PULLMAN ELECTRIC

30 YEAR

- Panel Equipment & Installations
- Identification & Marking Solutions
- Cable Accessories

Pullman Electric Trade Mall

About us

Since 1996, Pullman Electric has been recognized all over Egypt as a leading supplier of quality products for panel equipment, installations, cable accessories,identification & marking solutions.

BUSINESS STRATEGY

Pullman Electric team concentrates on presenting products & services with high quality and supports all customers' needs. Our advantage begins with management, R&D, sales team and ends with our customer. Based on user's feedback, we continually develop & update our products to meet actual customer's demands. Our close working relationships with our customers allow us to stand with the growing markets trends.
All our products are evaluated & qualified with standard certificates and meet different
approvals such as UL, CSA, VDE, CE and others.

WHY CHOOSE US?

The product categories that Pullman Electric covers include the following:
• Panel equipment & installations:
[wiring terminals, terminal blocks, signaling devices, busbar isolators, busbars, standard cable ties, braided sleeves, rubber glands, heat shrink, thermal management solutions, measuring instruments, timers and cable protection & insulation].
• Cable accessories:
Wire nuts, connectors, cable glands, UV cable ties, stainless steel cable ties, cable lugs & termination kits.
• Identification & marking solutions:
[Thermal printers, Multi- color printers, cut & auto half cut printers]
PULLMAN ELECTRIC has a safety sign and label maker featuring "All-In-One" capability.
Print custom signs on demand and in-house. Our printing machines are a cost and time efficient label printers.
Make exactly the label you want, when you want it.
The unique plotter cutter on the machine allows one to create custom signs of any shape and size.
Using Pullman Signs & Marking Solutions facilitates time and cost saves and improves your work process.

APPLICATIONS

- ELECTRICAL PIDENTIFICATION.
- INDUSTERIAL IDENTIFICATION.
- MECHANICAL & PIPE IDENTIFICATION.
- DATA & TELECOMMUNICATION IDENTIFICATION.
- ANSI and OSHA standards required signage - Control Panels - Switch Boards -
Wire Marking/Wire Identification – Terminal Blocks marking - Health & Safety Signs -
Product & Asset Labeling - Visual Management Signs- Pipe Marking / GHS Labels - Custom Labels
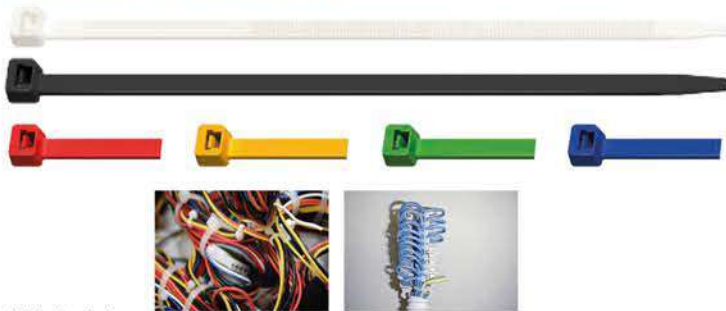
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Below Characters is applied for the cable ties made from Nylon 66,except for extra mentioned

Material:
Natural: Polyamide 6.6 natural
UV Black:Polyamide 6.6 + carbon black
Colors: Polyamide 6.6 natural + Colorant
* Flammability of raw material : UL 94 - V2
- Humidity absorption: 2,7% - 2,8% (23°C -50%RH)
* Working (Operation) Temperature: -40°C - + 85°C (-40°F - + 185°F)
* Min Installation Temperature: -10°C (14°F)
- Max sustainable temperature for short time: +110°C (230°F)
* Good resistance to bases, oils, greases, oil derivates,chloride solvents.
Limited resistance to acids. Not resistant to phenols.
- REACH, ROHS, PAHS Compliance.

APPLICATIONS
Electrical installations.
* Industrial wiring.
* Automotive.
* Panel building.
* Special applications.

BENEFITS
* Exclusive product (patented).
* Higher mechanical performances.
* Low insertion effort.
* Minimum installation temperature (-40°C).
Rounded edges for the safest application.
* Resealable and recyclable bag.

Standard Cable Ties

* Material:
Natural: Polyamide 6.6 natural
UV Black:Polyamide 6.6 + carbon black
Colors: Polyamide 6.6 natural + Colorant
* Flammability of raw material : UL 94 - V2
* Humidity absorption: 2,7% - 2,8% (23°C -50%RH)
- Working (Operation) Temperature: -40°C - + 85°C (-40°F - + 185°F)
* Min Installation Temperature: -10°C (14°F)
* Max sustainable temperature for short time: +110°C (230°F)
- Good resistance to bases, oils, greases, oil derivates, chloride solvents.
Limited resistance to acids. Not resistant to phenols.
- UL (Underwriters Laboratories) : File E258930 based newest standard UL62275
* TUV Approval: EN62275:2015
* REACH, ROHS, PAHS Compliance.

APPLICATIONS
* Electrical installations.
* Industrial wiring.
* Automotive.
* Panel building.

BENEFITS
*Bent rounded tip for an easier insertion through the head of the cable ties.
* Rounded edges for the safest application.
*Low friction coefficient of the material.

c(UL)us LISTED E258930 TYPE 21 TÜVRheinland EN62275 CE RoHS PAHs Reach

Heavy-Duty Cable Ties

* Material:
Natural: Polyamide 6.6 natural
UV Black:Polyamide 6.6 + carbon black
Colors: Polyamide 6.6 natural + Colorant
* Flammability of raw material: UL 94 - V2
* Humidity absorption: 2,7% - 2,8% (23°C -50%RH)
* Working (Operation) Temperature: -40°C - + 85°C (-40°F - + 185°F)
* Min Installation Temperature: -10°C (14°F)
* Max sustainable temperature for short time: +110°C (230°F)
- Good resistance to bases, oils, greases, oil derivates,chloride solvents.
Limited resistance to acids. Not resistant to phenols.
* UL (Underwriters Laboratories) : File E258930 based newest standard UL62275
* TUV Approval: EN62275:2015
* REACH, ROHS, PAHS Compliance.

APPLICATIONS
* Photovoltaic installations.
* Outdoor installations.
* Industrial wiring.

BENEFITS
* Excellent resistance to UV rays.
* Bent rounded tip for an easier insertion through the head of the cable ties.
* Rounded edges for the safest application.
* Suitable for photovoltaic installations.

c(UL)us LISTED E258930 TYPE 21 TÜVRheinland EN62275 CE RoHS PAHs Reach

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High Temperature Resistant Cable Ties

* Material:
Natural: Polyamide 46 natural
UV Black:Polyamide 46 + carbon black
* Flammability of raw material: UL 94 - V2
* Humidity absorption: 2,7% - 2,8% (23°C -50%RH)
* Working (Operation) Temperature: -40°C - + 130°C (-40°F - + 266°F)
* Min Installation Temperature: -10°C (14°F)
* Good resistance to bases, oils, greases, oil derivates,chloride solvents.
Limited resistance to acids. Not resistant to phenols.
* REACH, ROHS, PAHS Compliance.

APPLICATIONS
* Automotive (engine compartment).
* Use at high temperature.
* Industrial wiring.

BENEFITS
* Excellent resistance to high temperatures.
* Bent rounded tip for an easier insertion
  through the head of the cable ties.
* Rounded edges for the safest application.

Metal Detectable Cable Ties

* made of detectable nylon (PA66) compounds (the "Products")
These products are intended for use in the proximity of food processing,
handling, and packaging operations. In addition, these products are used
for cable management on food processing and packaging equipment,
and inside electrical control panels found in food
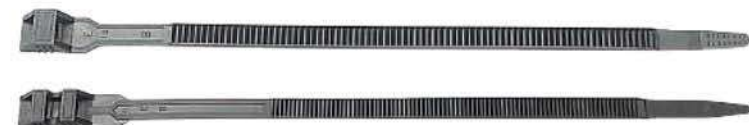processing and packaging operations

APPLICATIONS
* To fix wires in electrical equip
in food industries, pharmaceutical
and wherever there is a risk of
contamination by external agents
[Directive HACCP).
These cable ties are not suitable for
food contact.

BENEFITS
* Material easily detectable by metal
detectors, X-rays and visually.
* Bent rounded tip for an easier
insertion through the head of the
cable ties.
* Rounded edges for the safest
application.

Magic Cable Ties

* Self-locking head and body design
* Provides a fast and easy way of application
* Material: Hook: Nylon, Loop: Polyester, Base: Synthetic Resin
* Color available: Black, Green, Yellow, Red, Blue, White
* Melt temperature: Hook: 230°C, Loop: 180°C
* Working (Operation) Temperature -40°C - + 85°C (-40°F - + 185°F)
* Min Installation Temperature: -20°C (0°F)
Remarks: the tensile strength will be increased under the cold temperature, but the durability will be reduced.
* Water resistant: it could be used under the water, the tensile will be reduced 50%, but after dry it, the tensile will be recoverd.
* Chemical Resistant: Alkaline Soda (50%), Ammonia (28%), Hydrochlori Acid (2.5%), Nitric Acid (3.5%),can be still worked.
* Tensile Strength: 1x1cm connection: 25N (5.6lb), Peeling force: 1x1cm connection: 3N (0.67lb)

LINKED PRODUCTS:
Tools for cable ties, see pages 80

APPLICATIONS
* Electrical installations.
* Photovoltaic installations.
* Industrial wiring.
* Heavy-duty applications.
* External applications.

BENEFITS
* Highly withstands climatic changes.
also in sea-areas.
* Excellent resistance to UV rays.
* Can be used in temporary position,
which allows the re-opening.
* A very practical box that can easily
be hung to your belt. Its convenient
upper opening, very easy to be
reclosed, allows the quickest
picking-up of the product and the
best protection from dust.

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Extern Cable Ties

* Material:Polyamide 12, Polyamide 6.6 or Polyamide 6.6 in High Impact Grade
High Impact Grade Polyamide 6.6, is an unreinforced, super tough for
injection molding and extrusion, it offers outstanding impact resistance
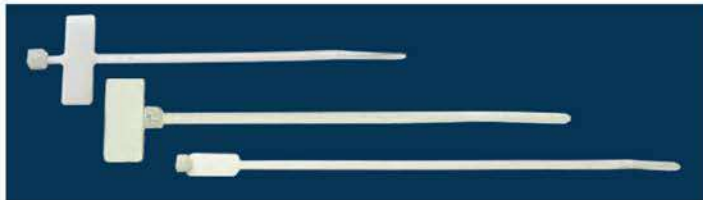over a wide temperature and humidity range.

Marker Cable Ties
Material:Polyamide 6.6

APPLICATIONS
- Electrical installations.
- Industrial wiring.
* Automotive.
* Panel building.
* Special applications where
a high resistance is required.

BENEFITS
* Hard to release.
* Limited insertion effort.
* Rounded edges for the safest application.
* Bent rounded tip for an easier insertion.
* The cable ties can bé closed by hand.
  Without the dedicated tool

APPLICATIONS
* Electrical installations.
* Industrial wiring.
* Automotive.
* Panel building.
* Special applications.

Item No.	SIZE (MM)	Tensile Strength	Miin Bunde Diameter (mm)	Mar Bungg Diamatar (mm)	Min Bundle Diameter (in)	Max Bundle Diameter (in)
LH-M-M-100-4	2.5×100	BON(18lb)	3.00	22.00	012	0.86
LH-M-M-200-8	2 5×200	BON(18lb)	3.00	53.30	012	2.12
LH-M-S-190-8	2.8×190	230N(50lb)	3.50	5090	0.14	2.00
LH-M-S-300-12	4.8×300	230N(50lb)	3.50	84.40	0.14	3.32
LH-M-S-370-14	4.8×370	230N(50lb)	3.30	106.70	0.14	4.20
LH-M-M-110-4	25x110	80N(18lb)	3.00	22,80	0.12	0.89

Item No.	TYPE	Wirte Area Imm	Wirte Area (in)
LH-M-M-100-4	monzonte	7 76x245	0.30 x 0.95
LH-M-M-200-8	Honzonte	7.75×24.5	0.30 x 0.95
LH-M-S-190-8	Mertica	12.9×27	0.50 × 1.05
LH-M-S-300-12	EOILEN	12.9×27	0.50 ÷ 1.05
LH-M-S-370-14	Vertica	12.9×27	0.50 x 1.05
LH-M-M-110-4	Flag	9.0x20	0. 35×0.78

Cable Ties Mounts Pad in Nylon
* Material:Polyamide 6.6
* 3M adhesive is available upon speical request.
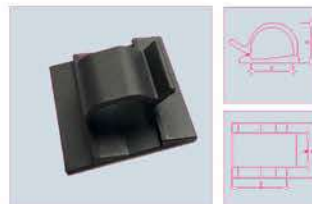* Can be screwed if without adhesive
Cable Ties Mounts Pad in ABS
* Material: Acrylonitrile Butadiene Styren

Adhesive Cable Clamp
* Material:Polyamide 6.6
* 3M adhesive is available
upon speical request.

Cable Ties Screw Mount
* Material:Polyamide 6.6

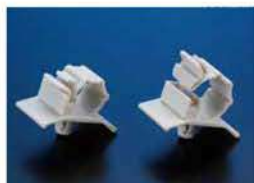## CABLE CLAMPS
• Material: UL approved
NYLON 66, 94V-2

PUSH TIE MOUNT
● Material: UL approved grey
NYLON 66, 94V-2

Cable Ties Mount Plug
* Material:Polyamide 6.5

BALL LOCK TYPE STAINLESS STEEL CABLE TIES

Self Locking Ball Type Stainless Steel Cable Ties provides a strong durable bundling and fastening. Low weight, high strength of roller ball are designed for use in application where strength, vibration, weathering corrosion extremes are a factor.
Available in Grade 316 & 304 Coated or Un-coated
in 4.6 mm and 7.9 mm widths and various lengths
The normal operating range for the roler bal uncoated
ties version is 8-0 C° ot +538 C° approximately
For coated version normal operating range is 8-0 C° ot +150 C°.
it is available in wide choice of colors

MINIMUM LOOP TENSILE STRENGTH

4.6 mm width Un-coated - 130 lbs   4.6 mm width Coated - 110 lbs
7.9 mm width Un-coated - 270 lbs   7.9 mm width Coated - 200 lbs

Ball Lock Type Cable Ties are also available in widths of 12 mm and 16 mm with various lengths for special requirements
Intermediate lengths are available on demand for special requirements

TECHNICAL DETAILS

Type: Roler Bal Un-coated
Width: 4.6 mm and 7.9 mm
Material: S 304 &S 316

Type: Roller Ball Coated
Width: 46. mm and 7.9 mm
Material: S 304 &S 316

LADDER TYPE STAINLESS STEEL CABLE TIES

Ladder Type Stainless Steel Cable Ties are as strong as Bal Lock type Cable Ties,
The unique locking design on the strip can be applied without any crimping tool.
The Ladder type ties are designed for self locking fast and easy application
Available in Grade 316 & 304 Coated or Un-coated,
in 7mm and 12 mm widths and various lengths.
Normal operating range for uncoated ties is -80 C° at +538 C° and fully coated ties is -80 C° to +150 C°.
it is available in wide choice of colors
Coated ties are recommended for resistance ot corosion, chemical and weathering

MINIMUM LOOP TENSILE STRENGTH

width - 100 lbs 7 mm   mm width - 200 lbs 12 mm
Intermediate lengths are available on demand for special requirements
Mentioned products are also available in material SS 304, use 304 instead of 316 in Product Code e.g.
7LTU-316-100 shall be 7LTU-304-100

Type: Ladder type Un-coated	Width: 7 mm and 12 mm	Material: SS 304 & SS 316
Type: Ladder type Coated	Width: 7 mm and 12 mm	Material: SS 304 & SS 316

TECHNICAL DETAILS

Type: Ladder type Un-coated
Width: 7mm and 21 mm
Material: S 304 & S 316

Type: Ladder type Coated
Width: 7mm and 12 mm
Material: S 304 &S 316

RELEASABLE TYPE STAINLESS STEEL CABLE TIES

Releasable Type Stainless Steel Cable Ties provides easy and quick installations because of its unique design with buckle.
Fasten-unfasten-refasten means greater flexibility with Releasable type Cable Ties The normal operating range for
the uncoated ties versionis -40 °C to +325 °C
approximately. For coated
version normal operating range is -60 °C to +170 °C
It is available in wide choice of colors. Coated ties have better weathering properties with excellent resistance
to corrosion, radiation and abrasion
Intermediate lengths are available on demand for special requirements

TECHNICAL DETAILS

Type: Releasable Coated and Un-coated
Width: 5 mm and 10 mm

Material: SS 304 & SS 316
MINIMUM LOOP TENSILE STRENGT
width Un-coated & Coated - 400 lbs 5 mm
width Un-coated & Coated- 500 lbs 10 mm

STAINLESS STEEL BANDS

Designed for quick installation, highest clamping force and gap-free inside diameter. The best choice for demanding applications!
• Apply 3-5 times faster than band and buckle hand tools
• Unique lock formed under full tension maximizing tightness
• 201 SS band provides greater material strength allowing tighter clamps and can be double wrapped for additional strength
• 3/4" band available in plastic totes
• Application Tool: UL4000-D cordless
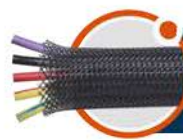
Braided Sleeve Products

GENERAL PURPOSE	METAL / SHIELDING	EXTREME TEMPERATURE
For general bundling & protection in office, commercial, & industrial applications, these products offer economical & varied solutions.	EMI, RFI, & ESD shielding solutions	Designed for protection from high temperature environments where failure would be catastrophic, these products are state-of-the-art in high-temp material engineering.
HEAVY DUTY	ADVANCED ENGINEERING	SPECIALTY
For applications where protection from abrasion damage is a primary concern, this line of Techflex® products is the right solution for rugged, challenging environments.	Engineered from specialized polymers, designed to exact specifications, & manufactured to tight tolerances, these premium products are in use in many aerospace, military, & biomedical applications.	Techflex® specializes in providing highly engineered, application specific products to fulfill our customers' individual specifications.

Flexo PET · Flexo reMix · Over expanded · Tight weave · Clean Cut

Flexo F6 · Flexo Wrap · Grip Wrap · F6 Woven Wrap · Heavy Wall

Flexo Super Duty · Gorilla · Dura-Wrap · Dura-Flex · Dura-Flex Pro

Metal Braid · Flexo Stainless · Flexo Shield · Flexo Conductive · Flexo FR

Liquid Wrap · Flexo F6 FR · Flexo Wrap FR · Flexo Tight Weave FR · Halar

Techon PFA · Aramid Armor · Kevlar · Aramid Armor · Studio Key Sleeve

Insultherm · Insultherm · Header Wrap · Non-Skid · Chrome

Dura-Race · Non-Skid · Nylon Mono · Mylar · Silicone Flex Glass

EXPANDABLE BRAIDED POLYESTER SLEEVING "SERIES TSRI"

General features
The braided sleeving of the Series TSRI, made from single polyester strands, is particularly suitable for protecting electrical cables and wiring. It is flame-retardant, insulating, resistant to abrasion and to the marine atmosphere. This series is available in diameters ranging from 4 mm to 60 mm and upon special request diameters of up to 90 mm can be made available

EXPANDABLE BRAIDED NYLON 66 SLEEVING "SERIES TS66"

General features
The braided sleeving of the series TS66 is made from monofilaments of NYLON 66 and is particularly suitable for applications in which good resistance to abrasion and to UV rays is required.
It is self-extinguishing and insulating and is available in standard diameters from 3 mm to 60 mm.
Other diameters up to a maximum of 150 mm are available upon request.

EXPANDABLE BRAIDED POLYESTER SLEEVING "SERIES TS800-RI"
UL94-V0 ACCORDING TO RAILWAY RULE EN 45545

General features
The braided sleeving of the Series TS800-RI, made from single polyester strands, is particularly suitable where a high degree of flame-retardance is required. It is insulating, resistant to abrasion and to the marine atmosphere and is mainly used for protecting electrical cables and wiring. The UL94-V0 characteristic can be recognised from the single strand of a different colour from that used for the sleeving which is inserted during its production. This series is available in diameters ranging from 4 mm to 60 mm. According to railway rule EN 45545

SILICON FIBREGLASS SLEEVING "SERIES GVS"

General features
GVS silicon fibreglass sleeving is particularly suitable for all uses in which good mechanical resistance, flexibility and temperature withstanding characteristics are required. It conforms to the thermal class C (250 °C) and also withstands peaks of temperature of up to 290 °C. It is produced with three values of standard voltage: 1500 V, 2500 V, 4000V.

SLEEVING IN FIBRE GLASS WITH EXTRUDED SILICON "SERIES GVS-UL"

General features
The sleeving in fibreglass with extruded silicon GVS-UL is particularly suitable for all situations in which good mechanical resistance, flexibility and resistance against particularly high temperatures are necessary. It complies with thermal class C (250 °C) and also withstands temperature peaks up to 290 °C. It is produced in 5 standard voltage values: 1500 V, 3000 V, 4000 V, 7000 V, 10000V

SLEEVING IN FIBRE GLASS WITH EXTRUDED SILICON "SERIES GVS-SIL"

General features
The sleeving in fibreglass with extruded silicon GVS-SIL is particularly suitable for all situations in which good mechanical resistance, flexibility and resistance against particularly high temperatures are necessary. It complies with thermal class C (250 °C) and also withstands temperature peaks up to 290 °C. It is produced in 5 standard voltage values: 1500 V, 3000 V, 4000 V, 7000 V, 10000 V

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Flame - Retardant polyolefin tubing

◆ Features

Shrink ratio: 2:1
Operating temperature: -55°C~125°C, -55°C~ 135°C
Minimum shrink temperature: 70°C
Minimum full recovery temperature: 110°C
Very flexible, highly flame-retardant.
Low shrink temperature
Good thermal stability.
UL224 E214175 125°C 600V VW-1
AMS-DTL-23053/5 class 1 and class 3
Conform to RoHS 2.0 ((EU)2015/863)

◆ Technical Data

Property		Test method	Requirement
Longitudinal shrinkage		ASTM D 2671	-10 % ~ 10 %
Tensile strength		ASTM D 638	≥10.4MPa
Ultimate elongation		ASTM D 638	≥200%
Aging 158°C168hrs	Tensile strength after aging	ASTM D 638	≥70% of original
	Ultimate elongation after aging	ASTM D 638	≥100%
Dielectric voltage withstand		UL224	2500V, 60sec no breakdown
Dielectric strength		ASTM D2671	≥19.7kV/mm
Volume resistivity		ASTM D 876	$>10^{14}\Omega\cdot cm$
Heat shock <200°C, 4hrs>		ASTM D2671	No cracking, flow,or dripping
Low temperature flexibility<-55°C, 4hrs>		ASTM D2671	No cracking
Flammability		VW-1	Pass

◆ Color

Standard color: black, white,red,blue,yellow, green.Special colors are available upon request.

◆ Dimension

Size (mm)	As supplied(mm) Inside diameter	As supplied(mm) Wall thickness	After recovery(mm) Inside diameter (max.)	After recovery(mm) Wall thickness (min.)	Standard Length (m/spool)
Φ0.8	1.0±0.2	0.15±0.05	0.6	0.25	200
Φ1.0	1.5±0.3	0.20±0.05	0.7	0.33	200
Φ1.5	2.0±0.3	0.20±0.05	0.8	0.34	200
Φ2.0	2.5±0.3	0.20±0.05	1.1	0.34	200
Φ2.5	3.0±0.3	0.25±0.05	1.25	0.42	200
Φ3.0	3.5±0.3	0.25±0.05	1.5	0.42	200
Φ3.5	4.0±0.3	0.25±0.05	1.75	0.42	200
Φ4.0	4.5±0.3	0.25±0.05	2.0	0.42	200
Φ4.5	5.0±0.3	0.25±0.05	2.25	0.42	200
Φ5.0	5.5±0.3	0.28±0.05	2.5	0.52	100
Φ6.0	6.5±0.3	0.28±0.05	3.0	0.52	100
Φ7.0	7.6±0.3	0.30±0.07	3.5	0.56	100
Φ8.0	8.6±0.3	0.30±0.07	4.0	0.56	100
Φ9.0	9.6±0.3	0.30±0.07	4.5	0.56	100
Φ10.0	10.7±0.4	0.30±0.07	5.0	0.56	100
Φ11.0	11.7±0.4	0.30±0.07	5.5	0.56	100
Φ12.0	12.7±0.4	0.30±0.07	6.0	0.56	100
Φ13.0	13.7±0.4	0.35±0.08	6.5	0.69	100
Φ14.0	14.7±0.4	0.35±0.08	7.0	0.69	100
Φ15.0	15.7±0.5	0.35±0.08	7.5	0.69	100
Φ16.0	16.7±0.5	0.35±0.08	8.0	0.69	100
Φ18.0	19.0±0.5	0.40±0.10	9.0	0.77	100
Φ20.0	21.0±0.5	0.40±0.10	10.0	0.77	100
Φ22.0	23.0±0.5	0.40±0.10	11.0	0.77	100
Φ25.0	26.0±1.0	0.45±0.10	12.5	0.87	50
Φ28.0	29.0±1.0	0.45±0.10	14.0	0.87	50
Φ30.0	31.5±1.0	0.45±0.10	15.0	0.87	50
Φ35.0	36.5±1.0	0.50±0.10	17.5	0.97	50
Φ40.0	42.0±1.5	0.50±0.10	20.0	0.97	50
Φ50.0	53.0±2.0	0.55±0.10	25.0	0.97	25
Φ60.0	63.0±3.0	0.60±0.15	30.0	1.17	25
Φ70.0	71.0±3.0	0.60±0.15	35.0	1.17	25
Φ80.0	81.0±3.0	0.65±0.15	40.0	1.20	25
Φ90.0	91.0±3.0	0.75±0.15	45.0	1.30	25
Φ100	101.0±3.0	0.75±0.15	50.0	1.30	25
Φ120	121.0±4.0	0.80±0.20	60.0	1.40	15
Φ150	151.0±4.0	0.80±0.20	75.0	1.50	15
Φ180	181.0±4.0	0.80±0.20	90.0	1.60	15

Size (inch)	Inside diameter (mm/inch) As supplied (min.)	Inside diameter (mm/inch) After recovery (max.)	Wall thickness (mm/inch) After recovery	Standard Length (m/spool)
3/64	1.2(0.046)	0.6(0.023)	0.40±0.08 (0.016±0.003)	200
1/16	1.6(0.063)	0.8(0.031)	0.43±0.08 (0.017±0.003)	200
3/32	2.4(0.093)	1.2(0.046)	0.51±0.08 (0.020±0.003)	200
1/8	3.2(0.125)	1.6(0.062)	0.51±0.08 (0.020±0.003)	200
3/16	4.8(0.187)	2.4(0.093)	0.51±0.08 (0.020±0.003)	100
1/4	6.4(0.250)	3.2(0.125)	0.64±0.08 (0.025±0.003)	100
3/8	9.5(0.375)	4.8(0.187)	0.64±0.08 (0.025±0.003)	100
1/2	12.7(0.500)	6.4(0.250)	0.64±0.08 (0.025±0.003)	100
3/4	19.1(0.750)	9.5(0.375)	0.76±0.08 (0.030±0.003)	100
1	25.4(1.000)	12.7(0.500)	0.89±0.12 (0.035±0.005)	50
1 1/4	31.8(1.250)	15.9(0.625)	1.02±0.15 (0.040±0.006)	50
1 1/2	38.1(1.500)	19.1(0.750)	1.02±0.15 (0.040±0.006)	50
2	50.8(2.000)	25.4(1.000)	1.14±0.16 (0.045±0.007)	25

Non standard sizes are available upon request.
Cut pieces available upon request.

Heat Shrinkable Busbar Insulation Tube

◆ Features

Shrink ratio: 2:1 (1kV&35kV) & 2.5:1 (10kV)
Working temperature: -55ºC ~ 125ºC
Shrink temperature: 84ºC ~ 125ºC
Environmental, flexible, flame retardant, soft

◆ Technical Data

Property	Standard		Test method
Tensile Strength	Standard		GB/T 1040
	≥10.4(Before Aging)		130ºC *168hrs
Elongation	≥7.3(After Aging)		GB/T 1040; GB/T7141
	≥300(Before Aging)		130ºC*168hrs
Breakdown Strength	No Cracking		GB/T 1408.1
Tensile Strength	≥25		GB/T 1410
Volume Resistivity	≥1×1014		GB/T 1410
Flame Retardant	≥30		GD/T 2406

*This data is suitable for 10kv bus bar protection tube. When managing this test, the user must make the tube recovery evenly and make sure the max thickness>2mm, and bus-bar tubes are longer than 1200mm. **35kV bus bar off center proportion≤50%.

◆ Dimension

Size	As supplied(mm)		After recovery (mm)	Standard length (m/spool)
	Width (mm)	Inner Diameter (wall thickness)	Max.Inner Diameter (wall thickness)	
1KV KHBB30	30	31.5±1.0 (0.45±0.15)	15 (0.95±0.15)	50
1KV KHBB35	40	37.0±1.5 (0.50±0.15)	16 (1.0±0.15)	50
1KV KHBB40	40	40.5±1.5 (0.50±0.15)	20 (1.0±0.15)	50
1KV KHBB50	50	50.5±2.0 (0.50±0.15)	25 (1.0±0.15)	25
1KV KHBB60	60	60±3.0 (0.80±0.2)	30 (1.3±0.2)	25
1KV KHBB70	80	70±3.0 (0.80±0.2)	32 (1.5±0.2)	25
1KV KHBB80	80/100	80±3.0 (0.80±0.3)	40 (1.5±0.3)	25
1KV KHBB90	100	90±4.0 (0.80±0.3)	43 (1.5±0.3)	25
1KV KHBB100	100/120	100±4.0 (0.80±0.3)	50 (1.5±0.3)	25
1KV KHBB120	150	120±4.0 (0.80±0.3)	60 (1.5±0.3)	25
1KV KHBB150	180	150±4.0 (0.80±0.3)	75 (1.5±0.3)	25
10KV KHBB20	20	20±0.8 (1.0±0.2)	9 (2.5±0.2)	25
10KV KHBB30	30	30±0.8 (1.0±0.2)	13 (2.5±0.2)	25
10KV KHBB40	40	40±1.0 (1.2±0.2)	15 (2.5±0.2)	25
10KV KHBB50	50	50±2.0 (1.2±0.2)	20 (2.5±0.2)	25
10KV KHBB60/65	60	65±3.0 (1.2±0.2)	24 (2.8±0.2)	25
10KV KHBB80	80/100	80±3.0 (1.2±0.3)	32 (2.8±0.3)	25
10KV KHBB100	100/120	100±4.0 (1.2±0.3)	40 (2.8±0.3)	25
10KV KHBB120	150	120±4.0 (1.2±0.3)	48 (2.8±0.3)	25
10KV KHBB150	200	150±4.0 (1.2±0.3)	60 (2.8±0.3)	25
10KV KHBB180	MAX	180±5.0 (1.2±0.3)	70 (2.8±0.3)	25
10KV KHBB210	MAX	210±5.0 (1.2±0.3)	80 (2.8±0.3)	25
10KV KHBB240	MAX	240±5.0 (1.2±0.3)	90 (3.8±0.3)	25
10KV KHBB300	MAX	300±5.0 (1.2±0.3)	100 (3.8±0.3)	25
35KV KHBB30	30	30±1.0 (2.0±0.3)	13 (4.0±0.3)	15
35KV KHBB40	40	40±1.0 (2.0±0.3)	15 (4.0±0.3)	15
35KV KHBB50	50	50±2.0 (2.2±0.3)	20 (4.5±0.3)	15
35KV KHBB60/65	60	65±2.0 (2.2±0.3)	24 (4.5±0.3)	15
35KV KHBB80	80/100	80±3.0 (2.2±0.3)	32 (4.5±0.3)	15
35KV KHBB100	100/120	100±4.0 (2.5±0.3)	40 (4.5±0.3)	15
35KV KHBB120	150	120±4.0 (2.5±0.3)	48 (5.0±0.3)	15
35KV KHBB150	200	150±4.0 (2.5±0.3)	60 (5.0±0.3)	15
35KV KHBB180	MAX	180±5.0 (2.5±0.3)	70 (5.5±0.3)	15
35KV KHBB210	MAX	210±5.0 (2.5±0.3)	80 (5.5±0.3)	15

We Are Proud To Be The Top Wire Terminal Choice For Thousands Of Electrical Contractors. No Matter What Kinds Of Electrical Terminals You Need, You Can Find The Ideal One From Our Extensive Selection Of Ring Terminals, Spade Connectors, Disconnects, Butt Splices And Connectors, Heat Shrink Terminals And Other Crimp Wire Connectors.

NON-INSULATED TERMINALS (BRAZED SEAM)

TERMINAL MATERIAL: COPPER
PLATING : TIN

VINYL-INSULATED TERMINALS

INSULATION MATERIAL: VINYL (PVC)
TERMINAL MATERIAL: COPPER
PLATING: TIN

VINYL-INSULATED TERMINALS (EASY ENTRY)

INSULATION MATERIAL: VINYL (PVC)
TERMINAL MATERIAL: COPPER
PLATING: TIN

VINYL-INSULATED TERMINALS (DOUBLE CRIMP) PVC

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: COPPER
METALLIC SLEEVE: COPPER
PLATING: TIN

SGE
Terminal & Wiring Accessories Inc.

SERVICE

EFFICIENCY

GOOD QUALITY

TERMINALS
EASY-ENTRY
(FUNNEL VINYL INSULATED)
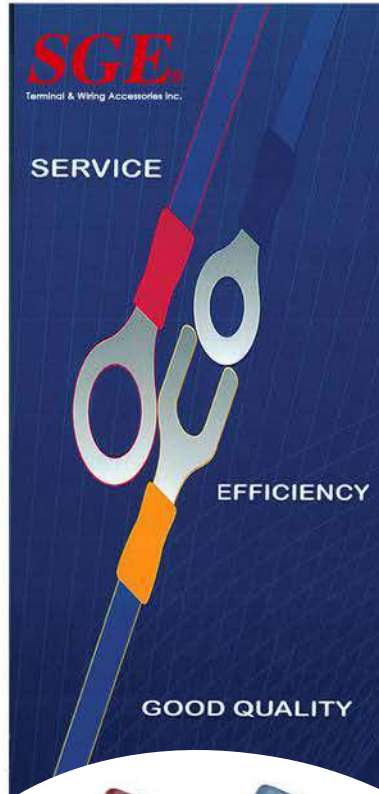
INSULATED HEAT SHRINKABLE TERMINALS BRAZED SEAM

INSULATION MATERIAL: HIGH DENSITY PE
TERMINAL MATERIAL: COPPER
PLATING: TIN

VINYL-INSULATED SPADE TERMINALS

INSULATION MATERIAL: VINYL (PVC
MATERIAL:COPPER
PLATING:TIN

NYLON-INSULATED TERMINALS (EASY-ENTRY)

INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: COPPER
PLATING: TIN

NYLON-INSULATED TERMINALS)DOUBLE CRIMP(

INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: COPPER
METALLIC SLEEVE: COPPER
PLATING: TIN

Applications

* Connection of cables on terminal blocks (ring, fork and pin type)

* Leads, junctions and cable insulation (quick connectors)

* Connection and insulation of electric cables (caps and terminals)

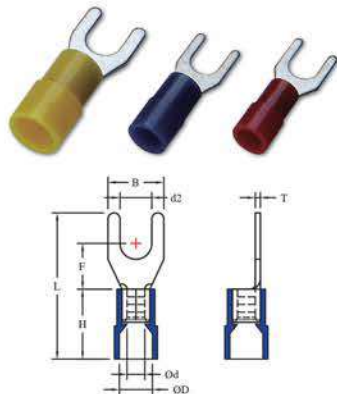* Connection of cables (joints and couplings)

Wiring Terminals

PULLMAN ELECTRIC

NYLON-INSULATED RING TERMINALS (EASY-ENTRY)

INSULATION MATERIAL: NYLON
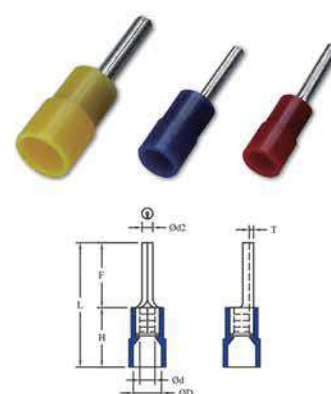TERMINAL MATERIAL: COPPER
PLATING: TIN
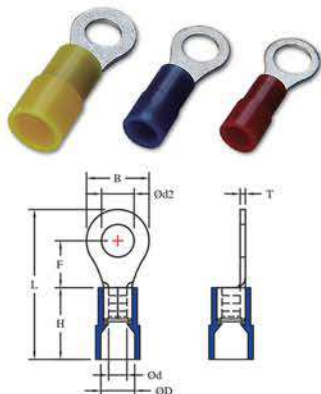
NYLON-INSULATED SPADE TERMINALS (EASY-ENTRY)

INSULATION MATERIAL: NYLON
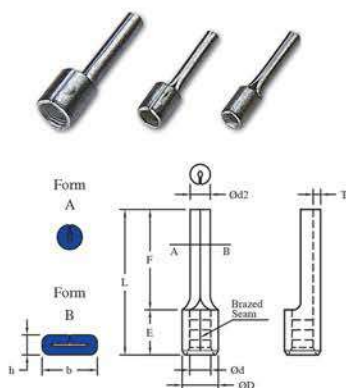TERMINAL MATERIAL: COPPER
PLATING: TIN

NYLON-INSULATED PIN TERMINALS (EASY-ENTRY)

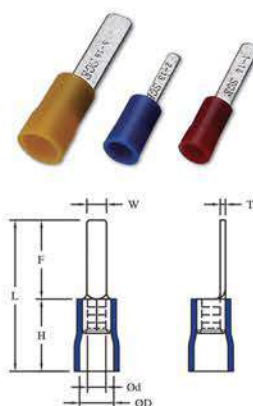INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: COPPER
PLATING: TIN

NON-INSULATED PIN TERMINALS (BRAZED SEAM)
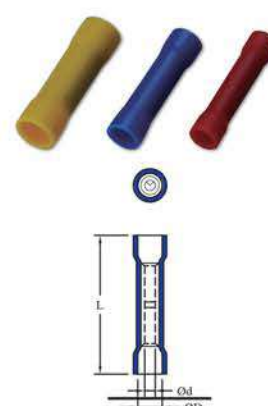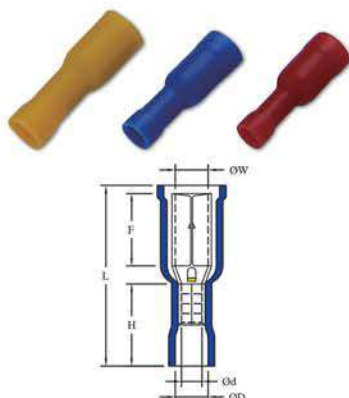
TERMINAL MATERIAL: COPPER
PLATING: TIN

VINYL-INSULATED BLADE TERMINALS PVC

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: COPPER
PLATING: TIN

VINYL-INSULATED BUTT SPLICE CONNECTORS (COPPER TUBULAR) PV

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: COPPER TUBULAR
PLATING: TIN

VINYL-FULLY INSULATED RECEPTACLE DISCONNECTORS PVC

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: BRASS
PLATING: TIN

VINYL-FULLY INSULATED RECEPTACLE DISCONNECTORS (DOUBLE CRIMP)PVC

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: BRASS
METALLIC SLEEVE: COPPER
PLATING: TIN
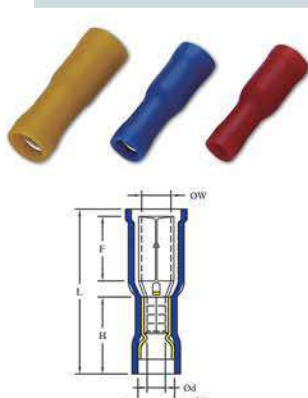
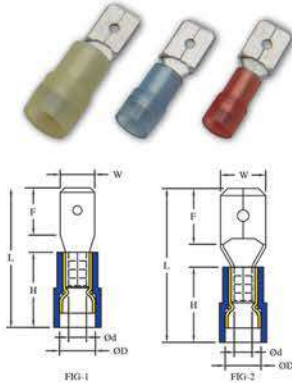## VINYL-INSULATED BUTT SPLICE CONNECTORS (BRASS PLATE) PVC

INSULATION MATERIAL: VINYL(PVC)
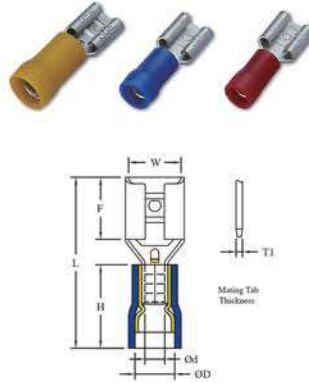TERMINAL MATERIAL: BRASS
PLATING: TIN

NYLON-INSULATED MALE DISCONNECTORS (DOUBLE CRIMP)

INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: BRASS
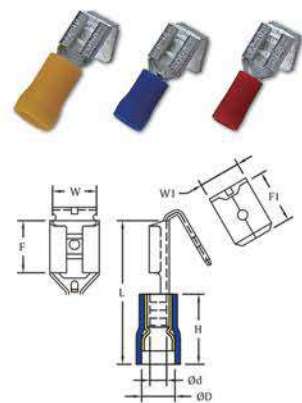METALLIC SLEEVE: COPPER
PLATING: TIN

VINYL-INSULATED FEMALE DISCONNECTORS (DOUBLE CRIMP) PVC

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: BRASS
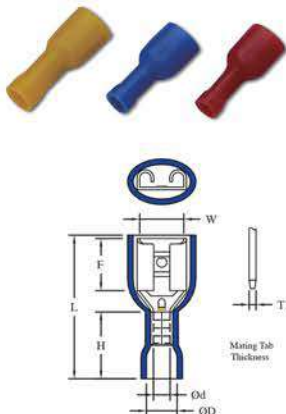METALLIC SLEEVE: COPPER
PLATING: TIN

VINYL-INSULATED PIGGY BACK DISCONNECTORS(DOUBLE CRIMP) PVC

INSULATION MATERIAL: VINYL(PVC)
TERMINAL MATERIAL: BRASS
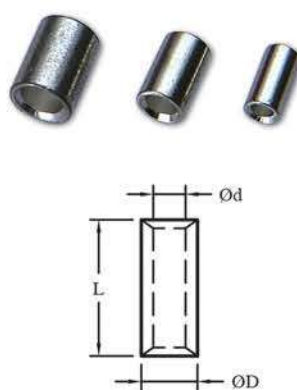METALLIC SLEEVE: COPPER
PLATING: TIN

VINYL-FULLY INSULATED FEMALE DISCONNECTORS PVC

INSULATION MATERIAL: VINYL(PVC)
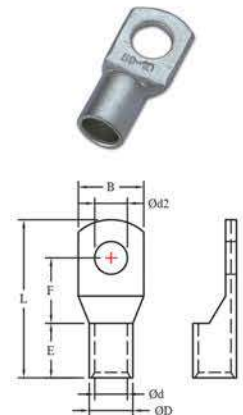TERMINAL MATERIAL: BRASS
PLATING: TIN

NON-INSULATED PARALLEL CONNECTORS

INSULATION MATERIAL: VINYL(PVC)
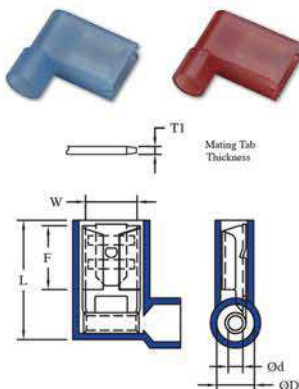TERMINAL MATERIAL: BRASS
PLATING: TIN

COPPER TUBULAR LUGS TERMINALS (TL TAPYE)

TERMINAL MATERIAL: COPPER
PLATING: TIN

NYLON INSULATED FLAG FEMALE DISCONNECTORS (EASY-ENTRY)

INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: BRASS
PLATING: TIN

OPEN BARREL TERMINALS
TERMINAL MATERIAL: BRASS

VINYL-INSULATED SLEEVES PVC
MATERIAL: VINYL(PVC)

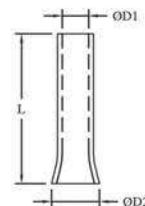## INSULATED CORD END SLEEVES (DIN 46228 / 4)

INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: COPPER   PLATING: TIN

WIRE RANGE mm²	ITEM NO. (T:French Color)		ITEM NO. (W:German Color)		ITEM NO. (DIN:DIN Color)		Dimensions (mm)				PACKING PCS
							ØD1	ØD2	L1	L2	
0.25 mm²	LT002506-VI	VIOLET	LT002506-LB	LIGHT BLUE			0.8	1.9	6.0	10.0	1,000
	LT002508-VI		LT002508-LB						8.0	12.0	
0.34 mm²	LT003406-PI	PINK	LT003406-TU	TURQOISE			0.8	1.9	6.0	10.0	1,000
	LT003408-PI		LT003408-TU						8.0	12.0	
0.50 mm²	LT005006-W	WHITE	LT005006-OR	ORANGE	LT005006-W	WHITE	1.0	2.6	6.0	12.0	500
	LT005008-W		LT005008-OR		LT005008-W				8.0	14.0	
	LT005010-W		LT005010-OR		LT005010-W				10.0	16.0	
0.75 mm²	LT007506-BL	BLUE	LT007506-W	WHITE	LT007506-GY	GREY	1.2	2.8	6.0	12.0	500
	LT007508-BL		LT007508-W		LT007508-GY				8.0	14.0	
	LT007510-BL		LT007510-W		LT007510-GY				10.0	16.0	
	LT007512-BL		LT007512-W		LT007512-GY				12.0	18.0	
1.0 mm²	LT010006-R	RED	LT010006-Y	YELLOW	LT010006-R	RED	1.4	3.0	6.0	12.0	500
	LT010008-R		LT010008-Y		LT010008-R				8.0	14.0	
	LT010010-R		LT010010-Y		LT010010-R				10.0	16.0	
	LT010012-R		LT010012-Y		LT010012-R				12.0	18.0	
1.5 mm²	LT015008-BK	BLACK	LT015008-R	RED	LT015008-BK	BLACK	1.7	3.5	8.0	14.0	500
	LT015010-BK		LT015010-R		LT015010-BK				10.0	16.0	
	LT015012-BK		LT015012-R		LT015012-BK				12.0	18.0	
	LT015018-BK		LT015018-R		LT015018-BK				18.0	24.0	
2.5 mm²	LT025008-GY	GREY	LT025008-BL	BLUE	LT025008-BL	BLUE	2.2	4.2	8.0	14.0	500
	LT025010-GY		LT025010-BL		LT025010-BL				10.0	16.0	
	LT025012-GY		LT025012-BL		LT025012-BL				12.0	18.0	
	LT025018-GY		LT025018-BL		LT025018-BL				18.0	24.0	

| WIRE RANGE mm²	ITEM NO. (T:French Color)		ITEM NO. (W:German Color)		ITEM NO. (DIN:DIN Color)		Dimensions (mm)				PACKING PCS
							ØD1	ØD2	L1	L2	
4.0 mm²	LT040010-OR	ORANGE	LT040010-GY	GREY	LT040010-GY	GREY	2.8	4.8	10.0	17.0	500
	LT040012-OR		LT040012-GY		LT040012-GY				12.0	20.0	
	LT040018-OR		LT040018-GY		LT040018-GY				18.0	26.0	
6.0 mm²	LT060012-GR	GREEN	LT060012-BK	BLACK	LT060012-Y	YELLOW	3.5	6.3	12.0	20.0	500
	LT060018-GR		LT060018-BK		LT060018-Y				18.0	26.0	
10.0 mm²	LT100012-BR	BROWN	LT100012-IV	IVORY	LT100012-R	RED	4.5	7.6	12.0	22.0	500
	LT100018-BR		LT100018-IV		LT100018-R				18.0	28.0	
16.0 mm²	LT160012-IV	IVORY	LT160012-GR	GREEN	LT160012-BL	BLUE	5.8	8.8	12.0	24.0	500
	LT160018-IV		LT160018-GR		LT160018-BL				18.0	28.0	
25.0 mm²	LT250016-BK	BLACK	LT250016-BR	BROWN	LT250016-Y	YELLOW	7.3	11.2	16.0	30.0	500
	LT250018-BK		LT250018-BR		LT250018-Y				18.0	30.0	
	LT250022-BK		LT250022-BR		LT250022-Y				22.0	36.0	
35.0 mm²	LT350016-R	RED	LT350016-BE	BEIGE	LT350016-R	RED	8.3	12.7	16.0	30.0	500
	LT350018-R		LT350018-BE		LT350018-R				18.0	32.0	
	LT350025-R		LT350025-BE		LT350025-R				25.0	39.0	
50.0 mm²	LT500020-BL	BLUE	LT500020-OL	OLIVE	LT500020-BL	BLUE	10.2	15.0	20.0	36.0	500
	LT500025-BL		LT500025-OL		LT500025-BL				25.0	40.0	
70.0 mm²					LT700021-Y	YELLOW	13.5	16.0	21.0	37.0	100
95.0 mm²					LT950025-R	RED	14.7	18.0	25.0	44.0	100
120.0 mm²					LT120027-BL	BLUE	16.7	20.0	27.0	48.0	100
150.0 mm²					LT150032-Y	YELLOW	19.5	23.0	32.0	58.0	100

NON-INSULATED CORD END SLEEVES (DIN 46228 / 1)
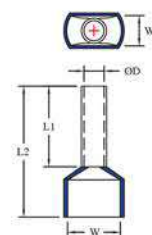
TERMINAL MATERIAL: COPPER
PLATING: TIN

INSULATED CORD END SLEEVES (DIN 46228 / 4)

INSULATION MATERIAL: NYLON
TERMINAL MATERIAL: COPPER
PLATING: TIN
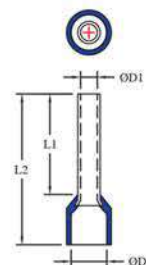
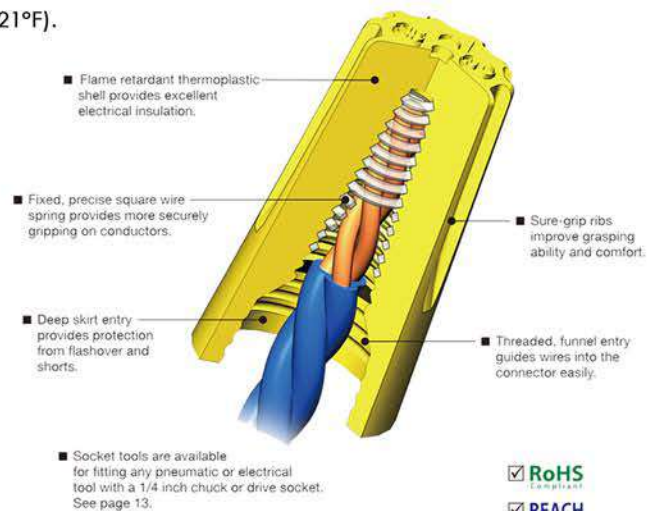### INSULATED TWIN CORD END SLEEVES (DIN 46228 / 4)

INSULATION MATERIAL: NYLON
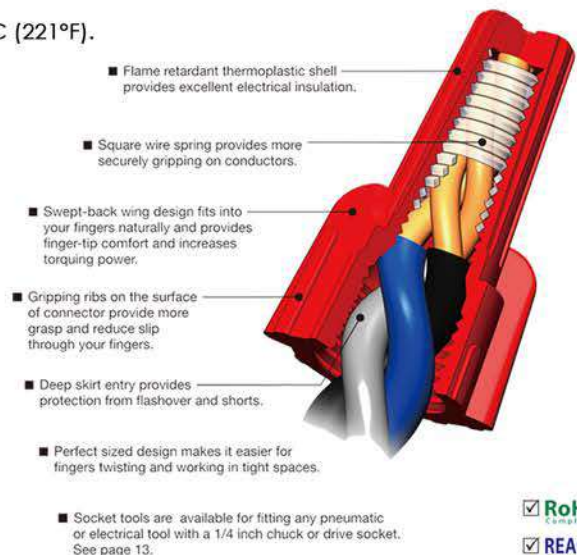TERMINAL MATERIAL: COPPER
PLATING: TIN

Screw-On Wire Connectors

* Tough thermoplastic, UL 94V-2 flame-retardant shell rated at 105°C (221°F).
* Zinc-plated square wire spring ensures a firm grip on conductors.
* Specific dented design offers better grip and comfort to ensure better torquing.
* Color-coded to industry standards for quick size identification.
* Rated to 600V max. for building wiring and 1000V max. in lighting fixtures/luminaires and signs.
* UL 486C Listed and CSA C22.2 No. 188 Certified.
* Available in socket tools for easy installation of the connectors (See page 13).

■ Flame retardant thermoplastic shell provides excellent electrical insulation.

■ Fixed, precise square wire spring provides more securely gripping on conductors.

■ Sure-grip ribs improve grasping ability and comfort.

■ Deep skirt entry provides protection from flashover and shorts.

■ Threaded, funnel entry guides wires into the connector easily.

■ Socket tools are available for fitting any pneumatic or electrical tool with a 1/4 inch chuck or drive socket. See page 13.

☑ RoHS Compliant
☑ REACH Compliant

Winged Wire Connectors

* Tough thermoplastic, UL 94V-2 flame-retardant shell rated at 105°C (221°F).
* Zinc-plated square wire spring ensures a firm grip on conductors.
* Swept-back wing design provides finger-tip comfor and increases torquing power.
* Color-coded to industry standards for quick size identification.
* Rated to 600V max. for building wiring and 1000V max. in lighting fixtures/luminaires and signs.
* UL 486C Listed and CSA C22.2 No. 188 Certified.
* Available in socket tools for easy installation of connectors (See page 13).

■ Flame retardant thermoplastic shell provides excellent electrical insulation.

■ Square wire spring provides more securely gripping on conductors.

■ Swept-back wing design fits into your fingers naturally and provides finger-tip comfort and increases torquing power.

■ Gripping ribs on the surface of connector provide more grasp and reduce slip through your fingers.

■ Deep skirt entry provides protection from flashover and shorts.

■ Perfect sized design makes it easier for fingers twisting and working in tight spaces.

■ Socket tools are available for fitting any pneumatic or electrical tool with a 1/4 inch chuck or drive socket. See page 13.

☑ RoHS Compliant
☑ REACH Compliant

Closed-End Wire Connectors

* Polyamide 66, UL 94V-2 flame-retardant shell rated at 105°C (221°F).
* Two types of sleeves, aluminum or tin-plated copper, to choose between.
* Long neck provides much more secure and easier installation.
* Ideal for applications requiring vibration resistance.
* UL 486C Listed and CSA C22.2 No. 188 Certified.
* Crimping tools are available upon request.

Dimensions (mm)	Cat. No.	Sleeve	Color	Electrical Ratings & Wire Range (Cu)	Approvals	Packing
	CE1	Cu	Nature	300V Max. 105°C (221°F) 22-18 AWG, Str Cu (CE1) 24-18 AWG, Str Cu (CE1X) Max. 2 #20 w/1 #18 Min. 2 #22	UL CSA CEC	Carton of 30,000 (30 bags, 1,000 ea.)
	CE1X	Al				
	CE2	Cu	Nature	300V Max. 105°C (221°F) 22-14 AWG, Cu Max. 1 #18 w/1 #14 Min. 2 #22	UL CSA CEC	Carton of 20,000 (20 bags, 1,000 ea.)
	CE2X	Al				
	CE5	Cu	Nature	300V Max. 105°C (221°F) 22-10 AWG, Str Cu (CE5) 20-10 AWG, Str Cu (CE5X) Max. 3 #14 Min. 2 #22 w/2 #18 (CE5) 3 #18 (CE5X)	UL CSA CEC	Carton of 10,000 (10 bags, 1,000 ea.)
	CE5X	Al				
	CE8	Cu	Nature	300V Max. (UL) 600V Max. (CSA/CQC) 105°C (221°F) 16-10 AWG, Str Cu Max. 2 #16 w/1 #10 Min. 2 #16 w/1 #12	UL CSA CEC	Carton of 6,000 (12 bags, 500 ea.)

☑ RoHS Compliant ☑ REACH Compliant

PULLMAN ELECTRIC
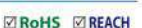
Releasable Wire Connectors, Lever Type

UNIK Pro Push-In Wire Connectors

Mini Pro Push-In Wire Connectors

Push-In Wire Connectors, Compact

Old ....
(PC25 Series)
New ....
(PC225 Series)
Around 25% space-saving

Push-In Wire Connectors, Standard Small

Push-In Wire Connectors Standard PC

Push-In Wire Connectors Standard PA

Push-In Wire Connector, 6 mm

EASY-LINK Lighting Connectors
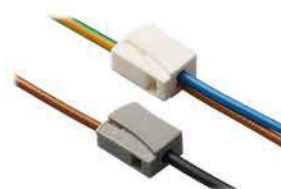
TERMINAL BLOCKS (PA Housing, Brass Insert)

Specification

* Housing: Polyamide 66 (PA 66), white flame-retardant to UL 94V-2
Working temperature:
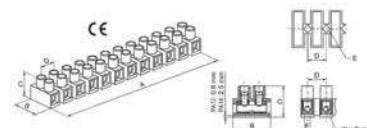T110°C (IEC), 105°C/221°F (UL)
* Terminal Body: Brass, nickel-plated
* Screw: Steel, zinc-plated

* Strip Length:
PA8 - 5.0 mm/0.20 in.
PA10 - 6.5 mm/ 0.26 in.
PA12 - 7.0 mm/0.28 in.
PA14 - 9.0 mm/0.35 in.
PA16 - 10.0 mm/0.39 in.
PA18 - 13.0 mm/0.51 in.

TERMINAL BLOCKS (PA Housing, Brass Insert)

Specification

* Housing: Polyamide 66 (PA 66), white flame-retardant to UL 94V-2
Working temperature:
T110°C (IEC), 105°C/ 185°F (UL)
* Terminal Body: Brass, nickel-plated
* Wire Protector: Stainless spring steel
* Screw: Steel, zinc-plated

* Strip Length:

PA8 - 5.0 mm/0.20 in.
PA10 - 6.5 mm / 0.26 in.
PA12 - 7.0 mm/0.28 in.
PA14 - 9.0 mm/ 0.35 in.

TERMINAL BLOCKS (PP Housing, Steel Insert)

Specification

* Housing: Polypropylene (PP), white flame-retardant to UL 94V-2
Working temperature:
T85°C (IEC), 65°C/149°F (UL)
* Terminal Body: Steel provided with or without a brass strip, zinc-plated
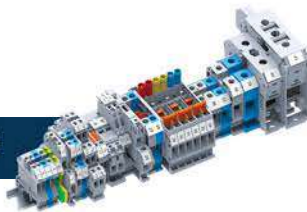* Screw: Steel, zinc-plated

* Strip Length:
PA20P & PA21P - 5.0 mm / 0.20 in.
PA30P & PA31P - 6.5 mm/ 0.26 in.
PA40P & PA41P - 9.0 mm/0.35 in.
PA50P - 9.0 mm/0.35 in.

PULLMAN ELECTRIC

SCREW CLAMP TYPE

Standard Feed Through Terminal Blocks

Current : up to 269 A
Wire Size : 0.2 - 120 mm²
Mounting : DIN 32 / 35 / 35-15

Multiple Connection Terminal Blocks

Current : up to 32 A
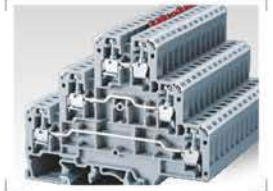Wire Size : 0.2 - 4 mm²
Mounting : DIN 32 / 35 / 35-15

Double Level Terminal Blocks

Current : up to 32 A
Wire Size : 0.2 - 4 mm²
Mounting : DIN 32 / 35 / 35-15

Triple Level Terminal Blocks

Current : up to 24 A
Wire Size : 0.2 - 2.5 mm²
Mounting : DIN 32 / 35 / 35-15

Ground / Earth Terminal Blocks

Current : up to 125 A
Wire Size : 0.2 - 35 mm²
Mounting : DIN 32 / 35 /
DIN 35-15 / DIN 15

Neutral / Earth Clamps

Current : up to 140 A
Wire Size : 0.2 - 35 mm²
Mounting : Panel / Base /
DIN 35 / 35-15

Distribution Blocks

Current : up to 101 A
Wire Size : 0.2 - 25 mm²
Mounting : DIN 32 / 35 / 35-15

Double Level Fuse Terminal Blocks

Current : up to 6.3 A
Wire Size : 0.2 - 4 mm²
Mounting : DIN 32 / 35 / 35-15

Single Level Fuse Terminal Blocks

Current : up to 16 A
Wire Size : 0.2 - 4 mm²
Mounting : DIN 32 / 35 / 35-15

Disconnect & Test Terminal Blocks

Current : up to 41 A
Wire Size : 0.2 - 6 mm²
Mounting : DIN 32 / 35 / 35-15

Micro Terminal Blocks

Current : up to 32 A
Wire Size : 0.2 - 4 mm²
Mounting : DIN 15

Panel Mount Terminal Block

Current : up to 32 A
Wire Size : 0.2 - 4 mm²
Mounting : Panel / Base

Thermocouple Terminal Blocks

Current : up to 24 A
Wire Size : 0.2 - 2.5 mm²
Mounting : DIN 32 / 35 / 35-15

Tab Connection Terminal Blocks

Current : up to 32 A
Wire Size : 0.2 - 4 mm²
Mounting : DIN 32 / 35 / 35-15

WITH ELECTRONIC COMPONENTS TERMINAL BLOCKS

Diode / Resistor Terminal Blocks
Terminal Blocks with Light Indication

SURGE SUPPRESSION TERMINAL BLOCKS

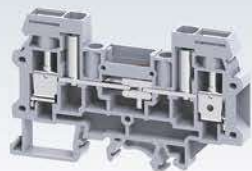& longitudinal (line / earth) surge
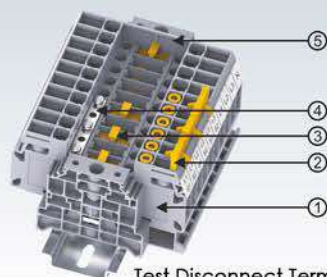thereby protecting distribution and input

DISCONNECT & TEST

For measuring, control andregulatory circuits. They provide a clear functional advantage for devices having utility instruments and associated transformers.
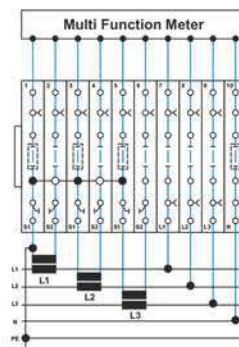

CDS6U

Test Disconnect Terminal Block for 3 Phase 4 wire multi function meter

Operating status

Multi Function Meter

No.	Cat. No.	Qty.
1	CDS6U	10
2	SLS2	3
3	LCCDS	4
4	CA723/5	1
5	EPCDS6U	1

SLS2 in open condition

STUD TYPE

Feed Through Terminal Blocks

Current : up to 41 A
Wire Size : 0.5 - 6 mm^2
Mounting : DIN 32 / 35 / 35-15

Feed Through Terminal Blocks

Current : up to 125 A
Wire Size : 1.5 - 35 mm^2
Mounting : DIN 32 / 35 / 35-15

Disconnect & Test Type Terminal Blocks

Current : up to 41 A
Wire Size : 0.5 - 6 mm^2
Mounting : DIN 32 / 35 / 35-15

Power Terminal Blocks

Current : up to 232 A
Wire Size : 1.5 - 95 mm^2
Mounting : DIN 35 / 35-15 / Panel

SPRING CLAMP

Feed Through Terminal Blocks

Current : up to 76 A
Wire Size : 0.2 - 16 mm^2
Mounting : DIN 35 / 35-15

Multiple Connection Terminal Blocks

Current : up to 41 A
Wire Size : 0.2 - 6 mm^2
Mounting : DIN 35 / 35-15

Ground / Earth Terminal Blocks

Current : up to 76 A
Wire Size : 0.2 - 16 mm^2
Mounting : DIN 35 / 35-15

Terminal Blocks with Electronic Components

Current : up to 32 A
Wire Size : 0.2 - 4 mm^2
Mounting : DIN 35 / 35-15

Angular Feed Through Terminal Blocks

Current : up to 41 A
Wire Size : 0.2 - 6 mm^2
Mounting : DIN 35 / 35-15

Pluggable Terminal Blocks

Current : up to 24 A
Wire Size : 0.2 - 2.5 mm^2
Mounting : DIN 35 / 35-15

Double Level Terminal Blocks

Current : up to 24 A
Wire Size : 0.2 - 2.5 mm^2
Mounting : DIN 35 / 35-15

Triple Level Terminal Blocks

Current : up to 24 A
Wire Size : 0.2 - 2.5 mm^2
Mounting : DIN 35 / 35-15

Fuse Terminal Blocks

Current : up to 6.3 A
Wire Size : 0.2 - 4 mm^2
Mounting : DIN 35 / 35-15

Disconnect & Test Terminal Blocks

Current : up to 16 A
Wire Size : 0.2 - 2.5 mm^2
Mounting : DIN 35 / 35-15

ACCESSORIES

Mounting Accessories

DIN Rails / Channels
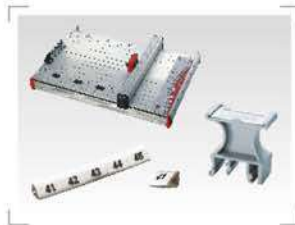Mounting Base
Mounting Handle
Mounting Bracket

End Clamps

For DIN 15, DIN 32,
DIN 35, DIN 35-15
Spacers

Marker & Marker Plotter

Group / Individual Marking
Marker Plotters
Engraving System

Shorting Accessories

Shorting Links, End, Partition
& Separator Plates, Protective
Cover, Side Holding Plates

SWITCHES & SOCKETS

DIN Rail Mounted Sockets & Switches

Current : up to 16 A
Wire Size : 0.5 - 2.5 sq.mm.
Mounting : DIN 35 / 35-15

TOOLS

Professional Tools

TERMINAL BLOCK JUMPERS

10 pole Jumper
2 independent rows
for Jumpering

Alternate
Shorting Jumper

Step Down
Jumper

Unified Jumper design for
CP series JX Series Jumpers
for CP series Terminals

Unified Jumper design for
CX series JX Series Jumpers
for CX series Terminals

Unified Jumper design for
CY series JX Series Jumpers
for CY series Terminals

Applications

Assembly for Power Circuit in
Process Control application

Test and calibration assembly for
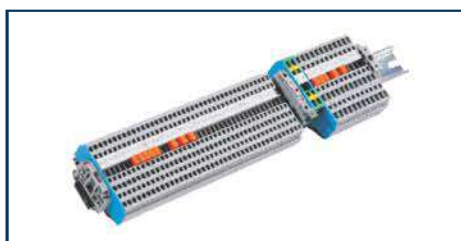Current Transformer (CT) application

Power Terminal Block assembly for
Vertical Machining Center

Control assembly
for Fire Alarm systems

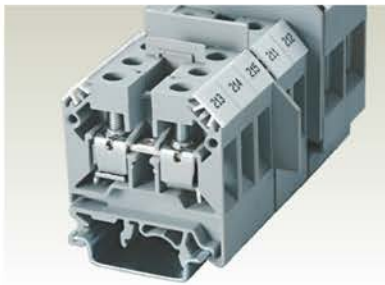Control Terminal Block assembly
for Textile machines

Assembly for Control Circuit in
Injection Moulding machines

SCREW CLAMP TERMINAL BLOCKS HAVE BEEN USED IN VARIOUS INDUSTERIAL APPLICATIONS

A high torque clamping system on the Screw Clamp Terminal Blocks ensures safe, gas tight connections. While cold forged, rolled threaded screws ensure highly reliable connections.

The end plate forms an integral part of all Terminal Blocks for 16 mm² wires and above, their by completely closing the Terminal Blocks. This ensures safe isolation for power connections.

Same profile grounding terminals are clearly identified with a green-yellow housing. Their shape and thickness is identical to the Feed Through Terminal Blocks.

In high current Terminal Blocks, an additional auxillary terminal can be connected. This enables an additional connection of upto 6 mm² wires.

Two level plus ground and Three level plus ground terminals facilitate single & three phase connections. These Terminal Blocks are an ideal choice for space saving applications.

Universal voltage rating of 6 - 60V & 110 - 240V is available on Fuse Terminal Blocks with offline indication. Both AC & DC circuits can be connected without any polarisation requirement.
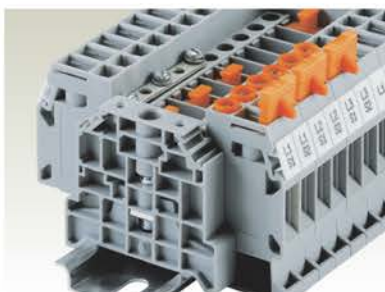
CDS6U Terminal Block system is a versatile wire connection method for current transformer and power meters. A wide range of accessories eases the testing of connected instruments.
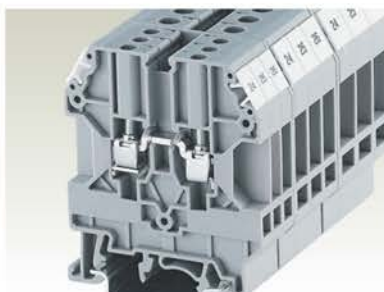
The CHV series High Voltage Terminal Blocks are suitable for upto 1000V DC applications required in the solar industry. The specially designed creepage and clearance distances help achieve the high voltage specifications.

Ideal for applications with limited space, these miniature blocks can be mounted on a special DIN15 rail.
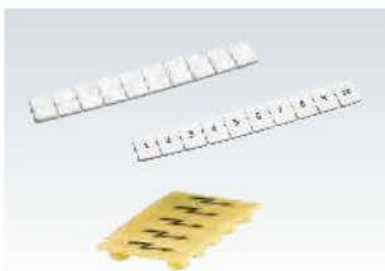
Standardized marking solutions are available to create clear and user friendly Terminal Block assemblies. Users can order blank or custom configured marking tags.
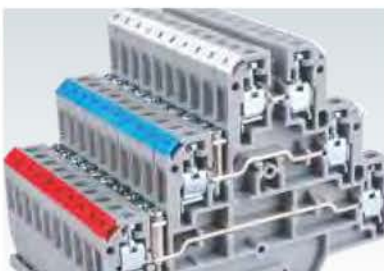
CTL series Terminal Blocks can be used for connecting sensors and actuators in control systems. Standard screw type jumpers are used to create configurations for ease of voltage distribution.

Panel mounted Terminal Blocks eliminate the need for using DIN rails. Individual terminals can be 'clicked' into each other to create specific pole configurations as per user requirements.
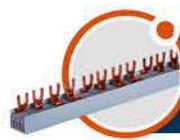
BUSBAR

The busbars enable an up to date way of connecting all kind of installation devices.
Compared to the convential installation using wiring bridges it offers the following advantages:
- faster installation
- saving time
- compact design
- reliable assignment of the phases

Besides the pole number, the cross-section and the connection technology - pin or fork type
the construction type is used as different criterion.
Usually the standard busbar is supplied in 1m lengths.
The customer will cut these bars according to his requirements.

Advantages:
- possibility of individual solutions regarding lenghts
- limited stock

The design is marked by an extended gap between the different phases. This secures
the creepage and clearance distances after cutting.
Another popular variation of the standard busbars is the MFC design.
This offers nearly unlimited possibilities regarding lengths ready to install.
Apart from the standard design also the Miniline system is an established design for several years.
With its very compact design Miniline offers ready fixed lengths suitable for many standard applications.
Without any problem Miniline can be installed overlapped. This allows you to extend the connection and
to partially increase the cross-section.
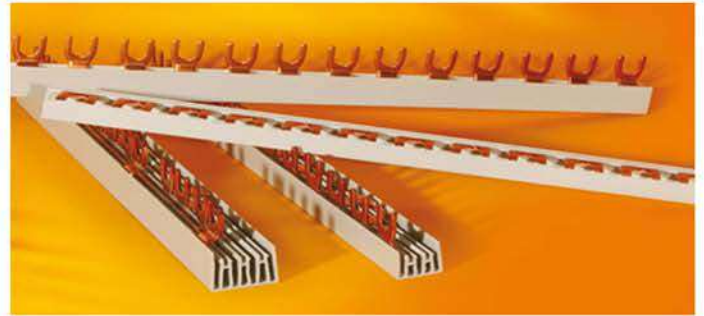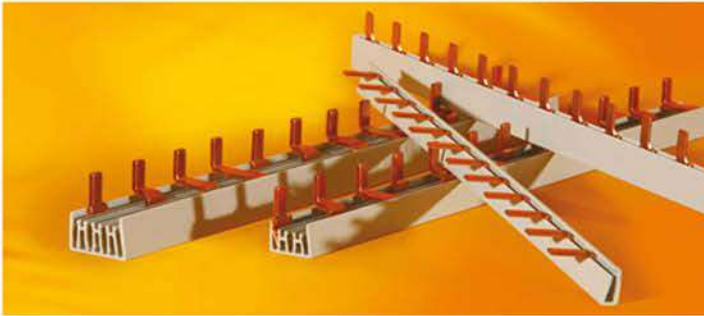
Single pole

BUSBAR S-1L-1000/10iso"
- Universal for circuit breakers
- Dimensions of bar (W x L): 4 x 10.5 mm
Length [mm]: 1000
Cross-section [mm²]: 10
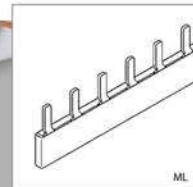
2 pole

BUSBAR S-2L-1000/10
- Universal for circuit breakers
- Dimensions of bar 1000 x 10 x 28 mm
Length [mm]: 1000
Cross-section [mm²]: 10

3 pole

BUSBAR S-3L-1000/10
- Universal for circuit breakers
- Dimensions of bar 1020 x 15 x 26 mm
Length [mm]: 1000
Cross-section [mm²]: 10 mm²

4 pole

BUSBAR S-4L-1000/16
- Universal for circuit breakers
- Dimensions of bar 1000 x 21 x 30 mm
Length [mm]:   1000
Cross-section [mm²]: 16 mm²

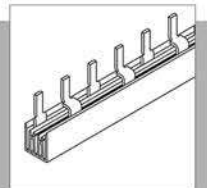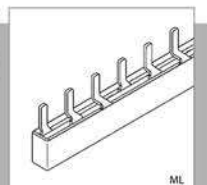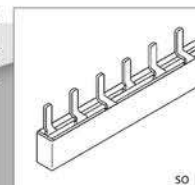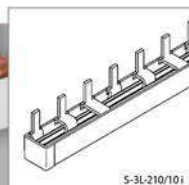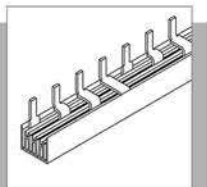## busbars for motor starters

wiring system for parallel
connection
wiring system for star-delta
starters
wiring system for
reversing starters
star bridges

busbars for motor starters

pole-3
for motor-protective switches
Moeller, Siemens, Schneider

busbars for motor starters

pole-3
for motor-protective switches
Moeller, Siemens, Schneider

Accessories

A-MS | EK-D-2+3/16 | ESB-G-MS1 | BS-MS-B
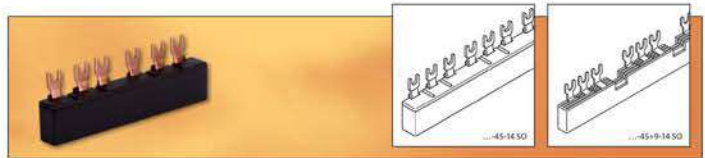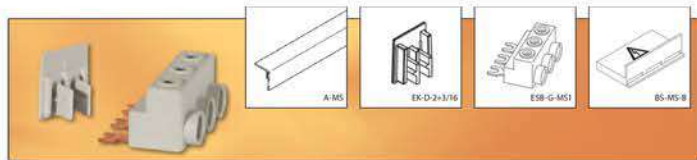
section rails

pole-3
for motor-protective switches
Moeller, Siemens, Schneider

S-3L-MS-4S-BSS/10 SI

Terminals

Connection technology for all applications

main terminal,
5-pole

main terminal,
mini modular

universal terminals

distribution block

adapter plate

for combination direct starter
e. g. manual motor starter and contactor

UMP 4S | UMP 90 / UMP 90-S | UMP 90 E / UMP 90 E-S
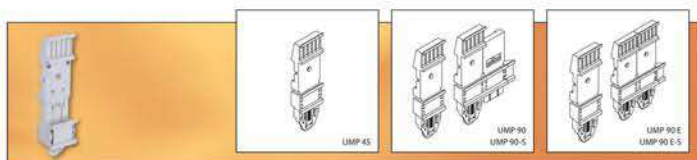
cable duct adapter

to be clipped-on

RKA 4S | HUT 3 | Verbindungsnocken

connection terminals for busbars

AS/50 SN
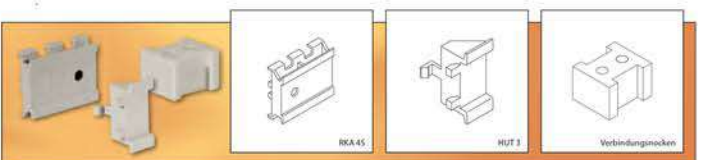
protection cover

connection terminals for busbars

BUSBAR'S TECHNICAL INFORMATION

section rails fork type

Fork-type busbars offer the same advantages as the pin-type version (see chap. 1). They are available in the same variations.

This type is often used for the combination of RCDs and MCBs. The double-option terminal gives the possibility to connect the busbar as well as the cable directly to the box terminal.

Wiring with breaker

The more stable shape of the fork garanties a secure connection even while dightening with bigger torques.

If you feed-in from the middle you have to observe that the sum of the outgoings is not higher than the max. current of the busbars I_s/phase!

Please note:
Busbars UL approved on request!

On request we are able to offer you different dimensions than the standard ones eg. step of 17,6 or 18 mm or even other steps as well as variations of the forks (M5, length of fork) and the pins (length and width).

Several busbars are available with a pin or fork to be broken out.

Surplus costs for printing of phase-description and/or logo on request.

Subject to alterations!

step for auxiliary contact:
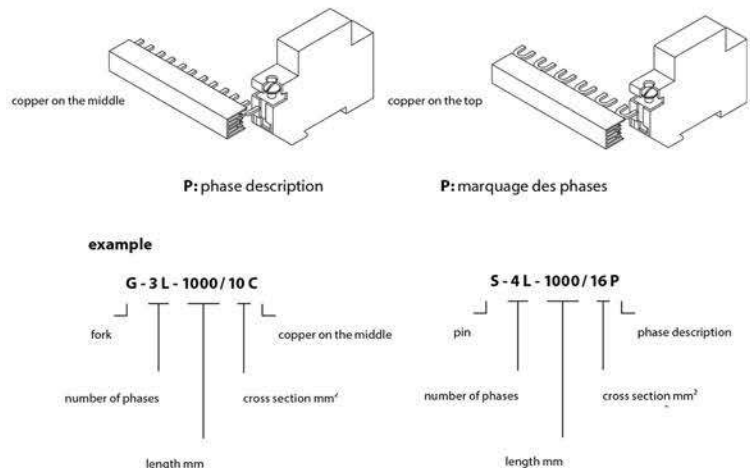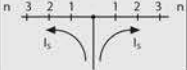+ 9 = MCBs with auxiliary contact

iso: insulated

1L: 1-phase

2L: 2-phase

3L: 3-phase

4L: 3-phase + neutral

C: without C:

copper on the middle

copper on the top

P: phase description

P: marquage des phases

example

G - 3 L - 1000 / 10 C

fork — number of phases — length mm — cross section mm² — copper on the middle

S - 4 L - 1000 / 16 P

pin — number of phases — length mm — cross section mm² — phase description

current carrying capacity:

|			Einphasenschiene 1-phase peigne unipolaire						Mehrphasenschiene 2, 3 and 4 phase peigne bi, tri, tétrapolaire			
Einspeisung am Schienenende feed-in from end alimentation en bout de peigne												
Schienenquerschnitt cross section section	mm²		10	12	16	20	25	35	10	16	25	36
max. Schienenstrom max. current courant max.	I_s Phase (A)		63	65	80	90	100	130	63	80	100	130
Mitteleinspeisung feed-in from the middle alimentation au milieu												
max. Strom pro Zweig max. current courant max. par branchement	mm²		100	110	130	150	180	220	100	130	180	220
max. Einspeisestrom/max. feed-in current/ alimentation max.	I_E Phase (A)		Richtet sich nach dem Anschlussquerschnitt! Depends on the cross section for connection! Dépend des sections de raccord!									

shortening of busbars

cut — burr — clean — cut back copper — attach end cover — finished

code of description

U: busbar, 1-phase, step 9 mm, w/o insulation

G: fork type M 6 = Standard
G M5: fork type M 5 *
G M6 SO: different length of fork *

standard type

special type
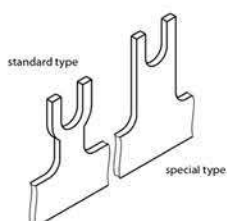
S: pin type:
W x L: 4 x 11,5 for 10 and 16 mm² distance: 17,8 mm from pin – pin = standard
W x L: 6,5 x 14,5 for 25 and 36 mm² distance: 17,8 mm from pin – pin = standard

S SO: different measurements (e. g. 5 x 11,5)*

G .. K / S .. K: fork and pin type/ fork and pin to be broken out

step fork-type

G: fork type 17,8 = standard (distance: 17,8 mm from fork – fork)

G 27: fork type = standard (distance: 27,0 mm from fork – fork)

G 17,6: fork type* (distance: 17,6 mm from fork – fork)

G 18: fork type* (distance: 18,0 mm from fork – fork)

step pin-type

S: pin type 17,8 = standard (distance: 17,8 mm from pin – pin)

S 27: pin type 17,8 = standard (distance: 27,0 mm from pin – pin)

S / SO: different measurements *

* On request.

busbars

Wide range of pin and fork-type busbars with different steps for a secure and efficient connection of MCBs, fault-current breakers, fuses residual current protective gears, motor-protective switches and other modular installation equipment.

regulations:
VDE 0660, Teil/part/§ 500
DIN EN 60 439-1; 1994

regulation of style:
IEC 664

material of insulation:
moulded insulation: PA. 6.6-V0
colour: grey RAL 7035

extrusion profile: PC/ABS-Blend-VO
colour: grey RAL 7035

compound filted version:
Latamid 66 H2 G/25-V0 LT 1
colour: black, RAL 7021

short-circuit strength:
moulded = 30 kA / ⊏⊐ 100 A gl
extruded = 25 kA / ⊏⊐ 100 A gl
compound filted version = 30 kA

cross-section of busbars:
10 - 12 - 16 - 20 - 25 - 36 mm²

disruptive strength:
moulded = 40 kV/mm
extruded = 36 kV/mm
compound filted version = 36 kV/mm

clima stability:
IEC 68-2

nominal voltage:
415 V

operating voltage:
max. 500 V
compound filted version: max. 690 V

surge voltage:
4 kV

group of insulation:
acc. to VDE 0110, part/§ 1; 4/1997 (IEC 664)
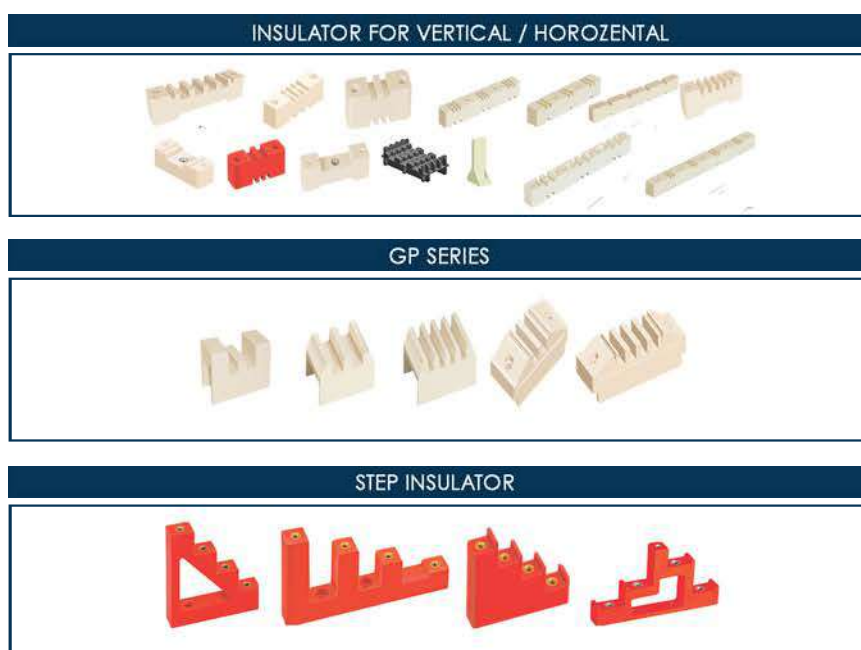
overvoltage category:
III

degree of soiling:
2

Standoff Insulator

Part No. (Insert)	Height (H) mm	Dimension AF mm	Dimension Ø R mm	TL mm	Nominal Voltage (AC / DC)	Std. Pkg. (Nos.)	Box Wt. (Kg.)
H 312 (M3)	12	8	7	3	500/700	500	1.500
H 416 (M4)	16	14	11	3.5	640/800	400	2.000
H 516 (M5)	16	14	11	3.5	640/800	400	2.000
H 420 (M4)	20	18	14	5	800/1100	200	2.000
H 520 (M5)	20	18	14	5	800/1100	200	2.000
H 620 (M6)	20	18	14	5	800/1100	200	2.200
H 425 (M4)	25	21	16	7	1000/1400	200	4.450
H 525 (M5)	25	21	16	7	1000/1400	200	4.500
H 62125 (M6)	25	21	16	7	1000/1400	100	3.500
H 625 (M6)	25	25	22	7	1000/1400	200	4.500
MH 625 (M6)	25	19	17	7	1000/1400	200	4.200
H 825 (M8)	25	33	25	7	1000/1400	50	2.600
H 630 (M6)	30	32	24	9	1200/1600	50	2.500
H 830 (M6)	30	32	25	9	1200/1600	50	2.800
H 1030 (M10)	30	32	25	9	1200/1600	50	3.100
H 635 (M6)	35	32	26	12	1400/1900	50	3.500
H 835 (M8)	35	32	26	12	1400/1900	50	3.500
DLH 835 (M8)	35	35	26	12	1400/1900	50	3.800
MH 835 (M8)	35	40	33	12	1400/1900	50	4.700
H 1035 (M10)	35	32	26	12	1400/1900	50	3.600
MH 1035 (M10)	35	40	33	12	1400/1900	50	4.700
H 640 (M6)	40	38	30	12	1600/2200	50	4.600
H 840 (M8)	40	39	31	12	1600/2200	50	4.800
H 1040 (M10)	40	38	30	12	1600/2200	50	4.700
H 645 (M6)	45	40	32	12	1800/2500	25	3.200
H 845 (M8)	45	40	32	12	1800/2500	25	3.200
H 1045 (M10)	45	40	32	12	1800/2500	25	3.900
H 650 (M6)	50	46	35	12	2000/2800	25	3.800
H 850 (M8)	50	46	35	17	2000/2800	25	3.800
H 1050 (M10)	50	46	35	17	2000/2800	25	4.000
ENH 1050 (M10)	50	50	44	17	2000/2800	20	4.000
H 1250 (M12)	50	46	35	17	2000/2800	25	4.000
H 860 (M8)	60	50	38	17	2400/3300	25	4.800
H 1060 (M10)	60	50	38	17	2400/3300	25	5.000
H 1260 (M12)	60	50	38	17	2400/3300	25	4.846
ENH 1660 (M16)	60	60	55	22	2400/3300	20	5.800
H 865 (M8)	65	55	41	17	2600/3600	25	6.260
H 1065 (M10)	65	55	41	17	2600/3600	25	6.260
H 1265 (M12)	65	55	41	17	2600/3600	25	6.500
H 1070 (M10)	70	55	41	22	2800/3900	25	6.800
H 1270 (M12)	70	55	41	22	2800/3900	25	6.860
H 1670 (M16)	70	55	41	22	2800/3900	25	7.000
H 1075 (M10)	75	53	42	22	3000/4200	25	7.000
H 1275 (M12)	75	53	42	22	3000/4200	25	7.000
H 1076E (M10)	76	50	34	22	3000/4200	25	5.700
H 1276E (M12)	76	50	34	22	3000/4200	25	5.750
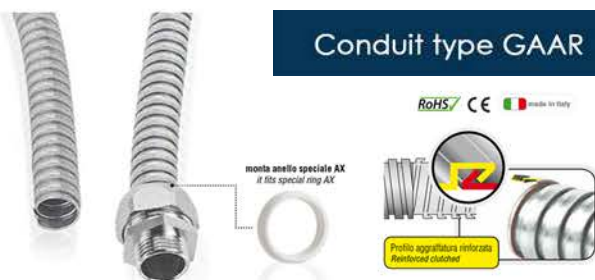
Hexagonal

Drum

Conical

Round Hex

Full Hex

Earthing Support

Cylindrical

Tubular Insulator

WT Series

insulator for vertical/horozental

FINGER SUPPORTS

INSULATOR FOR VERTICAL / HOROZENTAL

L-SUPPORTS

GP SERIES

ADJUSTABLE BUSBAR SUPPORT

STEP INSULATOR

Conduit type GAAR

RoHS CE made in Italy

monta anello speciale AX
it fits special ring AX

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited where is necessary an high fl exibility together with a good mechanical resistance to traction, torsion and compression and where no liquid tight is requested

Conduit type GARIX

made in Italy CE RoHS

monta anello speciale AX
it fits special ring AX

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited where is necessary an high fl exibility together with a good mechanical resistance to traction, torsion, compression, corrosion and where no liquid tight is requested

Conduit type DMC

RoHS CE made in Italy

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited where is necessary a strong mechanical resistance to traction, torsion and compression

Conduit type DMCX

made in Italy CE RoHS

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited where is necessary a strong mechanical resistance and an excellent resistance to traction, torsion, compression and corrosion

Conduit type DMC-ABT

RoHS CE made in Italy

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited where is necessary a strong mechanical resistance and an excellent resistance to traction, torsion, compression and particularly advised for high and low temperatures and in presence of high temperature's change

Conduit type DMC-ABTX

made in Italy CE RoHS

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application :

Very suited where is necessary a strong mechanical resistance and an excellent resistance to traction, torsion, compression and particularly advised for high and low temperatures and in presence of high temperature's change

Conduit type DMC-PU

RoHS CE made in Italy

monta anello standard AB
it fits standard ring AB

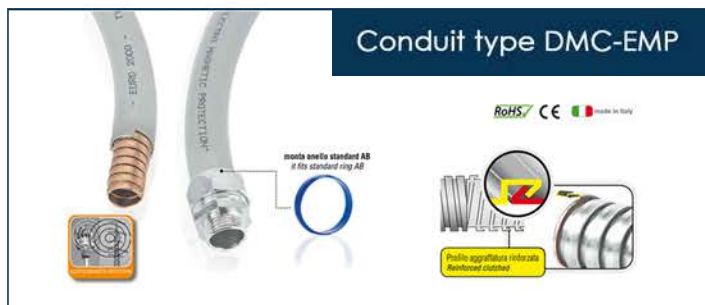Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very reliable where is necessary a strong mechanical resistance and an excellent resistance to traction, torsion and compression Particularly advised in case of eventual combustions that do not release halogen substances or toxic smokes

Conduit type UALT 2000

made in Italy CE RoHS

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
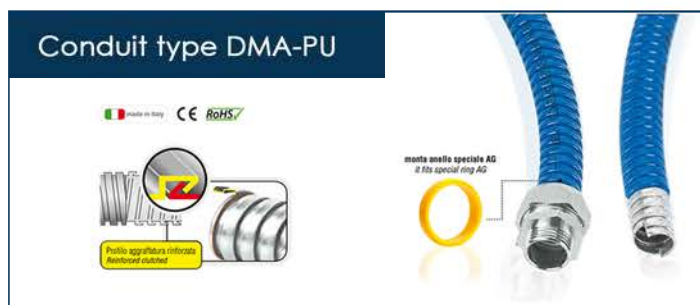Reinforced clutched

Application:

Very suited where is necessary to protect equipments against electromagnetic interferences according to european norms about electromagnetic compatibility EMC 89/336 EEC.

Conduit type DMC-EMP

RoHS CE made in Italy

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited where is necessary a strong mechanical resistance to traction, torsion and compression

Conduit type DMA-PU

made in Italy CE RoHS

monta anello speciale AG
it fits special ring AG

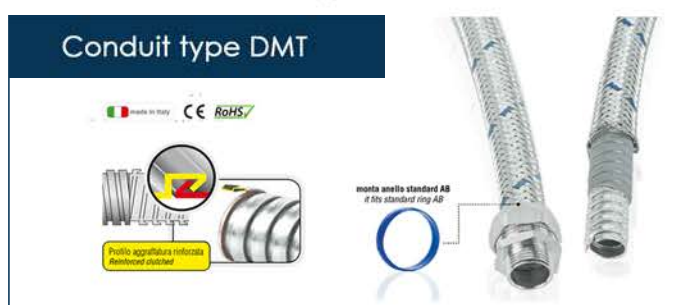Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Particularly advised in case of eventual combustions that do not release halogen substances or toxic smokes. good mechanical resistance and an excellent resistance to traction, torsion and compression.

Conduit type DMTN

RoHS CE made in Italy

monta anello standard AB o anello
speciale OT per alte temperature
it fits standard ring AB
or special OT metal ring

Profilo aggraffatura rinforzata
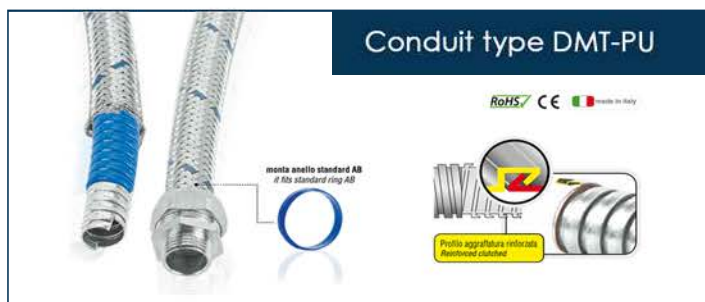Reinforced clutched

Application:

Very suited for installations where is foreseen the presence of twinkling and incandescent slags (rolling mill, foundry, welders printing works). It has a good
mechanical resistance to traction, torsion and compression

Conduit type DMT

made in Italy CE RoHS

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited for installations where is foreseen the presence of twinkling and incandescent slags (rolling mill, foundry welders, printing works). It has a good
mechanical resistance to traction, torsion and compression

Conduit type DMT-PU

RoHS CE made in Italy

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited for installations where is foreseen the presence of twinkling and incandescent slags (rolling mill, foundry, welders and printing works). Particularly advised in case of eventual combustions that do not release halogen substances or toxic smokes.
It has a good mechanical resistance to traction, torsion and compression

Conduit type DMT-LNX

made in Italy CE RoHS

monta anello speciale in ottone OT
it fits special brass ring OT

Profilo aggraffatura rinforzata
Reinforced clutched

Application:

Very suited for installations with temperature higher than 300°C
where is foreseen the presence of twinkling and incandescent slags (rolling mill,foundry, welders, printing works). It has a good mechanical resistance to traction torsion and compression

• Flexible fittings are available.

PULLMAN ELECTRIC

Conduit type DMT-EMP

RoHS ✓ CE ▮▮ made in Italy

monta anello standard AB
it fits standard ring AB

Profilo aggraffatura rinforzata
Reinforced clutched

Application:
Developed to assure a complete protection from interferences due to an electromagnetic fi eld (EMC). It can be used in The army or wherever is necessary to protect sofi sticated equipments from EMC interferences, according to european norms about EMC compatibility EMC 89/336 EEC. Very suited where in necessary a strong mechanical resistance and an excellent resistance to traction, torsion and compression.

Conduit type DMC HJT-L

RoHS ✓ CE ▮▮ made in Italy

Profilo aggraffatura rinforzata
Reinforced clutched
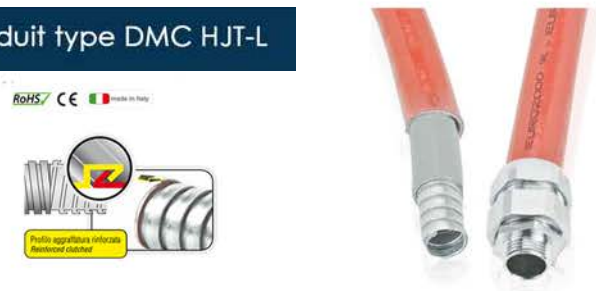
Application:
Conduit type DMC HJT-L is developed to offer togheter with high mechanical protection to traction, compression and crash, also thermic protection in particular aggressive enviroment in presence of fl ames, splashes of metal or of melted glass, steam water. The external recovering is made up by a mineral fi berglass, with a silicon elastomer, that can resist to exercise temperatures range
-60°C + 260°C (800°C highest point for 20 minutes)

Conduit type DMA

RoHS ✓ CE ▮▮ made in Italy

monta anello speciale AG
it fits special ring AG

Profilo aggraffatura rinforzata
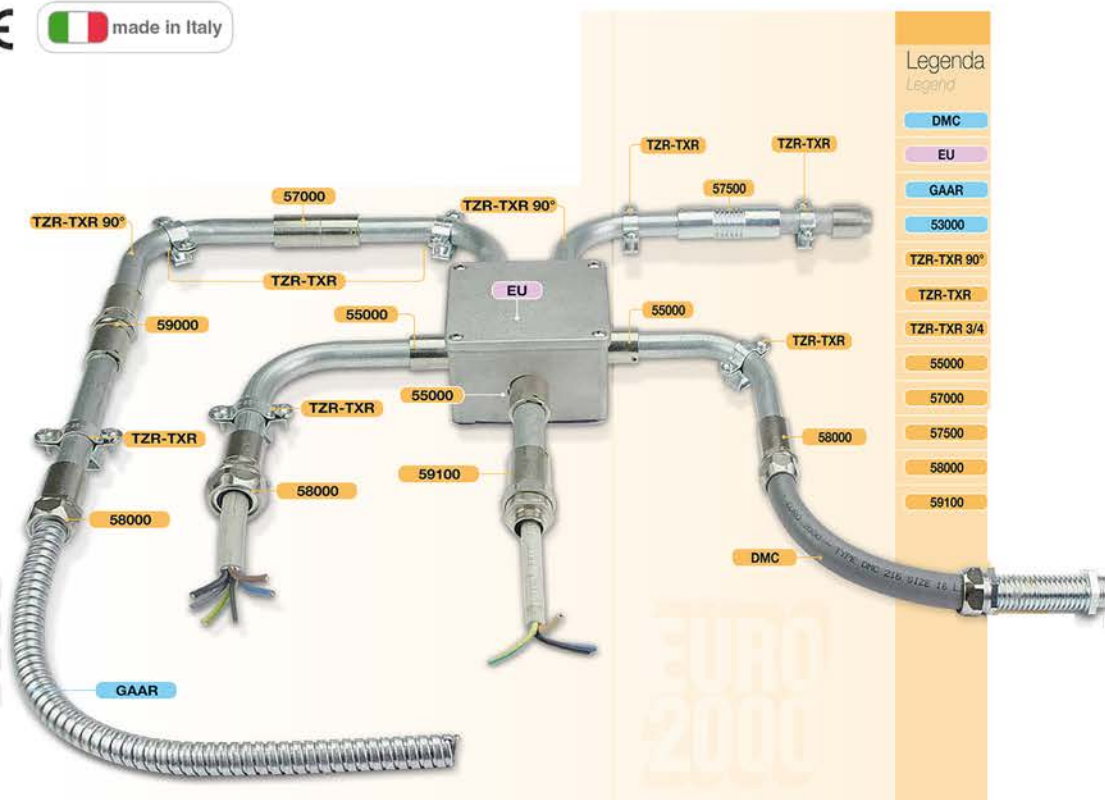Reinforced clutched

Application:
Very suited where is necessary a good mechanical resistance and an excellent resistance to traction, torsion and compression

Rigid threaded pipes
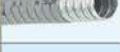
Rigid pipes are used for the passage of cables in anti-explosive electrical systems, which are (AD-PE) explosion-proof. Our rigid threaded pipes are provided with UNI 6125 conical gas thread with UNI 7684 sleeve or American NPT thread with galvanized sleeve screwed on one end and the other end protected by a plastic material cap.
Our pipes are hot-galvanized according to EN 10240. UNI 7683-7684, a European standard also specifies the requirements for galvanized round pipes when welded using unalloyed carbon steel with conical gas threads.

RoHS ✓ CE ▮▮ made in Italy

Legenda
Legend

| DMC |
| EU |
| GAAR |
| 53000 |
| TZR-TXR 90° |
| TZR-TXR |
| TZR-TXR 3/4 |
| 55000 |
| 57000 |
| 57500 |
| 58000 |
| 59100 |

Classification in compliance with CEI EN 61386 standards

CONDUITS' SYSTEMS		IP PROTECTION DEGREE	RESISTANCE TO COMPRESSION	COLORS	TEMPERATURE RANGE	HALOGEN FREE	SELF-EXTINGUISHING	EMC SCREENING	RESISTANCE TO ABRASION	UV RESISTANCE
GAAR		IP 50	1250 N	GALVANISED	-45° +250°	YES	YES	YES	YES	YES
GARIX		IP 50	1250 N	STAINLESS STEEL	-45° +250°	YES	YES	YES	YES	YES
DMC		IP 67	1250 N	GREY, BLACK	-15° +70°	-	YES	-	YES	YES
DMCX		IP 67	1250 N	GREY, BLACK	-15° +70°	-	YES	-	YES	YES
DMC-ABT		IP 67	1250 N	GREY, BLACK	-40° +105°	-	YES	-	YES	YES
DMC-ABTX		IP 67	1250 N	GREY, BLACK	-55° +145°	-	YES	-	YES	YES
DMC-EMP		IP 67	1250 N	GREY, BLACK	-15° +70°	-	YES	-	YES	YES
DMC PU		IP 67	1250 N	BLUE	-45° +120°	YES	YES	-	YES	YES
UALT 2000		IP 67	1250 N	GREY, BLACK	-15° +70°	-	YES	-	YES	YES
DMA		IP 67	1250 N	GREY, BLACK	-15° +70°	-	YES	-	-	YES
DMA PU		IP 67	1250 N	BLUE	-45° +120°	YES	YES	-	-	YES
DMT PU		IP 67	1250 N	GALVANISED	-45° +120°	YES	YES	55 dB	YES	YES
DMT		IP 67	1250 N	GALVANISED	-15° +70°	-	YES	55 dB	YES	YES
DMT EMP		IP 67	1250 N	GALVANISED	-15° +70°	-	YES	55 dB	YES	YES
DMTN		IP54	1250 N	GALVANISED	-45° +250°	-	YES	55 dB	YES	YES
DMT-LNX		IP54	1250 N	STAINLESS STEEL	-45° +300°	-	YES	49 dB	YES	YES
HJT		-	-	ORANGE	-60° +260°	-	YES	-	-	YES
DMC-HJT L		IP 67	1250 N	ORANGE	-60° +260°	-	YES	-	-	YES
GFP		IP 67	125 N	BLU	-15° +70°	-	YES	-	-	-
GFP-PXS		IP 67	750 N	GREY, BLACK	-15° +70°	-	YES	-	-	YES
GFPT		IP 67	125 N	GALVANISED	-15° +70°	-	YES	-	-	YES
TCX		IP 65	320 N	GREY, BLACK	+5° +70°	-	YES	-	-	-

Product features TKS KLIKSEAL®

Height of only 17-20 mm, 5,5 mm on the outside. Cable glands are approx. 30-40 mm.

Handles large range of cable and pipe diameters.

Installation time saving of up to 90%.

Self-adjusting to wall thickness.

Ergonomic installation.

"Pushout" membrane

Fixed in both directions when mounted.

Space saving design

Integrated tension relief

KLIK = No material compression during installation.

IP67

Rubber coated tension relief for protection of the cable mantle.
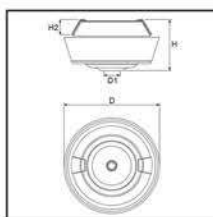
Material	TPE and Polyamide 66 - Halogen Free UL listed material
Mode of protection	IP67 / IP65
Temperature range	-20ºC....+125ºC [1]
Test standard	EN60529:1991 + A1 EN50262:1998 + A1+A2
Semko report	1111146 + 606620

• Integrated cable anchorage
• Fixed in both directions when mounted
• Space saving design
• Very quick and simple installation without the use of tools

Center the KLIKSEAL in the opening (from the inside), push evenly with both thumbs until it "kliks" into place.
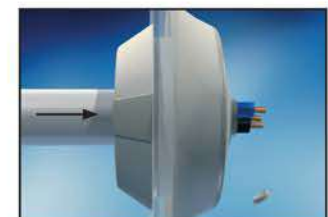
Insert the cable from the side with the polyamide tabs.
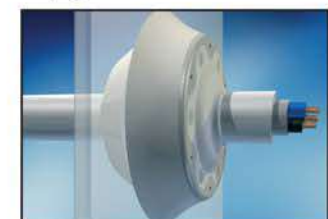
Product number	Size	IP67 and Cable Anchorage Type A* for Cable Ø mm	IP65 for Cable Ø mm	A mm	B for IP67/65 mm	H mm	H2 mm	D1 mm	D*** mm	Pcs pack	
RAL 7035											
T_14 758 03	M20	7 - 11	4 - 11	20,5	2 - 5	17 - 20	5,5	4,0	29,3 - 34,5	50	2000
T_14 758 04	M25	7 - 13**	4 - 13	25,5	2 - 5	17 - 20	5,5	5,0	34,3 - 40,0	50	1500
RAL 9005											
T_14 758 13	M20	7 - 11	4 - 11	20,5	2 - 5	17 - 20	5,5	4,0	29,3 - 34,5	50	2000
T_14 758 14	M25	7 - 13**	4 - 13	25,5	2 - 5	17 - 20	5,5	5,0	34,3 - 40,0	50	1500
RAL 9010											
T_14 758 23	M20	7 - 11	4 - 11	20,5	2 - 5	17 - 20	5,5	4,0	29,3 - 34,5	50	2000
T_14 758 24	M25	7 - 13**	4 - 13	25,5	2 - 5	17 - 20	5,5	5,0	34,3 - 40,0	50	1500
RAL XYZ											
TKS M20 XYZ	M20	7 - 11	4 - 11	20,5	2 - 5	17 - 20	5,5	4,0	29,3 - 34,5	50	2000
TKS M25 XYZ	M25	7 - 13**	4 - 13	25,5	2 - 5	17 - 20	5,5	5,0	34,3 - 40,0	50	1500

Product features RUTASEAL® & RUTASEAL LIGHT®

IP Class: IP67 (external).

Both Metric and PG programmes.

"Pushout" membrane with 0,25 mm thickness.

Internal / External holes IP67.

Internal / External holes IP67.

Produced in halogene-free EPDM or Chloroprene.
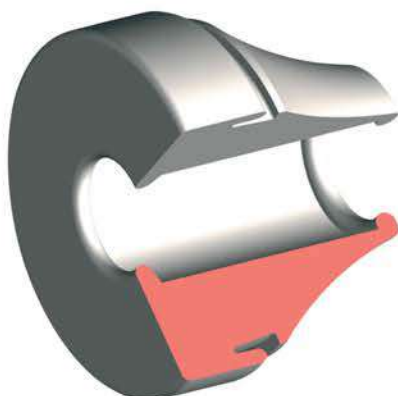
RUTASEAL can be assembled from either end depending upon the application.

Hardness: 60 ± 5 (Shore density).

Suits material thickness 0,5 - 4 mm both in plastic and metal.

Material	EPDM - Halogen Free Resistant to chemicals and weatherproof.
Mode of protection	IP67
Temperature range	-40ºC....+110ºC [1]
Test standard	EN60670-1:2005+A1:2013
Semko report	1301727 (M12-M50), 1612391 (M63) 1122298 (M12F, M16F)

• Quick and simple assembly without the use of tools
• Can be assembled from either end depending on application
• "Pushout" membrane

Push the grommet into the hole.

Pierce the grommet with the cable.

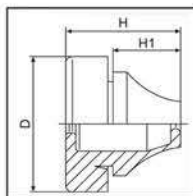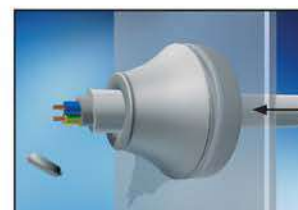The grommet is then locked in position by pulling back on the

RUTASEAL® Rubber Grommets

RUTASEAL® is very simple to use and demands no tools, which in turn means lower work cost. It requires no screwdriver or scissors to make the hole, which otherwise would endanger the IP-class seal. RUTASEAL® is SEMKO tested for IP67 internally and externally. The chloroprene version is also DNV approved. RUTASEAL® is produced in EPDM and Chloroprene in both PG and Metric. The seals are produced in black, light grey and grey. RUTASEAL® has a very high finish and the automatic method of production guarantees the same even and high quality on all products at all times.

Product number	Size	For cable/ pipe Ø mm	A mm	B mm	D mm	H mm	H1 mm	Pcs pack	
RAL 7001									
T_14 582 33	M12	4 - 7	12,5	0,5 - 2	20	12,7	5,4	50	4000
T_14 582 33-F	M12	4 - 7	12,5	2 - 5	20	12,7	5,4	50	4000
T_14 582 34	M16	5 - 9	16,5	1 - 4	21	18	10,5	50	4000
T_14 582 34-F	M16	5 - 9	16,5	2 - 5	21	18	10,5	50	4000
T_14 582 35	M20	8 - 13	20,5	1 - 4	25,5	20	12,7	50	2000
T_14 582 36	M25	11 - 17	25,5	1 - 4	30,5	21,6	14,5	50	1500
T_14 582 37	M32	15 - 20	32,5	1 - 4	38,5	24,8	17,5	25	1000
T_14 582 38	M40	19 - 28	40,5	1 - 4	48,5	30	20,4	25	400
T_14 582 39	M50	27 - 35	50,5	1 - 4	60,5	35	23,9	10	250
T_14 582 40	M63	34 - 45	63,5	1 - 4	73,5	40	28,9	5	125
RAL 9005									
T_14 582 93	M12	4 - 7	12,5	0,5 - 2	20	12,7	5,4	50	4000
T_14 582 93-F	M12	4 - 7	12,5	2 - 5	20	12,7	5,4	50	4000
T_14 582 94	M16	5 - 9	16,5	1 - 4	21	18	10,5	50	4000
T_14 582 94-F	M16	5 - 9	16,5	2 - 5	21	18	10,5	50	4000
T_14 582 95	M20	8 - 13	20,5	1 - 4	25,5	20	12,7	50	2000
T_14 582 96	M25	11 - 17	25,5	1 - 4	30,5	21,6	14,5	50	1500
T_14 582 97	M32	15 - 20	32,5	1 - 4	38,5	24,8	17,5	25	1000
T_14 582 98	M40	19 - 28	40,5	1 - 4	48,5	30	20,4	25	400
T_14 582 99	M50	27 - 35	50,5	1 - 4	60,5	35	23,9	10	250
T_14 583 00	M63	34 - 45	63,5	1 - 4	73,5	40	28,9	5	125
RAL 7035									
T_14 583 03	M12	4 - 7	12,5	0,5 - 2	20	12,7	5,4	50	4000
T_14 583 03-F	M12	4 - 7	12,5	2 - 5	20	12,7	5,4	50	4000
T_14 583 04	M16	5 - 9	16,5	1 - 4	21	18	10,5	50	4000
T_14 583 04-F	M16	5 - 9	16,5	2 - 5	21	18	10,5	50	4000
T_14 583 05	M20	8 - 13	20,5	1 - 4	25,5	20	12,7	50	2000
T_14 583 06	M25	11 - 17	25,5	1 - 4	30,5	21,6	14,5	50	1500
T_14 583 07	M32	15 - 20	32,5	1 - 4	38,5	24,8	17,5	25	1000
T_14 583 08	M40	19 - 28	40,5	1 - 4	48,5	30	20,4	25	400
T_14 583 09	M50	27 - 35	50,5	1 - 4	60,5	35	23,9	10	250
T_14 583 37	M63	34 - 45	63,5	1 - 4	73,5	40	28,9	5	125

(1) Unstressed material.

DESIGN-A-FLANge

With Design-A-Flange we are introducing a brand new flange concept, with an unparalleled level of protection and flexibility.
Design-A-Flangeis an innovative modular system where inserts can be changed depending on your needs. You can design your own configuration based on how many
openings you want, where you want them placed, and what type of seal you want to have.
You are no longer forced to use a fixed flange with a certain number of pre-determined openings.
You choose the configuration that suits your needs.
The push-out membranes ensures fast and easy installation without worries about achieving the correct IP-level. Should you want cable anchorage on certain cables then just install a Klikseal or a cable gland in the flange. If a cable no longer will be used you can seal the opening either by replacing the insert or cutting out the membrane and sealing the opening with one of our grommets.

Cable penetration by design

Design-A-Flange offers a number of features that you cannot find inany other flange solutions
* Design your own configuration, with the right size openings, and right number of openings placed where you want them
* Push-out membranes ot make instalation fast, easy and fool-proof High IP-protection
* No need ot drill separate holes ot instal aKlikseal or a cable gland Te essaseasi chang ot onolnger wnie uesd

Product advantages Design-A-Flange

Interchangeable inserts

Design your own solution

Compact design

"Pushout" membranes.

IP65, with or without cables

"Free placement" of openings

Possible to change configuration later on.

KLIKSEAL® or cable gland installation in the flange.

The Design-A-Flange System

Material	Fiberglass re-inforced Polypropylene and TPE - Halogen Free UL listed materials
Mode of protection	IP65
Temperature range	-20°C....+125°C (1)
Test standard	EN 60529:1991+A1 EN 60670-1:2005+A1:2013
Semko report	816003

• Design your own solution
• Interchangeable inserts
• "Free placement" of openings
• KLIKSEAL or cable gland installation in the flange

Prefabricated Flanges

FL21	T_26 654 01 / 19
FL21	T_26 654 02 / 20
FL21	T_26 654 03 / 21
FL13	T_26 654 05 / 23

Frame FL21 — T_26 654 00 / 18
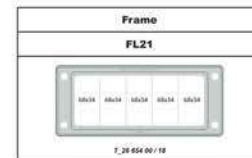
Inserts 68x68 for FL21

| 2x M20 (8-17mm) 2x M16 (5-10 mm) T_26 654 06 / 24 | KD M32 M40 M50 T_26 654 07 / 25 | 8x 7-14 mm T_26 654 08 / 26 | 2x 20-30mm 2x 10-20 mm T_26 654 09 / 27 |

Inserts 68x34 for FL21

| 2x 8-17mm T_26 654 11 / 29 | 2x M20 (8-13mm) T_26 654 12 / 30 | 10x 4-10mm T_26 654 13 / 31 |

Frame FL13 — T_26 654 04 / 22
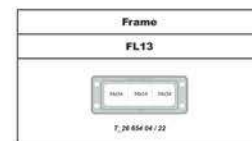
Inserts 34x68 for FL13 | **Insert 34x34 for FL13**

| 2x 8-17mm T_26 654 14 / 32 | 2x M20 (8-13mm) T_26 654 15 / 33 | 10x 4-10mm T_26 654 16 / 34 | 1x M20 (8-13mm) T_26 654 17 / 35 |
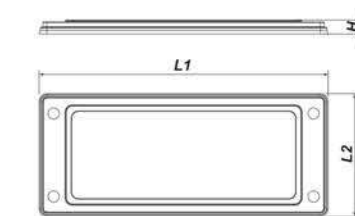
Size	L1 mm	L2 mm	H mm	H1 mm	H2 mm
FL 13	134	52	6,5	12	~ 35
FL 21	214	90	9	12	~ 35

Installation of cables
Push the cable through the membrane until the membrane pops out, or push out the membrane before installing the cable with a smaller cable or screwdriver.

PULLMAN ELECTRIC

Brass Cable Glands

A1/A2 Industrial Cable Gland

Brass indoor and outdoor cable gland highly suitable for all types of unarmoured cables, plastic or rubber sheathed cables. This gland provides a seal on outer sheath.

Recommended to use PVC shroud for additional ingress protection.
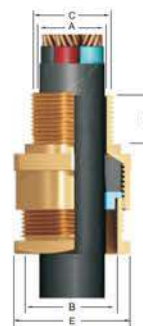
TECHNICAL DATA

Type	A1/A2
Design Specification	BS 6121 : Part I : 1989
Ingress protection	IP66
Gland Material	Brass
Finish	Plain Brass or Nickel Plated
Seal Material	Thermoplastic Elastomer
Cable Type	Unarmoured
Sealing Technique	Displacement Type
Sealing Area	Outer Sheath

Gland Size	CABLE DIMENSIONS ACCOMODATED		GLAND DIMENSIONS				
	Overall Diameter		Dia 'A'	Dia 'B'	Metric Entry Thread 'C'	Minimum Thread Length 'D'	Across Flat 'E' Max
	Min	Max					
16	3.5	8.5	10.0	12.0	16	15	21.30
20SS	3.5	8.5	10.0	15.4	20	15	23.60
20S	8.0	11.5	11.9	15.4	20	15	23.60
20L	11.0	13.5	14.5	17.9	20	15	26.85
25S	13.0	16.5	16.5	20.3	25	15	30.50
25L	13.0	19.5	20.7	27.4	25	15	35.50
32	19.0	25.5	26.9	31.7	32	15	41.30
40L	25.0	32.0	32.5	37.1	40	15	47.00
50S	31.5	37.0	38.6	44.2	50	15	55.00
50L	36.5	43.0	44.0	48.9	50	15	59.95
63S	42.5	50.0	50.3	56.1	63	15	64.75
63L	49.5	55.0	56.4	60.2	63	15	69.85
75S	54.5	61.0	62.2	62.2	75	15	78.75
75L	60.5	67.0	68.3	73.1	75	15	84.60
90	65.0	78.0	80.3	80.3	90	20	102.60
100	75.0	88.0	90.0	91.6	100	25	119.10

CW Industrial Cable Gland

Brass indoor and outdoor gland most popularly used with single wire armoured, plastic or rubber sheathed cable. Terminates and secured cable armouring and outer seal grips sheath of cable thus ensuring mechanical strength and earth continuity.

Earth tags to be use for earth continuity.

CW brass glands are also supplied with integral earth facilities.

Recommended to use PVC shroud for additional ingress protection.
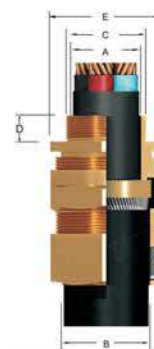
TECHNICAL DATA

Type	CW
Design Specification	BS 6121 : Part I : 1989
Ingress Protection	IP 66
Gland Material	Brass
Finish	Plain Brass or Nickel Plated
Seal Material	Thermoplastic Elastomer
Cable Type	Steel Wire Armour
Armour Clamping	Three Part (With Lock Nut)
Sealing Technique	Compression Type
Sealing Area	Outer Sheath

Gland Size	CABLE DIMENSIONS ACCOMODATED			GLAND DIMENSIONS				
	Under Armour Dia Max	Overall Dia Max	Armour Wire Dia	Dia 'A'	Dia 'B'	Metric Entry Thread 'C'	Minimum Thread Length 'D'	Across Flat 'E' Max
16	6.0	13.2	0.9	9.5	16.9	16	10	24.20
20S	11.6	15.8	0.9/1.25	12.3	17.0	20	10	24.00
20L	13.9	19.5	0.9/1.25	14.3	20.3	20	10	27.17
25S	15.5	25.8	0.9/1.25	18.3	26.4	25	10	32.75
25L	19.9	26.0	0.9/1.25	20.8	26.9	25	10	34.30
32	25.2	33.5	1.60/2.0	26.9	34.1	32	10	42.90
40S	29.4	38.5	1.60/2.0	31.5	39.6	40	15	49.30
40L	32.1	39.9	1.60/2.0	32.5	41.8	40	15	50.80
50S	39.5	49.0	2.0/2.25	40.9	50.2	50	15	61.70
50L	43.2	51.0	2.0/2.25	44.4	52.8	50	15	63.75
63S	50.6	58.9	2.5	51.8	61.9	63	15	73.90
63L	55.9	65.3	2.5	56.4	66.5	63	15	78.50
75S	61.9	71.6	2.5	63.2	74.2	75	20	87.40
75L	67.9	78.0	2.5	68.6	78.5	75	20	96.00
90	74.0	88.0	2.5	79.0	90.2	85	20	105.30

PR 33 Universal hand press

Universal hand press for terminals:
• with and without insulation of 0,5 ÷ 6 mm2
Features:
• easily exchangeable dies (see chart below)
• two-component grips prevents hand slipping using minimum force
• an eccentric for adjusting clamping force
• available with sets of dies in functional case
Length: 220mm; Weight (without dies): 500g

• cable end-sleeves of 0,5 ÷ 35 mm2

• high repetitiveness and precision of crimping
• ratcheting mechanism enables easy crimping

• selection of dies for individual needs
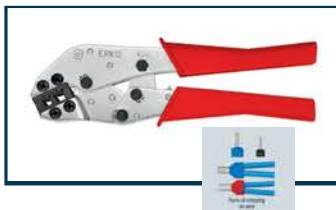
T 10-16V Hand press	T 16S Hand press	TC 6 Front pliers	T10 Hand press

ETA 66 Crimping pliers	T 3 Crimping pliers	T 16 Crimping pliers	RA 16 Hand press

PK 95 Crimper	PR 95A Hand press	PRZ 240 Hand press	GZ 300 Hydraulic head

Hole punching tools	EGC 45 Battery powered shears	HRZ 300 Hydraulic hand press	HR 100-U Hydraulic hand press

EPZ 120 Battery powered hydraulic press

Battery powered hydraulic press for:
• Cu tubular terminals and connectors on cable conductors (ZSM dies) of 6 ÷ 120 mm2
• Al tubular terminals and connectors acc. to DIN standard, on cable conductors (ZSM dies) of 16 ÷ 70 mm2
• Al tubular terminals and connectors outside DIN standard, on cable conductors (ZSM dies) of 16 ÷ 120 mm2
Special features:
• automatic off switch ending operation cycle after a proper crimping is complete
– indicated by green LED, not accurate crimping cycle – indicated by red LED
• electronic record of operation cycle – data transfer via USB
• efficient lithium-ion battery
• automatic pressure control
• flip top, rotatable by 330° head
• 2 batteries provided with set
Weight: 2,9 kg; Force: 32kN

GC 50-H800-E, GC 100-H800-E
Safety cable cutting set

RC 5 Cable shears

⚠ 1000 V

Shears for cutting:
• Al and Cu single- and multistrand cables, outer diameter up to 5 mm
• steel cable, diameter 2 mm
Features:
• shaped blades for easy cutting
• lever optimizes the force required to cut
NOTE: ability to work under voltage up to 1000V
Length: 200 mm; Weight: 290 g

RC 13 Cable shears	RC 15 S Cable shears	RC 15 Cable shears	RC 20 Cable shears
	with spring		

RC 54 Cable shears	RC 54S Cable shears	RC 100T Cable shears	RCO 32 Cable shears
		685÷875 mm	

RC 27 Cable shears	RC 38 Cable shears	GC 50 Hydraulic head	GC 100 Hydraulic head
	550÷700 mm	Example of a cut.	Example of a cut.
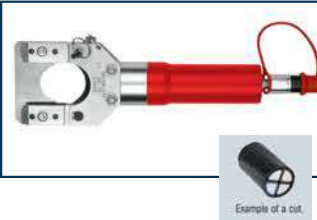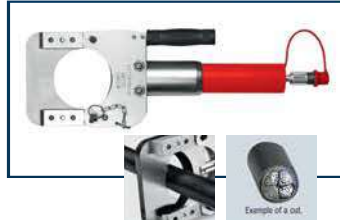
GCO 100 open hydraulic head

Hydraulic cutting head for:
• Al and Cu cables
• outer diameter up to 100 mm
NOTE: do not use for steel reinforced wires
(including AFL) or other materials
not intended for use
Works with H 800 hydraulic pump and AH
100, AH 500, AH 550, AH 500L
electric hydraulic units.
Length: 603 mm; Weight: 10 kg;

SI 10 Insulation stripper	SI 6 Insulation stripper
SI 10W Insulation stripper	SI 6 Insulation stripper

NSD wooden knife	NSE Electrician pocket knife	NMZS 50 Wire stripper knife	NI 28 Cable stripping knife	NM 30 Wire stripper knife

Control & Signalling Devices

Push Buttons & Pilot Lamps
- Widest range 22.5mm; illuminated and non-illuminated actuators in polycarbonate & metallic
- Pilot lamps - LED / Filament / Neon
- Ingress protection IP65 / IP66; NEMA4/4X

Push Button Stations
- Available in 1, 2, 3 & 4 ways; IP65 box with different combination of push buttons / selectors : Ingress protection IP65 / IP66; NEMA 4 / 4X
- Stations in aluminium die cast / plastic boxes

c(UL)us LISTED (SR) CE RoHS Compliant

Non-Illuminated Push Buttons (Type RB2-B)

(Control Units with chromium plated metal bezel)

RB2-BA4

RB2-BA16

RB2-BL4

RB2-BP4

RB2-BA48

RB2-BS14

RB2-BT43

RB2-BA3347

Operating Heads for Push Buttons, Spring Return - IP65

Description	Knob Size		Colour	
Flush Push Button		○	White	RB2-BA1
Spring Return		●	Black	RB2-BA2
		●	Green	RB2-BA3
		●	Red	RB2-BA4
		●	Yellow	RB2-BA5
		●	Blue	RB2-BA6
		↑	Black Arrow on White base	RB2-BA334
		↑	White Arrow on Black base	RB2-BA335
Recess (Guarded)		○	White	RB2-BA16
Push Button		●	Black	RB2-BA26
		●	Green	RB2-BA36
		●	Red	RB2-BA46
		●	Yellow	RB2-BA56
		●	Blue	RB2-BA66
Projecting Push Button		○	White	RB2-BL1
Spring Return		●	Black	RB2-BL2
		●	Green	RB2-BL3
		●	Red	RB2-BL4
		●	Yellow	RB2-BL5
		●	Blue	RB2-BL6
Booted Push Button		○	White	RB2-BP1
Spring Return		●	Black	RB2-BP2
IP66		●	Green	RB2-BP3
		●	Red	RB2-BP4
		●	Yellow	RB2-BP5
		●	Blue	RB2-BP6
Flush Push Button		○	White	RB2-BA18
Spring Return with		●	Black	RB2-BA28
Transparent Boot		●	Green	RB2-BA38
IP66		●	Red	RB2-BA48
		●	Yellow	RB2-BA58
		●	Blue	RB2-BA68
Mushroom Head Push Button		●	Black	RB2-BC2
Spring Return		●	Green	RB2-BC3
		●	Red	RB2-BC4
		●	Yellow	RB2-BC5
	φ 40mm	●	Blue	RB2-BC6
	φ 60mm	●	Red	RB2-BR4
Mushroom Head Push Button	φ 30mm	●	Red	RB2-BS44
Turn to Release	φ 40mm	●	Red	RB2-BS54
	φ 60mm	●	Red	RB2-BS64
Mushroom Head Push Button	φ 40mm	●	Red	RB2-BS14
Key Release - Key No. 455				
Mushroom Head Push Button	φ 40mm	●	Red (Pre Marked)	RB2-BT4
Push to Stay and Pull to Release		●	Red	RB2-BT43

Operating Heads with Black metal bezel

TO Order add Suffix '7' to above e.g. RB2-BA334 Becomes RB2-BA3347

- For legend plates refer page F9
- For body / contact assemblies refer page F6
- For accessories refer page F8 & F9
- For complete assemblies refer page F10 & F11

Robusta Contactors & Overload Relay

RANGE
- robusTa Contactors
- Rating: 9A~2100A
- Poles: 3 & 4 Pole, control relays
- Overload Relays
- Rating: 0.1A~ 1000A

FEATURES
- Superior functional aesthetics and advanced performance
- Common add-on accessories – front / side auxiliary contact block
- pneumatic timer block, mechanical interlock & coil suppressor
- Overload relays auto / manual reset with built-in single phase protection
- High mechanical life achieved by optimum design and world class material

Capacitor Duty Contactors

RANGE
- Rating: 7kVAR ~ 75kVAR
- Poles: 3 Pole, 415V AC, 50/60 Hz

FEATURES
- Excellent damping of In-rush current
- Reduced watt loss during "ON" condition, saves energy
- Capacitor bank switching in parallel without de-rating
- Enhanced equipment life
- Low maintenance down time
- Power quality improvement
- Optimized solution cost

Switch Disconnectors

RANGE
- Rating: 25A ~ 3150A, 415V, AC23A
- Poles: 2P, 3P, 4P & 6P

FEATURES
- Modular pole design – economical maintenance
- Available in open / sheet steel enclosure version
- Quick make & break mechanism, self cleaning contacts
- Compact construction
- Door interlock and padlock facility
- Suitable for isolation
- Telescopic shaft for depth adjustment
- Door defeat
- Provision for 2NO+2NC aux contacts

Changeover Switch (with & without fuse)

RANGE
- Rating: 63A ~ 3150A (without fuse); 125 ~ 800A (with fuse), 415V, AC23A
- Poles: 3P, 4P & 6P

FEATURES
- Available in open / sheet steel enclosure version
- Suitable for isolation
- Telescopic shaft for depth adjustment
- Door defeat
- Provision for 2NO+2NC aux contacts

PULLMAN ELECTRIC

Signalling Devices

Flush head Actuator	Mushroom Head	Modular Contact Blocks	Projecting Head Push Function Actuator	Selector	Twin Touch

Flush head illuminated Latchable and Non Latchable	Flush head Non Illuminated Latchable And Non Latchable	Projecting Head illuminated And Non-Illuminated Latchable And Non Latchable	Buzzer with Illumination	Emergency Push turn	Flush Head

Projecting Head Push Function	Mushroom Head	Selector	Flush Head Actuator	Selector	Mushroom head

Siren Flasher	Siren Flasher	Multicolor Tower light	Tower Lights	Tower Lights Buzzer	Customized Solutions

Pendants

Five Way Single Speed	Five Way Double Speed	Three Way Single Speed	Three Way Double Speed	Pro contact block NO	Pro Flush Head

Smart Solutions

Wireless Push Buttons	Wireless Crane Pendants	Wireless Andon Systems	Double speed

35

Limit switches

Metal	Mini	Micro	Metal SLMB Series

Metal SLMS Series	Plastic SLPB Series	Plastic SLPS Series	Metal+Plastic

Switches

Stop Switch For EV -1	Dash Board Switches	Dash Board Switches	Panic switches	Door Limit switches	Plunger Type Door Switch

Lighting Solutions

Bracket Mounted	5W	Led Tube Light 150 MM	Rocker Switch	Pro Plunger Switch	Tube Lights 2ft

E12	Pro Led Solutions Pro Led socket	TEMPERATURE INDICATOR	Led Light	POT PCB	PLUNGER SWITCH

RISH Whiteline Analog Panel Meters

90 deg.

240 deg.
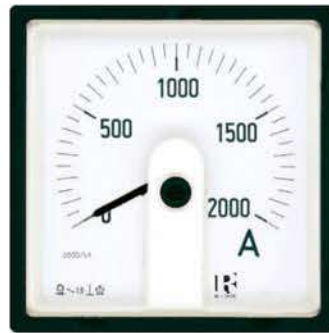
Type of Measurement	Current and Voltage						
Types of Meters	Moving Iron	Moving Coil		Moving Coil with Rectifier		MDI Bimetal Ammeter	MDI (Bimetal Ammeter with M.I. Ammeter)
Type of Scale	90°	90°	240°	90°	240°	90°	90°
Nomenclature	DE	DS	DSL	DG	DGL	BM	EB
DIN Sizes	48,72,96,144	48,72,96,144	48,72,96,144	48,72,96,144	72,96,144	72,96	72,96
Measured Parameters	A.C. Current, Voltage	D.C. Current, Voltage	D.C. Current, Voltage	A.C. Current, Voltage	A.C. Current, Voltage	Mean RMS, Max Current	Mean RMS, Max Current & Instantaneous RMS
Range of Measurement	Current 100mA-100A	Current 15µA-100A	Current 50µA-100A	Current 1mA-10A	Current CT Operated 1A & 5A	CT Operated 1A or 5A RS Time - 8, 15, 20, 30 min	CT Operated 1A or 5A RS Time - 8, 15, 20, 30 min
	Voltage 6V-750V	Voltage 15mV-600V	Voltage 15mV-600V	Voltage 6V-600V	Voltage 6V-600V	NA	NA
Proof Voltage in KV	3 (2 for 48 Size)	3 (2 for 48 Size)	2	2	2	3	3
Accuracy	1.5% of fiducial Value					3% of fiducial Value	

RISH Whiteline Panel Meters for Power, Power Factor and Frequency

2 IN 1 Meter

2 in 1 Series Panel Meters simultaneously measures 2 electrical parameters in single 96 x 96 mm meter. The 2 in 1 Series Consists of DE (Moving Iron), DS (Moving Coil), DG (Rectifier) & FM (Frequency) meters Mainly recommended in Synchro Panel.

Types: Voltage - Voltage, Ampere-Ampere, Voltage-Ampere, Hz-Hz
Applicable Standards: IEC 60051

Synchroscope (SQ)

RISH Whiteline Features

Interchangeable Scales	Mounting A) Swivel Screws	Easy Replaceable Glass And Bezel	IP Protection A) Standard IP 20 (Back Cover)	Built In Transducer Using SMT

Digital expertise

RISH EM 1340	Rish Master 3480	Rish EM 1330	Rish EM 1340	RISH Master 3480	RISH Eine Programmable AC DPM

RISH Master 3440	RISH Master 3420	RISH Master 3430	Rish EM 3490SS	Rish EM 3490	Rish EM 1320

RISH DPM Series (DC)

72 x 144 mm	48 x 96 mm	48 x 96 mm	24 x 96 mm	24 x 48 mm

96 x 96 mm	RISH DDM 96o × 96mm	RISH COS 96×96 mm	Rish Eine	Rish ACX

R412	24/96 S	Rish PGDX	24/48 D/F	48/96 F/C

R312

Multi-Function Meters

Step 1

Remove the window cover ata back side of the Instrument.

Step 2

Insert the required option O/P card in the given slot.

Step 3 & 4

Cut the appropriate] portion of window cover as per the terminals of optional card. Click fit the window & insert the connector.

INPUT CT / PT

Onsite Programming

Configuration through RS485 MODBUS

RS 485 to RS 232

AUX Supply
380VAC (-15% / +20%)
100-250 VAC/VDC (+/-10%)
12V-48 VDC (+/-10%)

OUTPUT Display

Digital Output

Pulse Output **Limit Output**
Analog Output

RS485 MODBUS

Transducers

Rish Con Series Transducers

RISH CON CA/CV

RISH CON M

Electrical Transducers

RISH Ducer/CON Series

Features

♦ Transducers are the beginning of a measuring Chain. Transducer acquires any electrical or Physical quantity and converts it into a proportional electrical signal. The output signal is either a DC voltage or a DC Current and is load independent through a wide range.

Applications

♦ Telemetering (e.g. Remote transmission of electrical parameters to regional distribution center)
♦ PLC, SCADA (Supervisory Control & Data Acquisition)
♦ Energy Management.
♦ Process Control where accurate & reliable monitoring of Electrical parameters is desired.
♦ Input to Recorders / Indicators
♦ Monitoring of various electrical parameters at generation, transmission & distribution of electrical energy.

Digital Clamp Meters

RISH Insu 5000   RISH Clamp Power   RISH Insu Digital Insulation Tester   Rishabh DMM 612-616   RISH Multi Series DMM   Rishabh DMM 6012-6016

Power Supply

Metering Current Transformers

Swivel for RISH Xmer with Mounting Screw

Terminal Cap

Terminals

Core

Swivel for RISH Xmer with Mounting Screw

DIN Rail Plate

Case

Wall Mounting Clamp
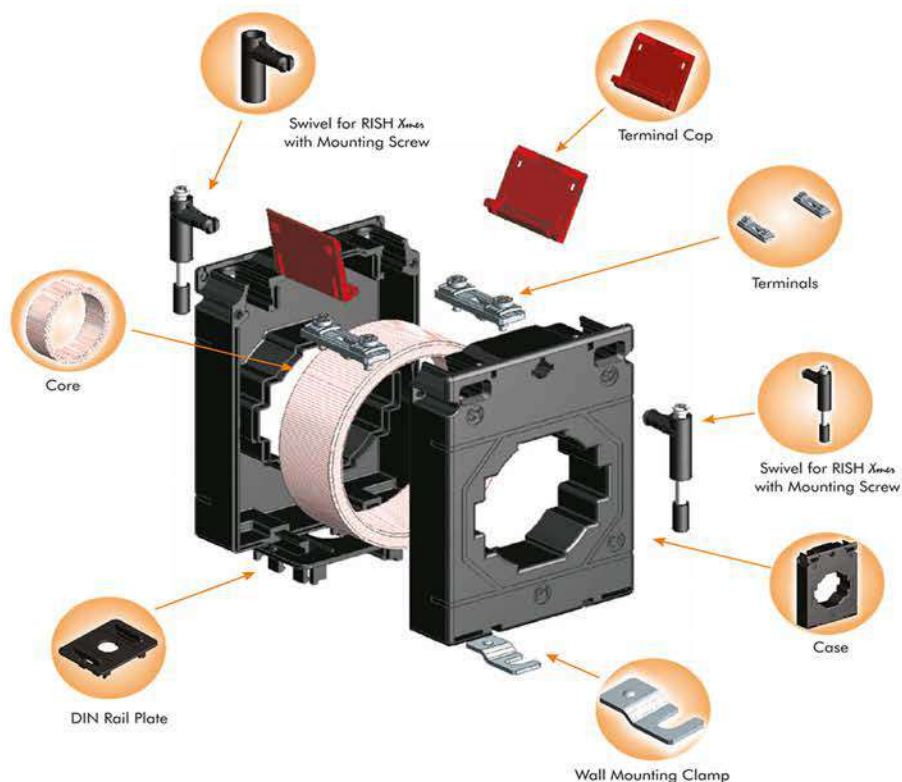
Wound Primary	Busbar Type	Tape Wound	RISH Xmer 3PH 105-21 (40)	RISH Xmer 45 (40) Series

RISH Xmer 86(45) Series	RISH Xmer 225 (50) Series	Protection Type	RISH Xmer 50/30 (30)	RISH Xmer 62/ W (40)

RISH Xmer 74/ W (45)	Split Core	RISH Xmer 62(40) / 74(45) Series	RISH Xmer 104(45) Series	RISH Xmer 50/50 Series

Electronic Timer Series Micon 175	Electronic Timer Series Micon 225	Electronic Timer Series Micon 780	Electronic Timer Series Micon 480

Electronic Timer Series Micon 350	DIN Digital Timer-Eliro	Panel mounting Programmable Digital Timer-Eliro	Digital Timer switch crono &Pulse

Astronomical Time Switches Astro TM	Synchronous Timer EM1000	Time Switch FM series	Digital Hour Meter

Hour Meter Series HM48	Hour Meter Series 36	Digital Counters	Impulse Counter Series CR 26

Insulation Monitoring Relay	Voltage Monitoring Relay SM800	Voltage Monitoring Relay SM175	Voltage Monitoring Relay SM301

Voltage Monitoring Relay SM500	Voltage Monitoring Relay SM501	Voltage Monitoring Relay SM600	Current Monitoring Relay

Earth Leakage Relay	Earth Leakage Relay-CBCT	PTC Thermistor Relay	Frequency Monitoring Relay

Programmable Logic Controllers PLC

Temperature Controller

Programmable Logic Controller Genie tm NX

Temperature Controller 4 Digit Series

Mini PLC-100

Temperature Controller Series PR69

Standard Polychloroprene rubber

Lubricated sleeves: up to type A4

British standard sleeves polychloroprene rubber	Standard sleeves in silicone rubber for high temperatures	in polychloroprene rubber

Standard colours:
018 natural
011 transparent
001 white
002 blue
003 green
004 yellow
006 brown
007 red
010 black
013 grey

PLIOGRAPH PLUS Markers in PVC Type 150

Marker booklets type 150
Number of markers per booklet: 150
Marker width: 2,8 mm
Marker height: 3,8 mm
Print height: 2,1 mm
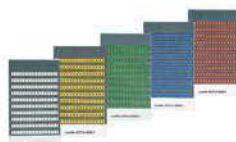
PLIOGRAPH PLUS Markers in PVC Type 200

Marker booklets type 200
Number of markers per booklet: 200
Marker width: 2,1 mm
Marker height: 3,8 mm
Print height: 2,1 mm

Carriers PLIOGRAPH PLUS in Flexible PVC

Transparent carriers   Material: PVC   Colour: transparent
In 6 sizes: for wires and cables of Ø 1,1 to 30 mm.
4 lengths: 3, 6, 8 and10 standard markers
type 150, or 4, 8, 11 and 14 narrow markers type 200
In strips of 0,60 m for cutting to required length.

- Available as Double carriers in flexible PVC

- 10 mm (supplied in bags)
- 18 mm (supplied in bags)
- 32 mm (supplied in bags)
- 0,60 m for markings
requiring lengths greater than shown above
(supplied in boxes)

Single   Double
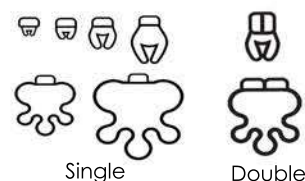
PR PLIOGRAPH PLUS

Carriers in Ethylene Vinyl Acete (Halogen Free)

"PR" transparent carriers
Three sizes: for Ø 1 to 9 mm
Material: EVA halogen free (- 10 to + 65°C)
Colour: clear
With marker holder:
For wires and cables of Ø 1 to 9.
In 3 sizes: 1 of them in 2 lengths.
For 6 to 7 standard markers for type 150
or 8 to 9 narrow markers for type 200

PRA PLIOGRAPH PLUS Carriers

in Flexible PVC With Eyelet Fasteners

Self-adhesive PRA PLIOGRAPH PLUS
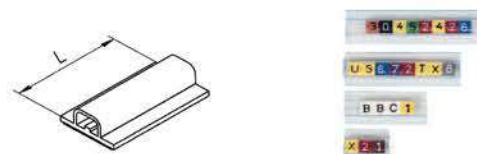
PLIOGRAPH 2000 Markers in PA6

Marker boxes:
Number of markers per string: 25 markers
Number of strings per box: 16
Print height: 2 mm

Label 14-1177 (V0 UL94)

LABELS PLIOGRAPH PLUS
For Carriers Laser Printed

Material: PET

Accessories

for mounting and removing PLUS for
PLIOGRAPHPLUS and PLIOGR
APH2000 markers

Mounting Tools

Combs PLUS
for identical identification of the
ends of the same conductor

PULLMAN ELECTRIC

Rigid insulating and identification

Markers Cylindrical ER and square EC

Material: high impact polystyrene
Operating temperatures: -30 to +70°C
Elongation at break: 45 %
Tensile stregth at break: 30 MPa
Application:
ER and EC markers allow insulation, wire end terminations and
wire marking.

unprinted   **printed**

Standard colours:

001 white	002 blue	003 green	004 yellow	007 red	010 black	013 grey	Q17 lilac

PLIO CARRIERS

> Material: PVC , PP
> flame resistant flame resistant
> Operating temperatures: -20 to +90°C -20 to +90°C
> Specifications: V0 UL94 V0 UL94
> halogen free (HF)
> Applications: our carriers are designed to respond
> to the need for speed of application, retro-marking,
> larger diameter cables and other applications.
> • Marking upon request.
> • Permanent marking.
> • Length of the carrier depends on text and its height.
> • Available in colors.

> Material: flexible PVC (quality 9920)
> Operating temperatures: -20 to +90°C
> Specifications: V0 UL94

Length of the carrier: 200 mm maxi.

SES-STERLING

Print area: 140 mm max.

Label LF

Material: PET
Temperature range: -40 to +125°C
Label thickness: 0,195 mm
Standard colours: white - yellow
Specification:
- printable on a LASER printer,
- double sided printing: 1 side colour white
1 side colour yellow.

Band PTE

Material: EVA   Colour: transparent
Operating temperatures: -20 to +65°C
Application: punched transparent support band for large
cables and tubes.The band punching can be held
with our SES-QUICK cable ties width 2,6 mm.
The M1P-BAND10 band, printable with our PLIOSCRIB M1-PRO
printer, the labels LFL 9,5, printable with a laser-printer, as well as
the PLIOMARK MINI labels (only PT EF band) can be used with PT
band for a clean and sustainable identifying
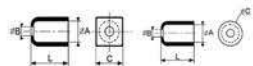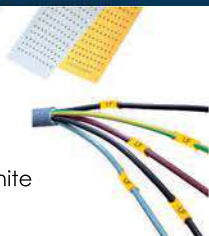
Various markers

Identification	Rigid insulating and identification markers	Printed boots for standard crimp terminals
	(380V)	6404
Materials	polystyrene choc	flexible PVC
Temperatures of use	-30 to +70°C	-25 to +75°C
Specification	halogene free	-
For cables	2,5 to 16 mm²	Ø 2,8 to 5 mm
Standard colours	white - blue - green - yellow red - black - grey - lilac	white - blue - green - yellow orange - brown - red - violet black - transparent - grey - ivory

Printed carriers with indelible marking

• Principe

Datas	LASER or embossed engraving	Examples:
Reception by electronic file	SES-STERLING	SES-STERLING

• Carriers: material and widths

PVC width 12 mm | PVC width 25 mm | PP-HF width 12 mm | PP-HF width 25 mm | INOX several widths

• Packing

caterpillar pre-cut for carriers PVC and PP | pasted on cardboard | bulk
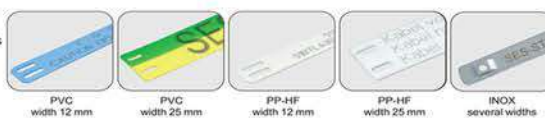
Label holders

type	PT EF	PT EG	LFL 2H	LFL	LF	SES-W SES-WL	FB 109 FB 110 FB 112	FB 201 FB 211
colours of the labels	-	-	white yellow	white yellow	white yellow	white	white	white yellow

type	SES PROTECTOR	PLIO-15 PLIO-30	PLIOMARK MINI	PLIOMARK MAXI	PLIOMARK MINOX
colours of the labels	white	white	white yellow	yellow	steel

EC Type Marker Tube

Material: soft PVC prevents oil and other substances from corroding.
Structure: The inside of the EC type tube is concave and flexible,
and the inner diameter could be stretch out and draw back with the size of the wire
Features: Short length, suitable for the joint of special signs, black on
yellow background, black on white background, could clearly set off the wire number

Color Coded Cable Marke

Material: South Asia soft PVC prevents oil and other substances from corroding.
Structure: The inside of the EC type tube is concave and flexible,and the inner
diameter could be stretch out and draw back with the size of the wire.
Features: 1. Short length, suitable for the joint of special signs, black on
yellow background,black on white background, could clearly set off the wire number.
2.One type of EC wiring mark could be used for a variety of wires.

N Type Coded Cable Marker

Material: Paraformaldehyde (POM)
Application: Put the bellmouthing close to the wire, and then push the mark
with your fingers,and the mark could slide onto the wire and be firmly clamped.
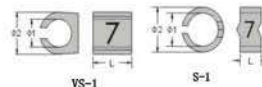
M Type Color Coded Cable Marker

Material: Made of UL qualified POM, fire rating 94V-2.
Features: The mark adopts double-convex and double-concave design,
it is not easy to individually flip when the mark is combined, and the code is maintained
Color: International standard color code.
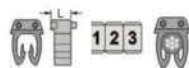
EC-J Flat Cable Marker

Material: South Asia soft PVC prevents oil and other substances from corroding.
Usage: A. Use as a normal tube: suitable for round or flat wires with diameter
of 3.5mm~7.0mm.
B. Used in conjunction with marking targets to mark large cables.

Marker Strip

Material: UL-qualified PVC/NYLON 66 (black), fire rating 94V-2
Application: With white and flat wiring signs used to mark large cables.
Usage: First fit the mark on the target, and then fix both ends of the target
with nylon cable ties
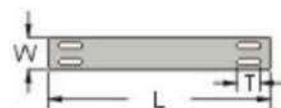
Shrinkable Polyolefin Identification Sleeves

Operating temperature

- Operating temperature: -55℃ ~ 135℃
- Minimum shrink temperature: 80℃
- Minimum fully recovery temperature: 120℃

Color

- SAE AMS-DTL-23053/5
- UL224 125℃ 600V
- SAE AS 81531, MIL-STD-202

- Standard color: White Yellow
- Other colors are available upon request.

PVC Marker Tubes

◆ Unique round profile for customized cable and wire marking.

◆ Reduces marking costs in projects for frequent, fast and late stage alterations.

◆ Fast to use bulk reel and box format.

Material: Made from premium **Heavy Metals free ROHS compliant**

Item No.	Inner Diameter (in mm)	Wall Thickness (in mm)	Standard Packing	Suitable for wire size
MS2.2	2.20	0.35	100 Mtr Roll	0.5 sq.mm
MS2.5	2.50	0.35	"	0.5-0.75 sq.mm
MS3.0	3.00	0.40	"	1.0-1.5 sq.mm
MS3.2	3.20	0.40	"	1.0-1.5 sq.mm
MS3.5	3.50	0.45	"	2.5 sq.mm
MS4.0	4.00	0.45	"	2.5-4.0 sq mm
MS4.2	4.20	0.45	"	4 sq.mm
MS4.5	4.50	0.45	"	4.0 sq.mm
MS5.0	5.00	0.45	"	4.0-6.0 sq.mm
MS5.2	5.20	0.45	"	6.0 sq.mm
MS5.5	5.50	0.50	"	6.0 sq.mm
MS6.0	6.00	0.50	"	6.0-10.0 sq.mm
MS7.0	7.00	0.50	"	10.0 sq.mm
MS8.0	8.00	0.50	"	16.0 sq.mm
MS9.0	9.00	0.50	"	16.0 sq.mm
MS10.0	10.00	0.50	"	25 sq.mm
MS12.0	12.00	0.60	"	35 sq.mm

Widely used for printing markers on all types of ferrule printing machines of reputed makes.

Standard Colors: White & yellow

Other sizes of different inner diameters, wall thickness and colors are available on request

Performance of Marker Tube:

• Ultimate Elongation: 275%
• Tensile strength: 15.50 N/mm2
• Temperature Range: -20 Deg C to +85 Deg C
• Durability:-Flammability resistance according to UL94-VO

Heat shrinkable identification marker sleeves

◆ Features

Shrink ratio: 3 :1
Operating temperature range: -55℃~125℃
Minimum shrink temperature: 70℃
Minimum fully recovery temperature:110℃
Flexible, highly flame-retardant.
Conform to RoHS 2.0 ((EU) 2015/863)
UL224 E214175 125℃ VW-1
SAE-AS81531,MIL-STD-202

◆ Color

Standard color: white,yellow.

◆ Technical Data

Property	Test method	Requirement
Tensile strength	ASTM D 638	≥10.4MPa
Ultimate elongation	ASTM D 638	≥200%
Print performance	SAE-AS81531	50rubs.legible
	MIL-STD-202	30 strokes,legible
Dielectric voltage withstand	UL224	2500V, 60sec no breakdown
Dielectric strength	ASTM D2671	≥19.7kV/mm
Volume resistivity	ASTM D 876	≥10¹²Ω·cm
Heat shock <200℃,4hrs>	ASTM D2671	No cracking, dripping or flowing
Flammability	Average burn time is less than 1 min	Pass

High temperature heat shrinkable identification marker sleeves

◆ Features

Shrink ratio: 2:1
Operating temperature range: -55℃~200℃
Minimum shrink temperature: 155℃
Minimum fully recovery temperature:175℃
Flexible, highly flame-retardant.
Provide insulation and strain relief.
AMS-DTL-23053/18
SAE-AS81531,MIL-STD-202

◆ Color

Standard color: white,yellow.

◆ Technical Data

Property	Test method	Requirement
Tensile strength	ASTM D 638	≥24.3MPa
Ultimate elongation	ASTM D 638	≥200%
Print performance	50rubs.legible	50rubs.legible
	30 strokes,legible	30 strokes,legible
Dielectric voltage withstand	UL224	2500V, 60sec no breakdown
Dielectric strength	ASTM D2671	≥23.6 kV/mm
Volume resistivity	ASTM D 876	≥10¹²Ω·cm
Heat shock <275℃,4hrs>	ASTM D2671	No cracking, dripping or flowing
Low temperature flexibility<-55℃,4hrs>	ASTM D2671	No cracking
Flammability	Average burn time is less than 1 min	Pass
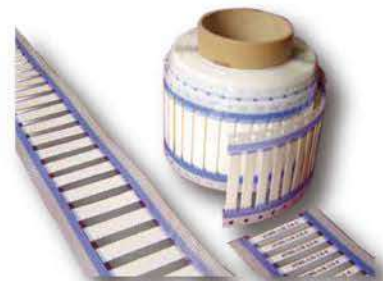
Package information

Continuous Type
A-Paper reel Packing (m/reel)
B-Plastic reel Packing (m/reel)
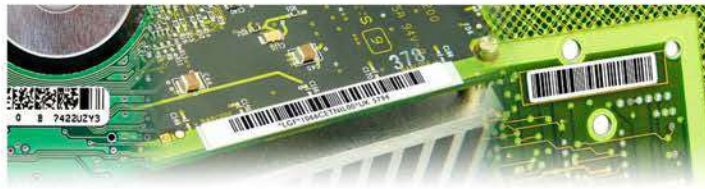
Specialists
in professional

Labels

M210 Portable label printer

Product Highlights
Stand Alone Printing:
Stand-alone

Resolution (dpi):
203 dpi

Colour Capability:
Monocolour

Application(s):
Data and telecommunications labelling,
Electrical labelling,General identification,
Lean and 5S labelling,
Warehouse marking,Wire and cable labelling

Continuous vs Die Cut Labels:
Continuous and Die-cut

Max. Label Width (mm):
19.05 mm

**Recommended
Usage per Day:** 100

Print Technology:
Thermal Transfer

Voice & datacom identification

Cable flags

Punch block & patch panel labels

Self-laminating cable markers

Continuous vinyl material

PermaSleeve wire marking sleeves

BradyGrip print-on hook material

Facility & safety identification

Indoor / outdoor grade facility & safety labels

Warehouse identification

General industrial labels

M211 Label Printer

Product Highlights
Resolution (dpi):
203 dpi

Stand Alone Printing:
Mobile device connected

**Recommended
Usage per Day:** 100

Application(s):
Asset tracking, Data and telecommunications labelling,
Electrical labelling, General identification, IT Equipment
labelling, Lean and 5S labelling, Warehouse marking,
Wire and cable labelling

Continuous vs Die Cut Labels:
Continuous and Die-cut

Print Technology:
Thermal Transfer

Max. Label Width (mm):
19.05 mm

Colour Capability:
Monocolour

M211 Accessories

Article No.	Description
170385	M211 Belt Clip
170386	M211 Hard Case
170387	M211 Power Brick
170388	M211 AC Wall adapter EMEA
170425	M211 Magnet Only Accessory
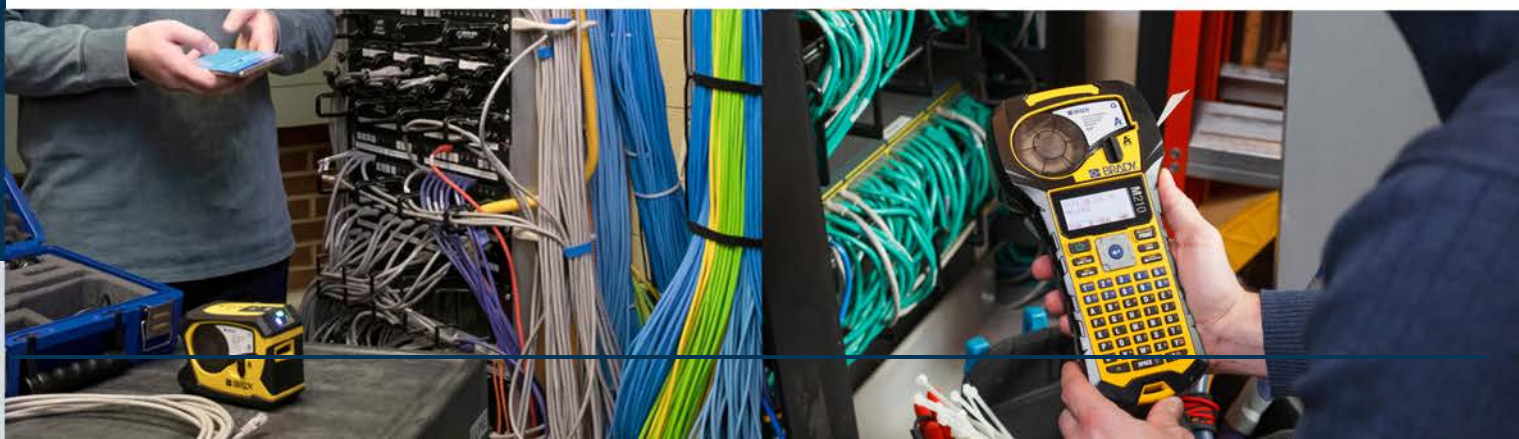
SELF-LAMINATING CABLE & WIRE LABELS
- Clear, wrap-around tail overlaminates white print-on area to protect text
- Great for data cables or wires that are frequently handled & moved

PERMASLEEVE™ HEAT-SHRINK CABLE & WIRE MARKERS
- 3:1 heat-shrink ratio, wire marker sleeve
- Fade resistant and flame retardant for superior aesthetic appearance
- Meets several SAE and MIL-STD specs*

CABLE & WIRE WRAP AROUND LABELS
- Nylon cloth label is highly pliable conforming to tightly curved surfaces
- Print multi-line legends in multiple areas when using flag mode
- Text entered in wire marker mode auto-repeats when label prints

NYLON STRIPS FOR TERMINAL BLOCK MARKING
- Narrow nylon cloth label strips for alignment on terminal blocks
- Prints terminal identification with user specified spacing using terminal block mode

POLYESTER STRIPS FOR COMPONENT MARKING
- High performance polyester material with white or transparent finish
- Best for flat, smooth surfaces
- B-488 withstands numerous solvents and variable temperatures

INDOOR/OUTDOOR VINYL FOR GENERAL INDUSTRAL MARKING
- Adheres to irregular, rough and curved surfaces
- Stands up to grease, oil and most industrial chemicals
- 8-10 years* average outdoor durability in temps from -40°C to 82°C

Diagram	Order Reference	Colour	Label Width A (mm)	Label Length B (m)
B-595: Vinyl				
◉	M21-375-595-BL	White on Blue	9.53	6.40 m
◉	M21-500-595-BL	White on Blue	12.70	6.40 m
◉	M21-750-595-BL	White on Blue	19.05	6.40 m
◉	M21-375-595-BR	White on Brown	9.53	6.40 m
◉	M21-500-595-BR	White on Brown	12.70	6.40 m
◉	M21-750-595-BR	White on Brown	19.05	6.40 m
◉	M21-375-595-GN	White on Green	9.53	6.40 m
◉	M21-500-595-GN	White on Green	12.70	6.40 m
◉	I d21-750-595-GN	White on Green	19.05	6.40 m
◉	M21-375-595-PL	White on Purple	9.53	6.40 m
◉	M21-500-595-PL	White on Purple	12.70	6.40 m
◉	M21-750-595-PL	White on Purple	19.05	6.40 m
◉	M21-375-595-RD	White on Red	9.53	6.40 m
◉	M21-500-595-RD	White on Red	12.70	6.40 m
◉	M21-750-595-RD	White on Red	19.05	6.40 m

Diagram	Order Reference	Colour	Label Width A (mm)	Label Length B (m)
B-595: Vinyl				
◉	M21-375-595-GY	Black on Grey	9.53	6.40 m
◉	M21-500-595-GY	Black on Grey	12.70	6.40 m
◉	M21-750-595-GY	Black on Grey	19.05	6.40 m
◉	M21-375-595-OR	Black on Orange	9.53	6.40 m
◉	M21-500-595-OR	Black on Orange	12.70	6.40 m
◉	M21-750-595-OR	Black on Orange	19.05	6.40 m
◉	M21-250-595-WT	Black on White	6.35	6.40 m
◉	M21-375-595-WT	Black on White	9.53	6.40 m
◉	M21-500-595-WT	Black on White	12.70	6.40 m
◉	M21-750-595-WT	Black on White	19.05	6.40 m
◉	M21-250-595-YL	Black on Yellow	6.35	6.40 m
◉	M21-375-595-YL	Black on Yellow	9.53	6.40 m
◉	M21-500-595-YL	Black on Yellow	12.70	6.40 m
◉	M21-750-595-YL	Black on Yellow	19.05	6.40 m
◉	M21-375-595-BK	White on Black	9.53	6.40 m
◉	M21-500-595-BK	White on Black	12.70	6.40 m
◉	M21-750-595-BK	White on Black	19.05	6.40 m

Wire Marking Machine

LETATWIN
LM-550A3 SERIES

MAX

PORTABLE PRINTER FOR
CONTROL PANEL
WIRE NUMBERING & DEVICE LABELING

TB-24VDC   PLC-01

K 14 K 15 K 16 K 17 K 18

INTEGRATED RECHARGEABLE BATTERY

● **Battery Insertion**

Open   AA batteries x 4pcs

● **Bringing Printer**

Bottom   Side

● **Printing without Power connection.**

Input   Printing

HALF CUT FUNCTION

Available block length

Heat Shrink Tubing: 10-150mm/block

Half - Cut   Half - Cut   Half - Cut

N X1 TBDI-01 FAN+24-01 CONVERTER-01

PSCT+EE001A+FC (+24V) 1. 1. L01/PSCT+EE02+08 (+24V) 02L. 02

Max 150mm length/block

VERSATILE PRINT MEDIA

Watch Introduction
Video of GRIPTUBE

1 GRIP TUBE Easy stop & Multi wire diameter tubing(sleeve)

Specially designed internal tube shape helps your markers hold
a fixed position on the wire, even when using multiple wire
diameter sizes. This material is a good fit to ferrule terminals.

1 Inside Shape

TU29G	TU37G	TU46G
(Outer Wire:Φ1.2mm~2.1mm)	(Outer Wire:φ2.5mm~2.7mm)	(Outer Wire:φ3.0mm~3.7mm)
φ1.2mm*¹ φ2.1mm	φ2.5mm φ2.7mm	φ3.0mm φ3.7mm

*¹Depending on Vibration it may move. We recommend checking performance test by yourself.
*The recommended size does not guarantee a match between wire and tube.

2 Features

Easy Stop   Easy Move

2 ID PLATE

P01+E01. A01. 40

3 ROUND TUBE

2 `N`Tube
UL224/E171616/105°C/600V

This `N` tube series
has acquired the
UL224 certification,
high insulation
performance.

4 TAPE

PLC-02 PLC

PC CONNECTION

Easy Operation : Copy & Paste   LETATWIN PC EDITOR

AUTO CAD DATA

Change data to
Windows Excel
or a [.csv] file

Copy
& Paste

*"AutoCAD® is a registered trademark or trademark of Autodesk, Inc.,
and/or its subsidiaries and/or affiliates in the USA and/or other countries."

* Windows® and Excel® are registered trademarks of
Microsoft Corporation of North America and other countries.

DATA TRANSFER   USB   LETATWIN PC EDITOR

EASY STEPS OF TUBE(SLEEVE) MARKING

You can carry the half cut printed tubing.   LETATWIN prints and half cut the tubing.   Input print data   Set the tubing on LETATWIN.

Insert 2pcs of the marked blocks   Cut by Hands   Done!

DEVELOPED FOR MAXIMIZING CABLE MARKING JOB PRODUCTIVITY

▌Long consumable roll length

LM-550A/PC adopts the dedicated consumables which have a longer roll length. Long roll length saves reloading time.

| LM-IR300B ink ribbon for LM-390A | 50 meters |
| LM-IR50B ink ribbon for LM-550A | **110 meters** |

| LM-TP3xxx tape for LM-390A | 8 meters |
| LM-TP5xxW (White) for LM-550A | **16 meters** |

*LM-TP5xxT (Transparent) and TP5xxY (Yellow) remain as 8meters.
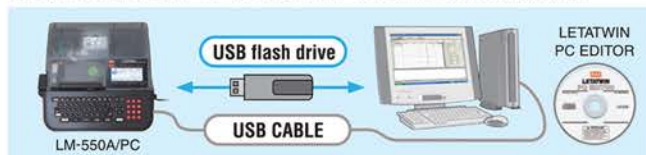
▌High-speed marking

LM-550A/PC has an enhanced feeding system that provides you with marking speed at 40mm/second. LM-550A/PC can make approx 52pcs of 20mm-length tube per minute.

Marking time

For marking on Tube

| LM-390A MAX previous model | 100 |
| **LM-550A** | **88** |

Saving time 12%!!

▌Maximum 250,000 characters built-in large memory storage

▌Easy access from your PC with USB

LM-550A/PC features a USB port for a direct cable connection with a Windows PC (for direct printing or file transfers), and a USB flash drive slot for transferring computer files made in our dedicated "LETATWIN PC EDITOR" software.

USB flash drive
USB CABLE
LETATWIN PC EDITOR
LM-550A/PC

▌SPECIFICATIONS

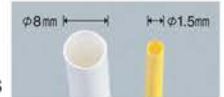| ITEMS	CONTENTS
Name	MAX ELECTRONIC LETTERING MACHINE LM-550A/PC
Dimensions	295 (W) × 293 (D) × 94 (H) mm
Weight	2.4kg
Printing method	Thermal transfer method (300dpi)
Display	LCD dot matrix : 64×160 Pixel (Backlit)
Printing speed	40mm/s (Standard) 20mm/s (Low temperature mode)
Maximum Printing length	Tube : 20m, Tape : 5m By multiple copy printing, maximum 30copies, upto Tube ; 100m, Tape ; 7m
Maximum number of characters to input	5,000 characters per file
Character size	1.3 , 2 , 3 , 4 , 6mm height
Usable tube	⌀1.5mm ~ 8.0mm (PVC tube) (For ⌀1.5~2.0mm tubes, the dedicated attachment (standard accessory) is required.) ⌀2.0mm ~ 6.5mm (Heat Shrinkable tube)
Usable tape	Width 5, 9, 12mm (Max genuine tape)
Tube cutting method	Auto half cut, manual full cut
Internal memory	250,000 characters (Maximum 50 files)
External memory	USB memory
Interface	USB 2.0 full speed
Power supply	DC12V, 3.0A Use only specified AC Adapter (100V~240V) included in the package
Power consumption	Max 30W
Operating environment	10°C to 35°C

▌Versatile marking capability

Various marking media and sizes
- ⌀1.5~⌀8.0mm PVC tubes
- ⌀2.0~⌀6.5mm Heat Shrinkable tubes
- 5mm/9mm/12mm wide MAX dedicated tapes
  - I.D. plates
  - Oval tubes *For the availability of European style marking media, please contact our distributor.

⌀8mm   ⌀1.5mm

To optimize printing quality, multiple combinations of settings (such as vertical/horizontal print positions and print density) can be saved to support European style marking media etc.

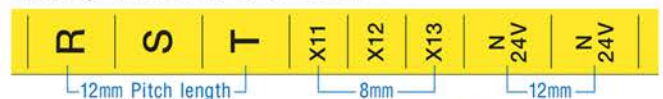### ▌Large and backlit LCD display

Backlit LCD display makes your confirmation of input contents easy, even if you work in a dim jobsite.

▌The pitch can be set up to maximum 60mm.

Marking on tape : 4 up to 60mm
Marking on tube : 10 up to 60mm *(Auto pitch function is available for more than 60mm)*

R   S   T   X11   X12   X13   N 24V   N 24V

└12mm Pitch length┘   └8mm┘   └12mm┘

▌Economical refill-type ink ribbon.

PRINTER SUPPLIES and MEDIA

INK RIBBON CASE 20PCS./CTN
LM-RC500

ECONOMICAL INK RIBBON REFILLS 10 ROLLS/BOX

| LM-IR50B (BLACK) | 110m/ROLL |

INK RIBBON REFILLS FOR HEAT SHRINKABLE TUBE 10 ROLLS/BOX

| LM-IR50BP (BLACK) | 110m/ROLL |
| LM-IR50W (WHITE) | 70m/ROLL |

TAPE CASSETTE 10PCS./BOX

LM-TP505W (WHITE)	5mm(W)×16m(L)/PC
LM-TP505Y (YELLOW)	5mm(W)× 8m(L)/PC
LM-TP505T (TRANSPARENT)	5mm(W)× 8m(L)/PC
LM-TP509W (WHITE)	9mm(W)×16m(L)/PC
LM-TP509Y (YELLOW)	9mm(W)× 8m(L)/PC
LM-TP509T (TRANSPARENT)	9mm(W)× 8m(L)/PC
LM-TP512W (WHITE)	12mm(W)×16m(L)/PC
LM-TP512Y (YELLOW)	12mm(W)× 8m(L)/PC

UL RECOGNIZED TUBE 1ROLL/BOX

LM-TU332N2 WHITE	⌀3.2mm×100m/ROLL
LM-TU336N2 WHITE	⌀3.6mm×100m/ROLL
LM-TU342N2 WHITE	⌀4.2mm× 80m/ROLL
LM-TU352N2 WHITE	⌀5.2mm× 80m/ROLL

MAX HIGH QUALITY TUBE 1ROLL/BOX

LM-TU432L WHITE	⌀3.2mm×200m/ROLL
LM-TU436L WHITE	⌀3.6mm×200m/ROLL
LM-TU442L WHITE	⌀4.2mm×200m/ROLL
LM-TU452L WHITE	⌀5.2mm×135m/ROLL
LM-TU464L WHITE	⌀6.4mm×100m/ROLL
LM-TU480L WHITE	⌀8.0mm× 70m/ROLL

PC REQUIREMENTS For Windows 10 / 8.1 / 8 / 7 operating systems. Windows® is a registered trademark of Microsoft Corporation (US) in U.S.A. or other countries.

The specifications and design of the products in this catalogue will be subject to change without advance notice due to our continuous efforts to improve the quality of our products.

CPM-100HG5

Printing & Cutting Machine

Bepop

CUSTOM LABELS ON DEMAND & IN HOUSE
Eliminates minimums, waiting, purchasing costs and more.

UNIQUE INTEGRATED PLOTTER CUTTER
Allows you to make any shape or size of labels; no need to keep inventory
of multiple size labels.
Cuts out letters and symbols for glass, walls and banners.

HIGH RESOLUTION PRINTING (400dpi)
Enables fine print on nameplates with clear legibility.

5-YEAR RATED TAPE ROLL AND INK RIBBON
Eliminate the needs to remake and reinstall old signs and labels.

THERMAL PRINTING TECHNOLOGY
Ensures high performance in tough environments, holds up to solvents,
cleaners and wear

Cuts
Any Shape
and Size!

Wide Range of the Applications

**4 inch (100 MM) Wide Lable
400 dbi Multi & full Color**

Site Safety

Safety Sign

Pipe Marking

Product Label

GHS Label

Barcode Label

Shadow Board Label

Wire Marking

Print Full Color

- OSHA Compliance
- Arc Flash
- NFPA
- Equipment

- ANSI Compliance
- Lean Manufacturing
- Maintenance
- Electrical Panels

- 5S
- Kanban
- Racks, Shelves & Bins
- Valve Tags

- Kaizen
- Visual Management
- Office Signs
- Bilingual and more...

UNIQUE INTEGRATED PLOTTER CUTTER

The Cutting blade
moves and cuts labels

Cutting Blade (Included)

SAVE TIME, SAVE MONEY AND IMPROVE PROCESSES

Sourcing appropriate labels and signs can often be time
consuming and costly, especially when only small
quantities, specifically worded, or exact sized outputs are
required. This is where the MAX Bepop allows you to
realize huge cost savings and operational improvements,
by producing exactly what you want, when you want it... 24
hours a day!

NO NEED FOR PRE-PRINTED LABELS
NO MORE WASTED STOCK

ALL IN ONE PRINTER!

Watch
the video

CONSUMABLES

■ PREMIUM TAPE ROLLS

Description	Color	Tape Width Inch (mm)	Tape Length Ft (m)	Material	Package
SL-S111GN BLACK TAPE ROLL	Black	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S112GN WHITE TAPE ROLL	White	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S113GN RED TAPE ROLL	Red	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S114GN BLUE TAPE ROLL	Blue	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S115GN YELLOW TAPE ROLL	Yellow	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S116GN GREEN TAPE ROLL	Green	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S118GN ORANGE TAPE ROLL	Orange	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S110GN CLEAR TAPE ROLL	Clear	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S126GN BROWN TAPE ROLL	Brown	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S108GN SILVER TAPE ROLL	Silver	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box
SL-S109GN GOLD TAPE ROLL	Gold	4 Inch (100mm)	49 ft (15m)	Glossy PVC	1 roll/box

■ SPECIAL TAPE ROLLS

Description	Color	Tape Width Inch (mm)	Tape Length Ft (m)	Material	Package
SL-S163N PET HL SILVER TAPE ROLL	Silver	4 Inch (100mm)	49 ft (15m)	PET	1 roll/box
SL-S164N PET HL GOLD TAPE ROLL	Gold	4 Inch (100mm)	49 ft (15m)	PET	1 roll/box
SL-S153N PET WHITE TAPE ROLL	White	4 Inch (100mm)	33 ft (10m)	PET	2 rolls/box
SL-S154N PET MAT SILVER TAPE ROLL	Silver	4 Inch (100mm)	33 ft (10m)	PET	2 rolls/box
SL-S141N REFLECTIVE WHITE TAPE ROLL	White	4 Inch (100mm)	33 ft (10m)	Reflective	2 rolls/box
SL-S100AP APPLICATION SHEET	Clear	4 Inch (100mm)	65 ft (20m)		2 rolls/box
SL-L100 FLOOR LAMINATE (80 micron)	Clear		98 ft (30m)		1 roll/box

■ RESIN RIBBONS 4 Inch x 180 ft (55m) for outdoor and indoor use

Description	Color
SL-R101T BLACK-C RIBBON	Black
SL-R122TH SUPER WHITE RIBBON	White
SL-R103T RED-C RIBBON	Red
SL-R104T BLUE-C RIBBON	Blue
SL-R108T YELLOW-C RIBBON	Yellow
SL-R107T GREEN-C RIBBON	Green
SL-R112T ORANGE-C RIBBON	Orange
SL-R105T DARK BLUE-C RIBBON	Dark Blue
SL-R106T DARK GREEN RIBBON	Dark Green

Description	Color
SL-R115T CMYK-C RIBBON	Process Cyan
SL-R116T CMYK-M RIBBON	Process Magenta
SL-R117T CMYK-Y RIBBON	Process Yellow
SL-R118T CMYK-K RIBBON	Process Black

Full Color Print Label

The CMYK ribbons are designed for use with MAX White Tape Roll.

Producing exactly what you want, when you want it!... 24 hours a day with MAX Bepop Systems

■ Examples of custom made labels and used tape rolls / ink ribbons

Product Label	Custom Shape Label	GHS Label	Wire Marking
SL-S163N PET HL SILVER TAPE ROLL SL-R101T BLACK-C INK RIBBON	SL-S115GN YELLOW TAPE ROLL SL-R101T BLACK-C INK RIBBON	SL-S112GN WHITE TAPE ROLL SL-R101T BLACK-C INK RIBBON SL-R103T RED-C INK RIBBON	SL-S112GN WHITE TAPE ROLL SL-R101T BLACK-C INK RIBBON

CPM-200GU

Printing & Cutting Machine

Bepop

CUSTOM LABELS ON DEMAND & IN HOUSE
Eliminates minimums, waiting, purchasing costs and more.

UNIQUE INTEGRATED PLOTTER CUTTER
Allows you to make any shape or size of labels; no need to keep inventory of multiple size labels. Cuts out letters and symbols for glass, walls and banners.

HIGH RESOLUTION PRINTING (300dpi)
Enables fine print on nameplates with clear legibility.

5-YEAR RATED TAPE ROLL AND INK RIBBON
Eliminate the needs to remake and reinstall old signs and labels.

THERMAL PRINTING TECHNOLOGY
Ensures high performance in tough environments, holds up to solvents, cleaners and wear and tear.

Cuts Any Shape and Size!

MAX Bepop

■ Example labels using CPM-200 series

**8 inch (200 MM) Wide Lable
300 dbi Multi & full Color**

5S Custom Label	Pipe Marking	Procedural Label for Lockout-Tagout	Extinguisher Label
WHITE PREMIUM TAPE ROLL CMYK RESIN RIBBONS	GREEN PREMIUM TAPE ROLL SUPER WHITE RESIN RIBBON	WHITE PREMIUM TAPE ROLL CMYK RESIN RIBBONS	RED PREMIUM TAPE ROLL SUPER WHITE RESIN RIBBON

Safety Signage	GHS Label	Shadow Board Label	Award Label
YELLOW PREMIUM TAPE ROLL BLACK RESIN RIBBON RED RESIN RIBBON	WHITE PREMIUM TAPE ROLL BLACK RESIN RIBBON RED RESIN RIBBON	WHITE PREMIUM TAPE ROLL BLACK RESIN RIBBONS	PET HL SILVER TAPE ROLL BLACK RESIN RIBBON

SAVE TIME, SAVE MONEY AND IMPROVE PROCESSES

Sourcing appropriate labels and signs can often be time consuming and costly, especially when only small quantities, specifically worded, or exact sized outputs are required. This is where the MAX Bepop allows you to realize huge cost savings and operational improvements, by producing exactly what you want, when you want it... 24 hours a day!

NO NEED FOR PRE-PRINTED LABELS
NO MORE WASTED STOCK

ALL IN ONE PRINTER!

Watch the video

Print and cut the exactly what you need in-house, anytime!

● Case Study: Safety Guidance Signage

Sign is purchased:
Before

All visitors must wear personal protective equipment while on site

Kaizen

Contents:
1) "All visitors must wear personal protective equipment while on site"
2) Generic guidance mark

Sign is made on site:
After

NEED PROTECTIVE FOOTWEAR?

Go to the Safety Department
1st Floor-Admin Building

Contents:
1) "NEED PROTECTIVE FOOTWEAR?"
2) "Go to the Safety Department 1st Floor-Admin Building."
3) Photo of destination is displayed with red arrow marking entrance.
4) Safety shoes guidance mark is used.

Conclusion : The CPM-200 allows you to tailor content to the exact needs of your site. In this case, leading to improvements in safety compliance for both employees and visitors.

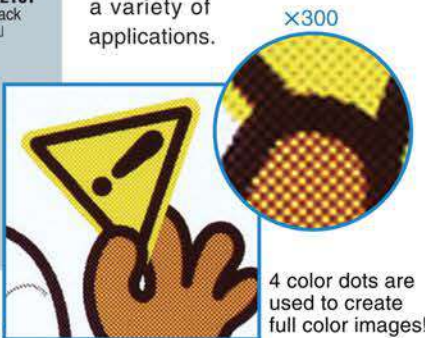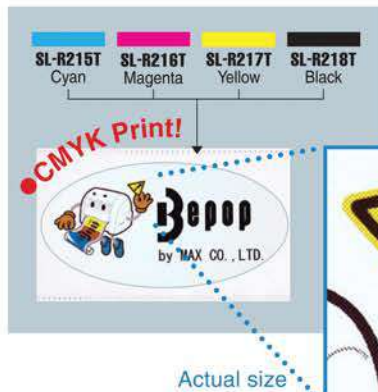## ● Built-in plotter can cut any shape you need!

NEED PROTECTIVE FOOTWEAR?
Go to the Safety Department
1st Floor-Admin Block

Free Cut!

Print in full color on 200mm wide vinyl!

A4 SIZE* SUPPORTED

The CPM-200G can print in vivid full color using 4 specialized process color ink ribbons (Cyan, Magenta, Yellow, and Black). Unique functions mean you can cut and print combinations of photos, illustrations, and text on 200mm vinyl! Make on-demand signage and labels for a variety of applications.

| SL-R215T | SL-R216T | SL-R217T | SL-R218T |
| Cyan | Magenta | Yellow | Black |

● **CMYK Print!**

Bepop
by MAX CO., LTD.

Actual size

×300

4 color dots are used to create full color images!

● Use photos, illustrations, and text together!

⚠ CAUTION

240mm
(Approx. 9.5in)

ROTATION HAZARD
Stand clear
of moving pallet

200mm
(Approx. 8in)

*The largest printing range is 200mm×2m(8"×78.7"). Including the margins, the vinyl supports 206mm or approx. A4 width.

Make labels, signs, and cut-lettering easily!

Anyone can design labels or signage easily using BepopPC EX editing software. After designing your labels or signs, send the data to your Bepop. The Bepop will print the colors, and then cut your shape.

View the video!

❶ Print
❷ Return

Cutting Tool
Cut
❸ Cut the shape

❹ Complete

⚠ DANGER
WEAR YOUR RESPIRATOR
⚠ PELIGRO
USE SU RESPIRADOR

MACH1, MACH2

for desktop applications

4" desktop printers in proven technology

With the MACH1 and MACH2 cab completes its printer range in the lower price segment.

The devices ideally fit with small to medium duty applications in thermal transfer and direct thermal printing.

MACH1 is provided with control buttons and a LED signal, while MACH2 has a colored LCD display and a navigator pad.

Fields of application

Business area	Applications
Office/authorities	Information and warning labels, inventory labels
Production	Product labels, protocol, certification and test labels
Healthcare	Labels for patient admission, blood banks
Trading	Product labels, pricing
Warehouse	Labels for storage location, shelf labeling
Transport/logistics	Address and shipping labels, incoming goods
Events	Labels for events in sports and schools, tickets

Label printers XD4T

It prints on both sides of textile tapes, cardboard labels, pressed tubes continuous or ready-for-use as well as on endless materials made of plastic, paper or cardboard. The ribbon separates from the materials with the help of a draw roller that also improves the accuracy of the imprint.

No print head adjustment necessary with different material widths. Print rollers provided for slim and thin materials.

MACH 4S for industrial applications

The MACH 4S provide all features of an industrial printer with a wide application range
The print mechanics and the chassis are made of high-quality materials and perfectly match in terms of shape and function.

PULLMAN ELECTRIC

SQUIX

SQUIX 2 ,SQUIX 4 , SQUIX 6, SQUIX 8
Left & Centered - aligned

The professional SQUIX label printers are the further development of the successful A+ printer series.

They find use in various areas of use.

They have been developed with consistent focus on intuitive usability and highly reliable processing.

Print mechanics and chassis are made of high-quality materials and match perfectly in design and function.

A wide range of peripherals and software enable user-specific solutions.

The rugged printers stand up to any demand, whether operated stand-alone, with a PC or in a network.

Print jobs are performed quickly and labels are provided straight away thanks to a high-speed processor.

Label printers
for industrial operation

SQUIX
Made in Germany

Key features

- Reliable and quick printing
- Accurate print images
- Easy to operate
- Compact design
- Maximum quality standards

Control panel

Self-explanatory symbols simplify settings and enable printers be operated intuitive and easily.

① **LED:** Power ON

② **Status bar:** receive data, record data stream, prior warning to a ribbon ending, SD memory card / USB stick plugged, Bluetooth, WLAN, Ethernet, USB slave, time

③ **Printer status:** ready, pause, number of labels printed in a print job, label peeled off, awaiting external start signal

④ **USB port** for plugging a service key or a memory stick, to transfer data to the IFFS memory

⑤ **Operation**

Cutter / perforation cutter:	cutting
External rewinder:	outside or inside winding
Tear-off mode / peel-off mode:	printing a label
Applicator:	printing and applying a label in individual steps

⚙ Jump to menu   🚫 Stop and delete all print jobs   ⏸ Interrupt and continue print job

🖨 Reprint last label   ⬇ Label feed

External control panel

If the control panel of a printer cannot be accessed, an additional external one can be plugged.

Same functionality as on a printer

Landscape mode or portrait mode

Operability as targeted, either on an external panel or on a printer

USB 2.0 Hi-Speed device for plugging a printer

① **LED:** Power ON

② **USB port** for plugging a service key or a memory stick. to transfer data to the IFFS memory

③ cab provides specified **USB cables** for power supply. Lengths are 1.8 m to 16 m

Label printers guiding materials aligned to the left

Optimum printing in matters of different widths and materials

Slim ones
for printing small labels

Label printer		SQUIX 2	
Print resolution	dpi	300	600
Print speed	mm/s max.	250	150
Print width	mm max.	56.9	54.1

Universal ones
Best-selling industrial units, providing a wide range of accessories

Label printers		SQUIX 4.3		SQUIX 4	
Print resolution	dpi	203	300	300	600
Print speed	mm/s max.	300	300	300	150
Print width	mm max.	104	108.4	105.7	105.7

A cutter can be provided integral to a basic unit.

Wide ones
for printing Odette, UCC and GS1 labels in logistics operations

Label printer		SQUIX 6.3	
Print resolution	dpi	203	300
Print speed	mm/s max.	250	250
Print width	mm max.	168	162.6

Extra wide ones
for printing pallet and drum labels

Label printer		SQUIX 8.3
Print resolution	dpi	300
Print speed	mm/s max.	150
Print width	mm max.	216

Direct thermal printers guiding materials aligned to the left

Basic unit

Peel-off unit

The precise and flexible ones
All materials that are wound on rolls or reels can be printed,
so can fanfold ones. Very small labels or slim continuous materials
such as pressed tubes are typical applications.

A specified sensor allows round or oval hoses
as high as 5 mm be labeled.

Label printer		SQUIX 4.3 M SQUIX 4.3 MP		SQUIX 4 M SQUIX 4 MP	
Print resolution	dpi	203	300	300	600
Print speed	mm/s max.	300	300	300	150
Print width	mm max.	104	108.4	105.7	105.7

cablabel S3 software

Design, print, administrate

cablabel S3 opens up the full potential of cab devices. Defining a label is first. Modular design adapts cablabel S3 to requirements step by step. Plug-ins are embedded. Native JScript programming, for example, is supported by the JScript Viewer. The designer user interface and JScript codes synchronize in real time. Optional features can be integrated, such as the Database Connector or barcode verifiers.

Stand-alone operation

This operating mode enables a printer select and print labels while not connected to a host system. Labels can be designed using software such as cablabel S3 or a text editor on a PC. Label formats, texts, graphics and data of a database can be stored on a memory card, a USB stick or a printer's IFFS memory. Only variable data are sent by a keyboard, a barcode scanner, a scale or any other host system to a printer, or be recalled by the Database Connector from a host and printed.

Printer control

Drivers

cab provides drivers to control a printer with software other than cablabel S3.

Free download on **www.cab.de/en/support**

Programming

JScript

cab printers embed JScript language.
Download free manual on **www.cab.de/en/programming**

abc Basic Compiler

Integral to the firmware, abc in addition to JScript enables advanced programming before data are edited for printout. For example, external printer languages can be replaced without intervening in a print job in progress. Data may be imported as well from other systems such as scales, barcode scanners or PLC.

Integration

Printer Vendor Program

cab as a member of this program developed a replace method for controlling cab printers from SAP[1] R/3 using SAPScript. Only variable data are sent by a host system to a printer. They add on the printer to local images and fonts (IFFS, memory card, etc.).

Printer administration

Configuration in the Intranet and Internet

Integral HTTP / FTP servers enable a printer be controlled or configured, firmware be updated and memory cards be administrated using standard applications such as a web browser or a FTP client. Administrators and operators on behalf of SNMP / SMTP are notified of states, alerts and errors by email or SNMP diagrams. Time and date are synchronized by a time server.

Database Connector

Printers in a network may access data from a ODBC / OLEDB database and print it on labels. Data can be rewritten to a database while print jobs are in progress.

Rewinding, unwinding

with or without the use of a cardboard core

RG guide plates enable labels be rewound internally on peel-off units. A guide plate therefore replaces the peel-off plate.

External ER4, ER6 rewinders, power supply built in

Label webs wound outside or inside are wound consistently and tight by electronic control, with the help of a pendulum arm. They operate also with printers other than cab.

External ER1, ER2, ER3 rewinders for printer assembly using screws

Label webs wound outside or inside are wound consistently and tight by electronic control, with the help of a pendulum arm.

External EU unwinders

Even heavy rolls are fed consistently.
Label webs wound outside or inside can be operated.

S1000 applicator

Apply labels in real time

S1000 attached to a SQUIX peel-off printer is economic,
whether operated semi-automated or integrated
in vertical orientation to a manufacture plant.
Labels are applied to an item by a stroke cylinder.

1. Long life cycles
2. Different levels of application
3. Compressed air regulation
4. Reliable processes
5. A wide range of sizes
6. Supporting air
7. Pad

Pre-dispense

Label applications can be verified by the touch of a button.
Printing is triggered on a first touch and the printed label
is transferred to the applicator. The label is applied
on a second touch.

Applicator		S1000-220	S1000-300	S1000-400
Operated with		SQUIX 2, SQUIX 4.3, SQUIX 4 SQUIX 4.3 M, SQUIX 4 M, SQUIX 6.3		
Cylinder stroke	mm	220	300	400
Stroke of a pad as calculated below a unit	mm	64	144	244
Compressed air	bar	4.5		
Performance labels/min approx[1]		25		

S3200 applicator

Apply labels in real time

S3200 attached to a SQUIX peel-off printer is economic,
whether operated semi-automated or integrated
to a manufacture plant. Printed labels are set 45° to 95°
to the horizontal by a rotary cylinder and applied
automatically to an item by a short stroke cylinder.

Life cycles, pre-dispense, compressed air regulation, reliable
processes and supporting air correspond to S1000 (see page 22).

Applicator		S3200
Operated with		SQUIX 2, SQUIX 4.3, SQUIX 4, SQUIX 4.3 M, SQUIX 4 M
Rotary cylinder		45° - 95°
Stroke cylinder	mm max.	30
Depth F of a pad immersing	mm max.	5
Compressed air	bar	4.5
Performance labels/min approx[1]		20

[1] calculated using labels 40 mm high and a print speed of 100 mm/s

Demand modules

S5104, S5104 M, S5106 demand modules

Items can be labeled in motion on a conveyor.
A product sensor detects the target position of a label.
While a label is peeled off, the next one is printed.
The speed of transport has to match with the speed of printing.
A reflective sensor monitors positioning.
A label sensor can be included or not.

Demand module		S5104	S5104 M	S5106
Operated with		SQUIX 4.3 SQUIX 4	SQUIX 4.3 M SQUIX 4 M	SQUIX 6.3
Label width	mm	25 - 116	4 - 110	50 - 176
Label height	mm	25 - 210	10 - 210	25 - 210
Distance of initial print line to the peel-off plate	mm	336 - 518		
Surface of an item		flat		
Height of an item		fixed		
State of an item at the moment a label is applied		in motion (speed adapted to printing)		
Performance labels/min approx[1]		60		

[1] calculated using labels 100 mm high and a print speed of 100 mm/s

Tube labeling

AXON 2 tube applicator

Tubes   Vials

Cable labeling

WICON wrap-around applicator

Maintenance

Label sensors
They can be unlocked by touch
and pulled out for cleaning

Print heads
They are easy to replace in few steps
In general, no adjustments are required

Print rollers
They are quick and easy to loosen
for cleaning or removal using a screw

All-purpose tool
It is provided close at hand on
a unit for replacing
components and assembling periphery

Service
Trained cab technicians support
worldwide in maintenance and repair

Trainings
Refresh your know-how of cab devices
with regard to efficient operation
service and repair

Overview of cab products

**Label printers
MACH1, MACH2**

**Label printers
EOS 2**

**Label printers
EOS 5**

**Label printers
MACH 4S**

**Label printers
SQUIX 2**

**Label printers
SQUIX 4**

**Label printers
SQUIX 6.3**

**Label printers
SQUIX 8.3**

**Label printers
XD Q** double-sided

**Label printers
XC** two-colored

**Print and apply systems
HERMES Q**

**Print and apply systems
Hermes C** two-colored

**Tube labeling systems
AXON 1**

**Print modules
PX Q**

Labels and ribbons

**Label software
cablabel S3**

0 123456 789

**Label dispensers
HS, VS**

**Labeling heads
IXOR**

**Marking lasers
XENO 4**

Laser marking systems

Thermal transfer printer for cable and wire identifications

SP8600

Industries served

Our Hotmarkers have been widely
used for cable identifications
across many manufacturing industries
including:
Control panels / Switchgear
Wire harnesses
Industrial installations
Heavy electrical machinery
Aircraft / Shipbuilding
Railway vehicle / Automobile
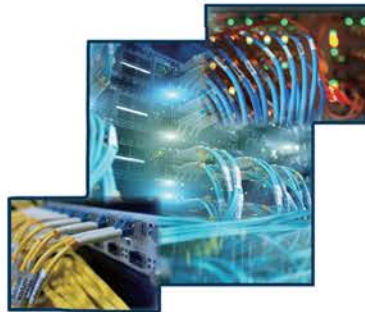
Key features

You can produce different kinds of cable marker sleeves effectively, as you need.
SP8600 can automatically mark and cut various types of tubes.
Marking speed increased by about 10% (as compared with previous model SP6600

Applicable tube size:

Outside Diameter: 2.0~28.0 mm
Laid-flat width: 3.2~45.0 mm

Stand-alone use

Optional keyboard allows stand-alone operation
through menu screen on the LCD.

PC-link function

Bundled software "CTKPCMS" enables you to:
- Handle marking data efficiently with on-screen previews and error windows.
- Utilize Windows' TrueType fonts for marking native characters, etc.
- Print Code 39 barcodes.
- Transfer marking data to SP8600 with a USB flash drive.

Hot Stamp Marking & Thermal Printing

Advantages of Hot Stamping Printers
• Low running costs
• long-lasting and legible markings
• high durability and long lifetime
• Capable of marking a wide range of plastic molded items
(bundling bands and connectors, control cables, and coated electric wires)
• Easy maintenance
• No drying time required, since liquid ink or organic solvents are not used.
• Operation panel updated to reduce unintended contacts
• Emergency stop button and two-button operation
• Foot switch continues to be an option

HOTMARKER®
B330P

Leather for Apparel, Shoe making

713CTK2JZ   LES571HM

Cable

Connector housing

Cable tie

HANDYANDY

The Handy Andy X is a fully programmable dot-peen marking machine.
The EASY-TO-USEmachine can automatically apply serial numbering, date codes,
job numbers, lot numbers, and even company logos. The PC software works with Windows®
(Xp and newer versions) and is easy to understand and operate.

Features

1. Marking head with metal pin housing, and cabide pin

2. Bench-top stand with T Slot mounting for fixturing parts

3. FRL - Filter, Regulator, Lubricator, and safety lockout
compressed air preparation system

4. Windows software included free of charge for use
with customer provided PC

Specifications

Power - 110v AC

Compressed Air - 30-60 psi

Operting System - PC WIndows (required, not provided with unit)

Marking Window - 3.15" x 1.97"

Weight – 30lbs

STAINLESS STEEL MARKERS & TAGS

Print your own tags on 316 stainless steel and apply with Tie-Lok® Ties.

Material	Height		Length		Thickness		Package Weight		Package Quantity
	in	mm	in	mm	in	mm	Lbs	Kg	
316 SS	.75	19	2.0	50.8	.015	.38	.5	.2	100/Box
316 SS	1.5	38.1	2.5	63.5	.015	.38	1.2	.6	100/Box
316 SS	.75	19	3.5	88.9	.015	.38	.8	.4	100/Box

TAINLESS STEEL MARKERS & TAGS: A comprehensive range of Stainless Steel Marking System is available for
effortless and permanent identification of cable accessories or ducting system, even in harsh environments
- Tags are available in Stainless Steel Grade 316 & Alumanium
- We can also manufacture Tags of special characters & on Arabic text.
- Stainless steel marking system available in engraving & laser printing process.
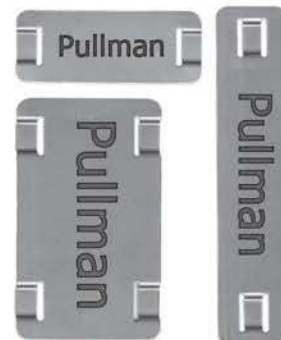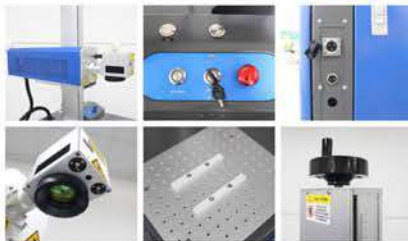
Fiber Laser Marking Machine 20W

Hispeed MOPA version fiber laser marking machine
ntegrates a MOPA (Master Oscillator Power Amplifier) laser
source for better marking performance in plastic materials
MOPA fiber laser sources allow users to select (in addition
to conventional power, speed and frequency settings) the
laser pulse width. It is especially useful when marking some
plastic and other very sensitive materials to thermal processes
thereby obtaining a final result with more quality and greater contrast

CO2 Laser Marking Device Laser Marking Machine 30W

CO2 laser marking machine adopts the most advanced
CO2 RF laser generator and high speed galvo scanner system
With high quality optic devices, high stability laser generator
full automatic control system. The machine system working
with high precision and fast speed, very stable performance
can work continuously for a long time and can be applied
directly in large quantities of online processing lines

Precision UV Laser Marking Machine

This equipment is a special cutting equipment designed
by using laser technology and numerical control technology
It has the characteristics of stable laser power, good beam pattern
high peak power, low cost, safety, stability, and simple operation
This machine is a standard machine, and can be equipped with
automatic or film-to-film, roll-to-film

Application industry

Used in PCB and SMT industries. FPC soft board cutting, drilling
PCB circuit board sub-board cutting, camera module cutting
fingerprint recognition chip cutting, semiconductor cutting, etc

EPC Cutting   EPC Cutting   Aluminum Foil Cutting   PC Cutting   PCB Cutting   PI Cutting

Battery film Cutting   Polyimide mixture Cutting   Cover Film Cutting

Materials for laser, engraving, digitatl printing

Most popular plastic sheet materials for laser marking, rotary engraving and direct digital printing
A complimentary Color Chart, the ultimate guide to all stock products as well as technical and product capability information
materials are engineered to help complement and grow your business. Fabricate and decorate our materials using conventional
marking, engraving and printing equipment and then finish them with our complete line of sign supplies products
including stand-offs, sign frames and mounting fixtures

- Laser Engravable
- Rotary Engravable
- Print Receptive

FEATURED ColorHues® Glitter	**FEATURED** DurMark	**FEATURED** FlexiBrass®	**FEATURED** LaserGloss Exterior
ADA Alternative	ColorCast Acrylics	ColorHues®	ColorShop® Woods
EcoMark	FiberGrave®	FlexiColor®	LaserGlow®
LaserLIGHTS	LaserMag	LaserMark®	LaserMax®
LaserMax® Reverse Light Blockers	LaserMax® Tri-Layer	Lucents	Message Board
Metalgraph Plus	PrintMark®	Reverse LaserMark®	Textures
The Naturals	UltraGrave® Matte	UltraGrave® Satin	

APPLICATIONS

PULLMAN ELECTRIC

Patch Panel , Punch Block And FacePlate Labels	Equipment , Panel , Component And Rating Plate Labels	Faceplate & Outlet Labels	Control Panel And Electrical
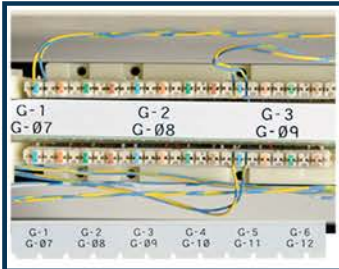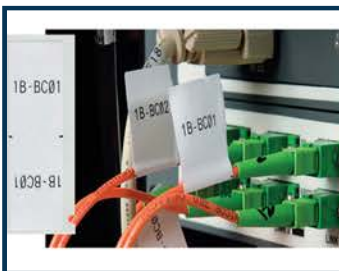
Cable Flags		Self - Laminating Wire & Cable Markers	Self - Laminting Cable Markers
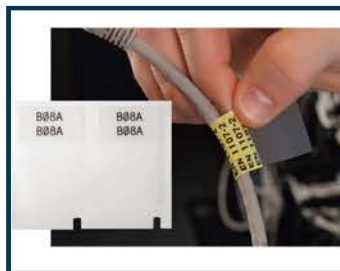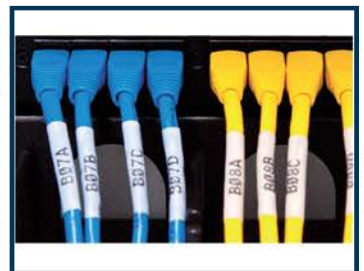
Tags For Communications Cables	Rating Plate Labels	Low Surface Energy/Powder Coated Surface Labels	Rough Surface Labels
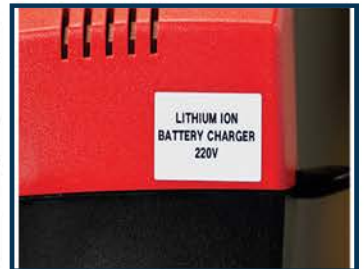
Perma Sleeve TM Heat - Sheink Sleeve Markers		Laminat TM Cable Marking Carriers	
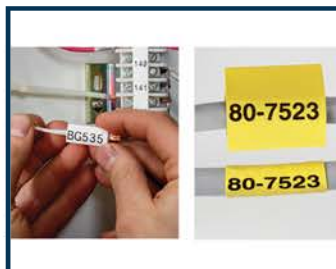
Eprep : Engraved Plate Rep Lacement		Perma Shield TM Labels	Dura Sleeve Tag Carrier

APPLICATIONS FOR MECHANICAL IDENTIFICATION

COLOR GUIDELINES

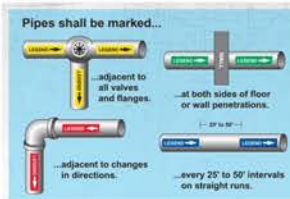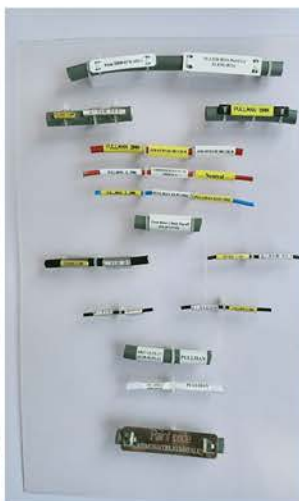| Content Type	Description	Required Colors	Example
FLAMMABLE	Fluids that are a vapor or produce vapors that can ignite and continue to burn in air.	Black on Yellow	→ HYDROGEN →
COMBUSTIBLE	Fluids that may burn but are not flammable.	White on Brown	→ ACETIC ACID →
TOXIC/CORROSIVE	Fluids that are corrosive or toxic or will produce corrosive or toxic substances.	Black on Orange	→ NITRIC ACID →
FIRE QUENCHING	Water and other substances used in sprinkler fire-fighting piping systems.	White on Red	→ HALON →
OTHER WATER	Any other water except for water used in sprinkler & fire-fighting piping systems.	White on Green	→ BOILER WATER →
COMPRESSED AIR	Any vapor or gas under pressure that does not fit a category above.	White on Blue	→ COMPRESSED AIR →
OTHER	Definable by user.	White on Purple	→ OTHER →
OTHER	Definable by user.	White on Black	→ OTHER →
OTHER	Definable by user.	Black on White	→ OTHER →
OTHER	Definable by user.	White on Gray	→ OTHER →
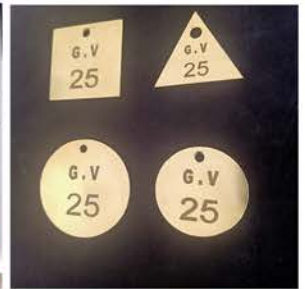
How to place labels for maximum visibility
Pipe marking labels should be positioned in such a way that they are visible from most people's line of sight
A few guidelines about visibilty/ placement are:
* The label should be visible from the point of normal approach
* The label should be visible at every entry point in the floor or wall
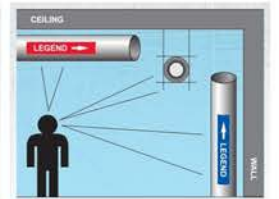
SOME OF PULLMAN ELECTRICAL & TELECOMMUNICATION PROJECTS

INDEX

Cert. No.: 44 100 990789/01-E3

TUV NORD

VDE Testing &
Certification Institute

Underwriters Laboratories Inc

Canadian Standards Association

Installation instruction refer page 175-178

(IECEE) CB Scheme

(IECEE) CE Scheme

STQC Certification Services

Lloyds Register

📞 01001503703 - 01111503703   202 255 271 04 - 202 255 271 03

📍 - Maadi Address : 12,161 ST, Crossing 105 ST Maadi - Cairo, Egypt.
   - 15 May Address : Trade mall – Beside 15 May city Autharity

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2025