## LML PRODUCTS LTD

MANUFACTURING
HIGH QUALITY
ELECTRICAL
COMPONENTS
& CONNECTIONS





## WELCOME TO

LML Products, our UK manufacturing operations have been supplying critical electrical components, home & abroad, since 1968. With a broad and expanding range of ISO 9001 manufacturing & finishing processes we are here to provide quality and reliability. Extensive experience, in-house research and testing plus extensive use of computer-aided design and thermal modelling enable us to help you with valuable advice on design and applications.



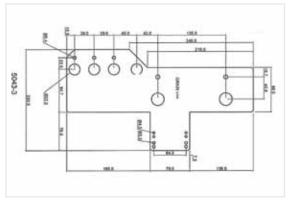
#### LML MANUFACTURES

- \* Terminals and connectors for cable installations
- Heavy-duty busbars, connectors and coils for equipment and switchgear
- High frequency interconnections and laminates for power electronics
- \* Precision components for OEMs and bespoke applications

Our full range of precision & CNC processes includes machining, bending and forming plus cutting by punching, water-jet and fibre-laser. Finishing and ancillary processes include electroplating, brazing, welding, insulation and assembly.







#### LML TERMINAL LUGS

- Next-day delivery from stock for standard terminals ordered by 2.30pm
- \* Short lead-time for non-standard special terminals

#### BESPOKE AND CUSTOM PARTS

Bespoke parts are often manufactured to customer drawings but LML is pleased to help with the specification and design of specialised components. Details are archived for rapid response to repeat orders.

## **HOW TO ORDER**

Telephone: 01249 810000

Email: sales@Imlproducts.co.uk

Fax: 01249 810001



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#### SOLID BUSBARS



- Conventional busbars from standard sections with powerful press-forming and edge-bending to optimise material utilisation
- Precision sheet profiles by, water-jet or fibre-laser
- Full range of electrical finishes
- Insulation available as sleeves, thermally bonded laminates, coatings or encapsulation

Solid busbars optimise DC resistance and thermal stability in LF applications but higher frequencies need thinner sheets to minimise inductance and AC resistance. Compared to copper, the higher resistivity of aluminium can be offset by its greater skin depth penetration. We can assist with thermal and electrical modelling to optimise design parameters.

#### **CABLE TERMINATIONS**



- Heavy-Duty terminals have a cross-section nominally equal to the cable and are required for applications expected to survive high surge-currents. Design features can be specifically configured for their application (e.g. HV or buried connections etc.).
- Protected-Circuit terminals have a lighter wall section and are designed to provide secure crimping and long life-cycles when working currents are actively limited to the cable's normal rating.

Cable terminations and related components are only manufactured from optimum-purity original mill-produced copper. In-house recycling is not used owing to the risk of trace contaminants that can seriously impair electrical and mechanical performance.

Whilst custom parts are available in any format, two concepts cover most applications: Heavy and Standard Duty Terminal Lugs

#### EARTH BARS



- Can supply with dislocating link
- · Links as required
- Supply up to 2m lengths
- Any combination of links and bar

Multiple contact Earth Bars provide a convenient common connector for a Main Earth Point. Our Standard Earth Bars are manufactured from 50mm x 6mm hard drawn copper bar rated at 815A complete with M10 brass stud assemblies on 35mm centres. They are mounted onto a black powder-coated galvanised steel base with M10 x 35 reinforced polyester insulators.

#### C CRIMPS



- C Crimps Manufactured from high purity copper and suitable for a number of uses
- For tapping off overhead distribution lines or to create earthing networks
- Allows connections to cables to be formed without cutting the main cable
- Available plain or tinned

# BRAIDED OR LAMINATED FLEXIBLE CONNECTORS AND LEADS



- Flexible leads terminated with standard or customised terminations crimped, swaged or brazed
- Single or multiple braids with customized termination collars
- Laminated busbars with soldered terminations
- Range of insulation sleeves, materials, collars and accessories

Cables, braids and laminated busbars provide an obvious answer for flexibility and mechanical isolation. The lengths of multiple conductors should be equalised however as imbalanced current pathways can cause overheating and damage in the thermally separated strands or braids.

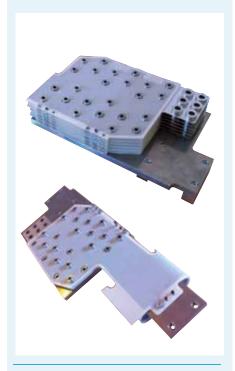
#### **CUSTOM COMPONENTS**



- · Pressings & formed parts
- Edge-winding for inductors and blow-out coils
- Air- and water-cooled heat-sinks
- Machined components
- Extensive range of materials, processes, finishes, insulators and accessories
- Testing, computer modelling and numerical analysis available for prototypes

If you are looking to manufacture your own designs we can help to optimise the quality and cost and provide first-class support with production control, delivery schedules and quality assurance. If you need a new design for your application then we can offer advice, prototypes, testing and pilot manufacture.

#### LAMINATED BUSBARS



- Precision conductor profiles by, water-jet or fibre-laser
- Full range of electrical finishes
- PET/epoxy insulation film thermally bonded under vacuum
- Collars, inserts and accessories

HFPC demands low-inductance interconnection for IGBTs and their capacitors with closely spaced thin sheets to minimise inductance and AC resistance. Compared to Copper, the higher resistivity of Aluminium can be offset by its greater skin depth penetration. We can assist with thermal and electrical modelling to optimise design parameters.

## HEATSINKS, COOLERS & MACHINED PARTS



- Silver tipped contacts available
- Deep hole drilling
- CAD cam programming
- Large array of tooling coatings or encapsulation

Precisely toleranced water-cooled blocks and heat sinks are essential for the efficient operation of many types of electrical and electronic devices. Our investment in CNC machinery facilitates precise control of the manufacturing process of close surface tolerance machined blocks. We manufacture to your designs and specifications but can also offer a wealth of experience and advice which adds value to our service.

#### **CRIMPING TOOLS**



We can supply a full range of crimping tools. Please contact our sales office for assistance.

#### IN-HOUSE FLECTROPLATING

In-house rack & barrel electroplating brings important control and flexibility to the critical surface properties of electrical parts.

Quite apart from aesthetic qualities, an electroplated layer can stabilise electrical contact, prevent corrosion, provide solderability and optimise tribology with a mating surface. Coatings are equally critical to the performance of cables, busbars and terminations

For routine low-stress applications, tin protects copper components with a low contact-resistance coating that that is perfectly adequate for temperatures up to circa 60degC. In line with standard industry practice, our terminals are normally supplied with a  $5\mu$  tin coating and are intended for use in protected circuits working at controlled temperatures without thermal excursions from surge-currents etc.

If high temperatures, 80degC or more, are likely then tin should be avoided, especially in thick layers or on finely-stranded wires. Diffusion of tin into copper becomes rapid above about 100degC and then causes serious permanent damage to the conductivity of the copper substrate. Tincoated finely stranded cables can easily become dangerously resistive after exposure to overheating. Tin is also unsuitable for very cold environments, below circa -20degC, where it can form an amorphous allotrope that can detach as powder.

Tin coatings are also compatible with softsolder but the high temperatures of the soldering process can cause local damage to the resistance of the copper substrate, as described above.

Nickel is a reasonable alternative coating for limited higher temperatures. Nickel can also cause profound damage to the conductivity of copper but the temperature necessary for inter-diffusion is very much higher. Nickel is satisfactory for service up to circa 300degC but generally has a higher, less stable, contact resistance than tin. Nickel should not normally be regarded as a solder-compatible coating.

Silver retains stable surface contact resistance under most conditions and provides by far the best protective coating for electrical applications of copper. Its conductivity is the best available, slightly better than pure copper, and it has no detrimental effect on the bulk conductivity of a copper component or cable at any temperature up to melting. Copper-silver brazing provides excellent high integrity connections but tin-based solders are detrimental and counter-productive with silver coatings. Silver coating is used for high-reliability contacts and busbars plus instrument cables and their terminations.

Precious metals, such as gold, rhodium and ruthenium can also be applied, usually onto a coating of silver, to minimise oxidation and preserve absolute electrical integrity. The final choice for optimum performance can also depend on the thermal and tribological properties of the coating and its compatibility with the recipient surface.

#### For further details, please speak to us

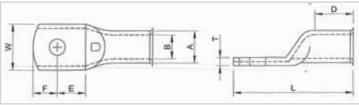


# HEAVY DUTY TERMINAL LUGS -TYPE HD

The numerical part of the series reference denotes the conductor cross sectional area in mm2. Thus to order, for example, a terminal for a 10mm2 conductor and a M12 stud size the full ordering reference is CAT10-12.



Other sizes and designs available upon request



CAT REF	STUD; SIZE (MM)	A	В	W	E	F	D	L	T
CAT1.5	4,5	3.6	1.9	8.0	5.0	4.0	6.0	18.0	0.9
	6	3.6	1.9	10.0	6.0	5.5	6.0	20.0	0.6
CAT2.5	4	3.9	2.4	7.7	5.0	4.0	7.5	20.0	1.0
	5	3.9	2.4	10.0	5.5	5.5	8.0	21.5	1.1
	6	3.9	2.4	10.0	6.5	5.5	8.0	21.5	0.6
	8	4.4	2.6	12.0	9.0	6.0	8.0	26.5	0.7
CAT4	4	4.7	3.0	10.0	6.0	5.0	8.0	21.5	1.1
	5,6	4.7	3.0	10.0	5.5	5.5	8.0	21.5	1.1
	8	4.7	3.0	12.0	9.0	6.0	7.5	26.5	0.9
CAT6	4	5.5	3.8	10.0	5.9	54.1	8.5	24.5	1.2
	5	5.5	3.8	10.0	5.9	5.1	8.5	24.5	1.2
	6	5.5	3.8	10.0	5.9	54.1	8.5	24.5	1.2
	8	5.5	3.8	12.0	8.0	7.0	8.5	27.5	1.0
	10	5.5	3.8	15.0	13.0	8.0	8.5	34.0	0.9
CAT10	5, 6,	6.9	4.4	11.0	5.9	5.1	9.0	27.0	2.0
	8	6.9	4.4	14.0	9.7	8.3	10.0	35.0	1.6
	10, B	6.9	4.4	16.0	12.0	10.0	10.0	39.0	1.5
	12	6.9	4.4	18.0	12.0	10.0	10.0	39.0	1.2
CAT16	5, 6	8.0	5.6	11.5	5.9	5.1	11.0	28.5	2.2
	8	8.0	5.6	14.0	9.7	8.3	13.0	38.0	1.8
	10, B	8.0	5.6	16.0	12.0	10.0	13.0	42.0	1.6
	12	8.0	5.6	18.0	12.0	10.0	13.0	42.0	1.3
CAT25	5, 6, 8	9.5	7.0	13.5	9.7	8.3	13.0	40.0	2.4
	10, B	9.5	7.0	16.0	12.0	10.0	13.0	44.0	2.0
	12	9.5	7.0	18.0	12.0	10.0	13.0	44.0	1.8
CAT35	5, 6, 8	11.0	8.2	15.5	9.7	8.3	14.0	41.0	2.8
	10, B	11.0	8.2	15.5	12.0	10.0	14.0	45.0	2.8
	12	11.0	8.2	18.0	12.0	10.0	14.0	45.0	2.5
CAT50	5, 6, 8	12.1	9.5	17.2	9.7	8.3	18.0	46.0	2.6
	10, 12, B	12.1	9.5	17.2	12.0	10.0	18.0	50.0	2.6
CAT70	5, 6, 8	15.0	11.5	21.4	9.7	8.3	18.0	48.0	3.5
	10, 12, B	15.0	11.5	21.4	12.0	10.0	18.0	52.0	3.5
	14, 16	15.0	11.5	21.4	16.5	16.5	18.0	64.0	3.5
CAT95	B, 8, 10, 12	17.0	13.5	24.5	12.0	10.0	24.0	58.0	3.5
	14, 16	17.0	13.5	24.5	16.5	16.5	18.0	64.0	3.5
CAT120	B, 8, 10, 12, 14, 16	19.0	15.0	27.2	16.5	16.5	27.0	75.0	4.0
	20	19.0	15.0	27.2	18.7	14.3	27.0	75.0	4.0
CAT150	B, 8, 10, 12, 14, 16	21.0	16.5	30.0	16.5	16.5	27.0	78.0	4.5
	20	21.0	16.5	30.0	17.0	16.0	27.0	78.0	4.5
CAT185	B, 8, 10, 12, 14, 16	23.0	18.5	33.5	16.5	16.5	30.0	82.0	4.5
	20	23.0	18.5	33.5	17.0	16.0	30.0	82.0	4.5
CAT240	B, 8, 10, 12, 14, 16, 20	26.0	21.0	37.7	18.0	17.0	32.0	88.0	5.0
CAT300	B, 10, 12, 14, 16, 20	28.0	23.0	41.0	17.0	17.0	37.0	95.0	5.0
CAT400	B, 10, 12, 14, 16, 20	32.0	27.0	47.3	20.0	20.0	38.0	103.0	5.0
CAT500	B, 10, 12, 14, 16, 20	36.0	30.0	53.0	20.0	20.0	43.0	105.0	6.0
CAT630	B, 10, 12, 14, 16, 20	44.0	33.8	63.0	24.0	24.0	46.0	125.0	10.2
CAT800	B, 10, 12, 14, 16, 20	49.0	38.0	70.0	36.0	36.0	56.0	169.0	11.0
CAT1000	B, 10, 12, 14, 16, 20	53.0	42.5	77.0	33.5	33.5	56.0	170.0	10.5

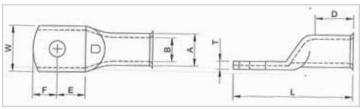
NOTE: Stud Size  $B = Blank Palm \mid Also available with no inspection hole$ 

# STANDARD DUTY TERMINAL LUGS -TYPE NT

The numerical part of the series reference denotes the conductor cross sectional area in mm2. Thus to order, for example, a terminal for a 25mm2 conductor and an M8 stud size the full ordering reference is CAT25-8NT. The following information is intended to provide comprehensive ordering assistance and dimensional data on our wide range.



Other sizes and designs available upon request



CAT REF	STUD; SIZE (MM)	А	В	W	Е	F	D	L	T
CAT10	6NT	6.2	4.5	10.4	6.2	6.2	9.3	24	1.3
	8NT	6.6	4.7	13.5	8.0	7.0	9.5	29.5	1.2
CAT16	5NT	7.5	5.5	10.8	8.8	6.2	9.5	30.0	2.0
	6NT	7.5	5.5	10.8	8.8	6.2	9.5	30.0	2.0
	8NT	7.5	5.5	13.5	8.0	7.0	9.5	30.0	1.6
	10NT	7.5	5.5	15.0	10.9	9.6	9.5	35.5	1.5
CAT25	5NT, 6NT	9.4	7.0	13.8	8.8	6.2	12.0	32.5	2.4
	8NT	9.4	7.0	13.8	8.0	7.0	12.0	32.5	2.4
	10NT	9.4	7.0	16.0	10.9	9.6	12.0	38.0	2.1
	12NT	9.4	7.0	18.0	10.5	10.0	12.0	38.0	1.9
CAT35	5NT, 6NT	10.6	8.2	15.3	8.8	6.2	14.0	35.0	2.4
	8NT	10.6	8.2	15.3	8.0	7.0	14.0	35.0	2.4
	10NT	10.6	8.2	15.3	10.9	9.6	14.0	40.5	2.4
	12NT	10.6	8.2	18.0	10.5	10.0	14.0	40.5	2.2
CAT50	6NT	11.9	9.5	17.4	8.8	6.2	14.9	37.0	2.5
	8NT	11.9	9.5	17.4	8.0	7.0	14.9	37.0	2.5
	10NT	11.9	9.5	17.4	10.9	9.6	14.9	42.5	2.5
	12NT	11.9	9.5	17.4	10.5	10.0	14.9	42.5	2.5
CAT70	6NT	14.5	11.5	20.9	8.8	6.2	16.0	40.5	3.0
	8NT	14.5	11.5	20.9	8.0	7.0	16.0	40.5	3.0
	10NT	14.5	11.5	20.9	10.9	9.6	16.0	46.0	3.0
	12NT	14.5	11.5	20.9	10.5	10.0	16.0	46.0	3.0
	14NT, 16NT	14.5	11.5	20.9	16.0	13.0	17.0	55.0	3.0
CAT95	8NT	16.7	13.5	24.3	10.9	9.6	18.0	49.5	3.2
	10NT	16.7	13.5	24.3	10.9	9.6	19.0	49.5	3.2
	12NT	16.7	13.5	24.3	10.5	10.0	19.0	49.5	3.2
CAT120	B, 8NT, 10NT, 12NT	19.0	15.0	27.3	14.0	10.0	19.0	55.5	4.0
	14NT	19.0	15.0	27.3	13.2	10.8	19.0	55.5	4.0
CAT150	8NT, 10NT, 12NT, B	21.0	16.5	30.2	14.0	10.0	23.0	61.0	4.5
	14NT	21.0	16.5	30.2	13.2	10.8	23.0	61.0	4.5
CAT185	B, 8NT, 10NT, 12NT	23.0	18.5	33.3	14.0	10.0	26.0	66.5	4.5
	14NT	23.0	18.5	33.3	13.2	10.8	26.0	66.5	4.5

NOTE: Stud Size B = Blank Palm | Also available with no inspection hole

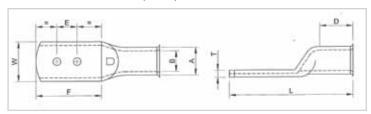
## EXTENDED PALM 2 HOLE FIXING/ TELECOMMUNICATION TERMINAL

## -TYPE POI

The numerical part of the series reference denotes the conductor cross sectional area in mm2. The following information is intended to provide comprehensive ordering assistance and dimensional data on our wide range.



Other sizes and designs available upon request



CAT REF	STUD; SIZE (MM)	A	В	W	Е	F	D	L	T
CAT10P0I	6.5	6.9	4.4	11.0	16.0	34.0	12.0	52.0	2.4
CAT16P0I	6.5	8.0	5.6	11.0	16.0	34.0	12.0	52.0	2.4
CAT25P0I	6.5	9.5	7.0	13.5	16.0	34.0	13.0	55.0	2.4
CAT35P0I	6.5	11.0	8.2	15.5	16.0	34.0	14.0	56.0	2.8
CAT50P0I	6.5	12.1	9.5	17.2	16.0	34.0	18.0	61.0	2.6
CAT70P0I	12.5	15.0	11.5	21.2	45.0	75.0	18.0	106.0	3.5
CAT95P0I	12.5	17.0	13.5	24.5	45.0	75.0	24.0	112.0	3.5
CAT120P0I	12.5	19.0	15.0	27.5	45.0	75.0	27.0	117.0	4.0
CAT150P0I	12.5	21.0	16.5	30.3	45.0	75.0	27.0	119.0	4.5
CAT185POI	12.5	23.0	18.5	33.5	45.0	75.0	34.0	125.0	4.5
CAT240P0I	12.5	26.0	21.0	37.7	45.0	75.0	32.0	125.0	5.0
CAT300POI	12.5	28.0	23.0	40.8	45.0	75.0	37.0	136.0	5.0
CAT400POI	12.5	32.0	27.0	47.3	45.0	75.0	37.0	138.0	5.0
CAT500POI	12.5	38.0	30.0	55.0	45.0	75.0	60.0	167.0	8.2
CAT630POI	12.5	44.0	33.8	63.0	45.0	75.0	60.0	167.0	10.2
CAT800P0I	12.5	49.0	38.0	70.0	45.0	75.0	56.0	173.0	11.0
CAT1000POI	12.5	53.0	42.5	77.0	45.0	75.0	56.0	170.0	10.5

NOTE: The stud size and centres shown are standard. Other sizes and centres can be provided if required.

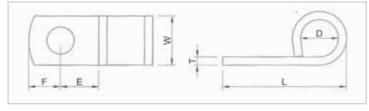
Available with or without inspection hole.

## FLAG TERMINAL

## -TYPE FT



Other sizes and designs available upon request



CAT REF	CONDUCTOR; SIZE (MM2)	STUD; SIZE (MM)	L	W	T	F	Е	D
CAT10FT	10	5, 6, 8	27.0	12.7	1.6	8.0	10.7	4.8
		10,12	37.0	15.9	1.6	8.0		4.8
CAT16FT	16	5, 6, 8	28.0	12.7	1.6	8.0	10.7	6.0
		10,12	38.0	15.9	1.6	8.0		6.0
CAT25FT	25	5, 6, 8	31.0	12.7	1.6	8.0	11.9	7.6
		10,12	41.0	15.9	1.6	8.0		7.6
CAT35FT	35	5, 6, 8,	32.0	12.7	1.6	8.0	11.9	8.4
		10, 12	32.0	15.9	1.6	8.0	11.9	8.4
CAT50FT	50	5, 6, 8	33.0	15.9	1.6	8.0	11.9	9.5
		10,12	41.0	15.9	1.6	8.0	21.0	9.5
CAT70FT	70	5, 6, 8	44.7	15.9	1.6	8.0	22.5	11.5
		10,12	52.7	15.9	1.6	8.0	31.0	11.5

# TRANSFORMER TERMINALS 4 HOLE FIXING -TYPE 8TF4H

The numerical part of the series reference denotes the conductor cross sectional area in mm2

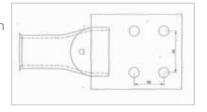
Different Hole Sizes Available. Available with or without inspection hole.

Other sizes and designs available upon request

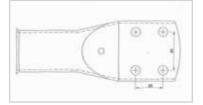


CAT REF	
CAT70	8TF4H
CAT95	8TF4H
CAT120	8TF4H
CAT150	8TF4H
CAT185	8TF4H
CAT240	8TF4H
CAT300	8TF4H
CAT400	8TF4H
CAT500	8TF4H
CAT630	8TF4H
CAT800	8TF4H
CAT1000	8TF4H

CAT70 to CAT300 are of the brazed palm terminal type with barrel dimensions identical to Type HD heavy duty terminals

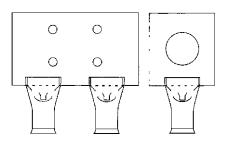


CAT400 to CAT1000 are not dimensionally identical to the Type HD heavy duty terminals. Please call for further details



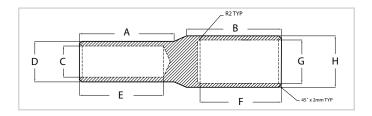
#### BRAZED PALM ASSEMBLIES

Heavy duty terminal barrels brazed onto specially machined fixings of any description. The brazed joint gives low millivolt drop and higher mechanical strength than the copper on either side of the joint. Standard crimping tools can be used to connect the cable to virtually any type of connector minimising fixing time and maximising electrical and mechanical joint performance.



### HIGH VOLTAGE SPLICES

Copper Pin Terminals and Dissimilar Splices up to 36kV available manufactured from solid Thick Wall Copper Rod and fully annealed to stop any splitting when crimped. Manufactured to customer request.



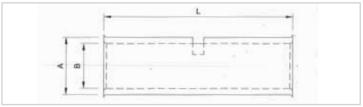
## HEAVY DUTY BUTT SPLICES

## -TYPE BSHD

The numerical part of the series reference denotes the conductor cross sectional area in mm2. The following information is intended to provide comprehensive ordering assistance and dimensional data on our wide range.

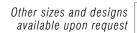


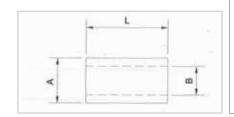
Other sizes and designs available upon request



CAT REF	A	В	L	
CAT1.5 BS	3.6	1.8	16.0	
CAT2.5 BS	4.0	2.3	20.0	
CAT4 BS	4.8	3.0	22.0	
CAT6 BS	5.5	3.8	22.0	
CAT10 BS	6.2	4.4	23.0	
CAT16 BS	7.0	5.6	30.0	
CAT25 BS	9.0	7.0	35.0	
CAT35 BS	10.5	8.2	39.0	
CAT50 BS	12.1	9.5	44.0	
CAT70 BS	15.0	11.5	44.0	
CAT95 BS	17.0	13.5	55.0	
CAT120 BS	19.0	15.0	63.0	
CAT150 BS	21.0	16.5	66.0	
CAT185 BS	23.0	18.5	74.0	
CAT240 BS	26.0	21.0	80.0	
CAT300 BS	28.0	23.0	89.0	
CAT400 BS	32.0	27.0	90.0	
CAT500 BS	38.1	30.0	135.0	No Inspection Hole/Sight Hole
CAT630 BS	44.0	33.8	135.0	No Inspection Hole/Sight Hole
CAT800 BS	49.0	38.0	135.0	No Inspection Hole/Sight Hole
CAT1000 BS	53.0	42.5	135.0	No Inspection Hole/Sight Hole

# HEAVY DUTY PARALLEL SPLICES -TYPE PS







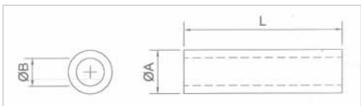
CAT REF	A	В	L
CAT10 PS	6.9	4.6	9.0
CAT16 PS	8.0	5.6	14.0
CAT25 PS	9.5	7.0	16.0
CAT35 PS	11.0	8.2	18.0
CAT50 PS	12.1	9.5	20.0
CAT70 PS	15.0	11.5	23.0
CAT95 PS	17.0	13.5	26.0
CAT120 PS	19.0	15.0	31.0
CAT150 PS	21.0	16.5	32.0
CAT185 PS	23.0	18.5	36.0
CAT240 PS	26.0	21.0	39.0
CAT300 PS	28.0	23.0	43.0
CAT400 PS	32.0	27.0	44.0
CAT500 PS	38.1	30.0	66.0
CAT630 PS	44.0	33.0	66.0
CAT800 PS	49.0	38.0	66.0
CAT1000 PS	53.0	42.5	66.0

## PARALLEL SPLICE

CAT REF	A (O.D)	B (I.D)	L (Length
CAT PL16	8.8	5.8	11.5
CAT PL25	11	7.5	13.5
CAT PL35	13	9	16.5



Other sizes and designs available upon request

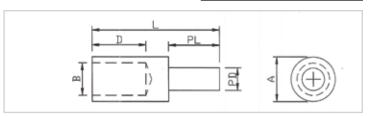


### **COPPER PIN TERMINALS**

Copper pin terminals are manufactured to order and are available to cater for conductor sizes from 1.5mm2 to 1000mm2. When ordering specify conductor cross sectional area, pin length and pin diameter required.



Other sizes and designs available upon request



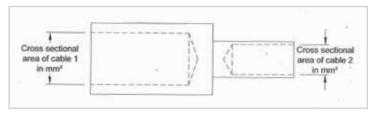
CAT REF	A	В	D	L	PL	PD
CAT10 PIN	6.25	4.45	8.00	23.00	10.00	3.80
CAT16 PIN	7.00	5.35	11.00	30.00	13.50	3.80
CAT25 PIN	9.50	7.00	11.25	38.00	19.00	4.50
CAT35 PIN	10.70	8.00	12.00	40.00	19.00	5.00
CAT50 PIN	12.30	9.50	16.00	41.00	19.00	7.50
CAT70 PIN	15.80	11.25	19.50	45.00	18.00	8.00
CAT95 PIN	17.00	13.50	20.00	45.00	19.00	8.00
CAT120 PIN	19.00	15.00	24.00	54.00	24.00	10.00
CAT150 PIN	22.00	16.50	27.00	56.00	24.00	10.00
CAT185 PIN	25.00	18.50	30.00	60.00	25.00	8.00
	25.00	18.50	30.00	60.00	25.00	12.00
CAT240 PIN	25.00	21.00	32.00	62.00	25.00	14.00
CAT300 PIN	28.00	23.00	42.00	82.00	32.00	16.00
CAT400 PIN	32.00	27.00	45.00	85.00	32.00	16.00

## DISSIMILAR COPPER SPLICES

Copper splices for jointing cables of dissimilar cross sectional areas are manufactured to order and are available to cater for conductor sizes from 1.5mm2 to 1000mm2. When ordering specify the conductor cross sectional area of both conductors.



Other sizes and designs available upon request



## EARTH BARS

### - STANDARD

Multiple contact Earth Bars provide a convenient common connector for a Main Earth Point. Our Standard Earth Bars are manufactured from 50mm x 6mm hard drawn copper bar rated at 815A complete with M10 brass stud assemblies on 35mm centres. They are mounted onto a black powder-coated galvanised steel base with M10 x 35 reinforced polyester insulators.

CAT REF	DESCRIPTION	DIMENSIONS
EBAR4	4 Way Earth Bar	300 x 100 x 90
EBAR6	6 Way Earth Bar	300 x 100 x 90
EBAR8	8 Way Earth Bar	450 x 100 x 90
EBAR10	10 Way Earth Bar	450 x 100 x 90
EBAR12	12 Way Earth Bar	520 x 100 90
EBAR14	14 Way Earth Bar	650 x 100 x 90
EBAR16	16 Way Earth Bar	650 x 100 x 90
EBAR18	18 Way Earth Bar	800 x 100 x 90
EBAR20	20 Way Earth Bar	800 x 100 x 90
EBAR22	22 Way Earth Bar	900 x 100 x 90
EBAR24	24 Way Earth Bar	1050 x 100 x 90
EBAR26	26 Way Earth Bar	1050 x 100 x 90
EBAR28	28 Way Earth Bar	1250 x 100 x 90
EBAR30	30 Way Earth Bar	1250 x 100 x 90



Other sizes and designs available upon request

## EARTH BARS

## - SINGLE DISCONNECTING LINK

The single disconnecting link enables multiple earth rods or systems to be tested or inspected with a temporary break in an earth or lightning connection. Earth Bars are manufactured from 50mm x 6mm hard drawn copper bar rated at 815A complete with M10 brass stud assemblies on 35mm centres. They are mounted onto a black powder-coated galvanised steel base with M10 x 35 reinforced polyester insulators.

CAT REF	DESCRIPTION	DIMENSIONS
EBAR4-1	4 Way Earth Single Link	375 x 100 x 90
EBAR6-1	6 Way Earth Bar Single Link	475 x 100 x 90
EBAR8-1	8 Way Earth Bar Single Link	575 x 100 x 90
EBAR10-1	10 Way Earth Bar Single Link	725 x 100 x 90
EBAR12-1	12 Way Earth Bar Single Link	825 x 100 x 90
EBAR14-1	14 Way Earth Bar Single Link	925 x 100 x 90
EBAR16-1	16 Way Earth Bar Single Link	1025 x 100 x 90
EBAR18-1	18 Way Earth Bar Single Link	1125 x 100 x 90
EBAR20-1	20 Way Earth Bar Single Link	1275 x 100 x 90
EBAR22-1	22 Way Earth Bar Single Link	1375 x 100 x 90
EBAR24-1	24 Way Earth Bar Single Link	1475 x 100 x 90
EBAR26-1	26 Way Earth Bar Single Link	1575 x 100 x 90
EBAR28-1	28 Way Earth Bar Single Link	1725 x 100 x 90
EBAR30-1	30 Way Earth Bar Single Link	1825 x 100 x 90



Other sizes and designs available upon request

## EARTH BARS

### - TWIN DISCONNECTING LINK

The twin disconnecting link enables multiple systems to be tested or inspected with a temporary break in earth or lightning connections. Earth Bars are manufactured from 50mm x 6mm hard drawn copper bar rated at 815A complete with M10 brass stud assemblies on 35mm centres. They are mounted onto a black powder-coated galvanised steel base with M10 x 35 reinforced polyester insulators.

CAT REF	DESCRIPTION	DIMENSIONS
EBAR4-2	4 Way Earth Bar Twin Link	tba
EBAR6-2	6 Way Earth Bar Twin Link	550 x 100 x 90
EBAR8-2	8 Way Earth Bar Twin Link	650 x 100 x 90
EBAR10-2	10 Way Earth Bar Twin Link	800 x 100 x 90
EBAR12-2	12 Way Earth Bar Twin Link	900 x 100 x 90
EBAR14-2	14 Way Earth Bar Twin Link	1000 x 100 x 90
EBAR16-2	16 Way Earth Bar Twin Link	1100 x 100 x 90
EBAR18-2	18 Way Earth Bar Twin Link	1200 x 100 x 90
EBAR20-2	20 Way Earth Bar Twin Link	1350 x 100 x 90
EBAR22-2	22 Way Earth Bar Twin Link	1450 x 100 x 90
EBAR24-2	24 Way Earth Bar Twin Link	1550 x 100 x 90
EBAR26-2	26 Way Earth Bar Twin Link	1650 x 100 x 90
EBAR28-2	28 Way Earth Bar Twin Link	1800 x 100 x 90
EBAR30-2	30 Way Earth Bar Twin Link	1900 x 100 x 90

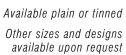


Other sizes and designs available upon request

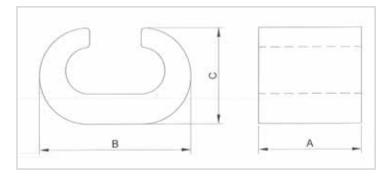
Dissimilar versions also available

## C CRIMPS

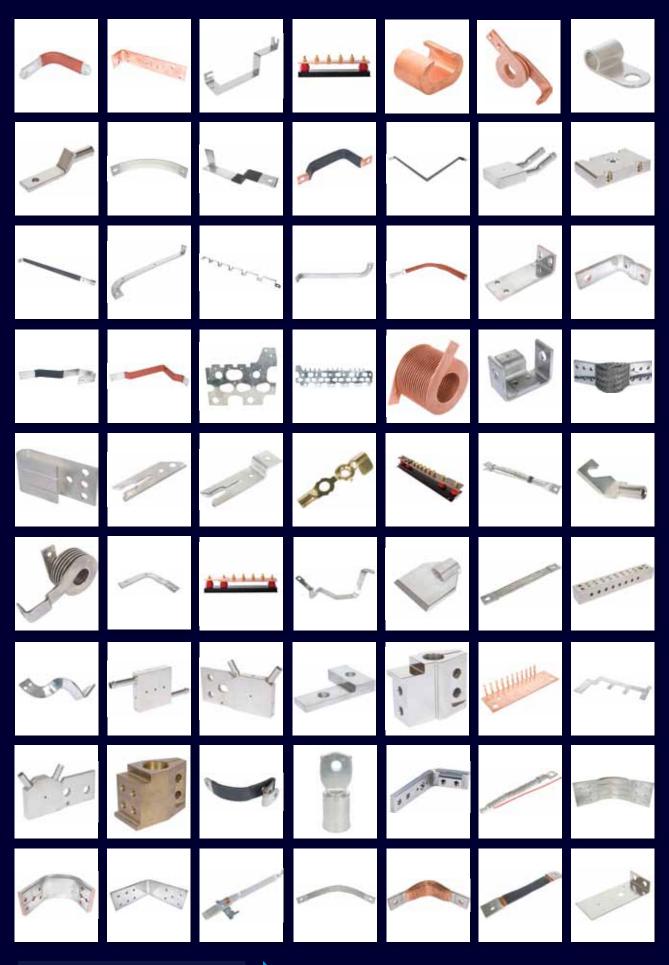
Manufactured from high purity copper and suitable for a number of uses for tapping off overhead distribution lines or to create earthing networks allows connections to cables to be formed without cutting the main cable







CAT REF	A	В	C	Cable mm2
T10-10C CCRIMP	12.00	12.60	8.40	C10-C10
T16-16C CCRIMP	17.00	19.40	12.00	C16-C16
T25-25C CCRIMP	17.00	21.40	13.00	C25-C25
T35-35C CCRIMP	21.00	26.60	15.60	C35-C35
T50-50C CCRIMP	26.00	38.00	21.00	C50-C50
T70-70C CCRIMP	28.00	34.00	21.00	C70-C70
T95-95C CCRIMP	29.00	41.00	26.00	C95-C95
T120-120C CCRIMP	30.00	45.00	28.00	C120-C120
T150-150C CCRIMP	30.00	48.00	28.00	C150-C150
T185-185C CCRIMP	32.00	52.00	32.00	C185-C185
T240-240C CCRIMP	32.00	55.00	38.00	C240-C240



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