
BRF1220	BRF 3X63X1	6
BRF1225	BRF 4X63X1	6

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BFX1230	BFX 5X63X1	6
BFX1235	BFX 6X63X1	6
BFX1240	BFX 8X63X1	6
BFX1245	BFX 10X63X1	6
BFX1250	BFX 3X80X1	6
BFX1255	BFX 4X80X1	6
BFX1260	BFX 5X80X1	6
BFX1265	BFX 6X80X1	6
BFX1270	BFX 8X80X1	6
BFX1275	BFX 10X80X1	6
BFX1280	BFX 4X100X1	6
BFX1285	BFX 5X100X1	6
BFX1290	BFX 6X100X1	6
BFX1295	BFX 8X100X1	6
BFX1300	BFX 10X100X1	6
BFX1305	BFX 12X100X1	6
BFX3055	BFX 2X20X1-3	7
BFX3060	BFX 3X20X1-3	7
BFX3070	BFX 5X20X1-3	7
BFX3085	BFX 2X24X1-3	7
BFX3090	BFX 3X24X1-3	7
BFX3095	BFX 4X24X1-3	7
BFX3100	BFX 5X24X1-3	7
BFX3125	BFX 3X32X1-3	7
BFX3135	BFX 5X32X1-3	7
BFX3145	BFX 8X32X1-3	7
BFX3170	BFX 5X40X1-3	7
BFX3185	BFX 10X40X1-3	7
BFX3200	BFX 5X50X1-3	7
BRF		
BRF0990	BRF 12X2X1000	15
BRF0995	BRF 12X3X1000	15
BRF1000	BRF 12X4X1000	15
BRF1005	BRF 12X5X1000	15
BRF1010	BRF 15X5X1000	15
BRF1015	BRF 20X5X1000	15
BRF1016	BRF 25X4X1000	15
BRF1020	BRF 32X5X1000	15
BRF1025	BRF 12X4X2000	15
BRF1030	BRF 15X5X2000	15
BRF1031	BRF 15X5X2000PC	15
BRF1035	BRF 20X5X2000	15
BRF1040	BRF 30X5X2000	15
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BRP1005	BRP 50X5	15
BRP1010	BRP 63X5	15
BRP1015	BRP 80X5	15
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BRP1025	BRP 125X5	15
BRP1030	BRP 50X10	15
BRP1035	BRP 60X10	15
BRP1040	BRP 80X10	15

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BRP1045	BRP 100X10	15
BRP1050	BRP 120X10	15
BOC		
BOC1000	BOC RIP 8	17
BOC1005	BOC KIT 8-5	17
BOC1010	BOC KIT 8-10	17
CPH		
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CPH1010	CPH 20M6	38
CPH1015	CPH 25M5	38
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CPH1030	CPH 30M8	38
CPH1035	CPH 35M6	38
CPH1040	CPH 35M8	38
CPH1045	CPH 35M10	38
CPH1050	CPH40M6	38
CPH1055	CPH 40M8	38
CPH1070	CPH 45M8	38
CPH1080	CPH 50M6	38
CPH1085	CPH 50M8	38
CPH1090	CPH 50M10	38
CPH1095	CPH 60M8	38
CPH1100	CPH 60M10	38
CPH1105	CPH 75M12	38
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DIN1000	DIN NF35H7	46
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DIN1145	DIN STC 70-6	47
DIN1150	DIN STC 90-6	47
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DIN3060	DIN NF35H15Z-3	46
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DZM1075	DZM 50M5	49
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DZM1085	DZM 70M5	49
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GFT1015	GFT 120x500	50
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GFT1035	GFT 200x500	50
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GPG2045	GPG 64G	43
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GNP2005	GNP 08N	43
GNP2010	GNP 10N	43
GNP2015	GNP 12N	43
GNP2020	GNP 15N	43
GNP2025	GNP 20N	43
GNP2030	GNP 30N	43
GNP2035	GNP 40N	43
GNP2040	GNP 50N	43
GNP2045	GNP 64N	43
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GPV1005	GPV-08N	43
GPV1010	GPV-10N	43
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GPV1025	GPV-20N	43
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GSL1010	GSL 08	44
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MCR1025	MCR 10x35	18
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