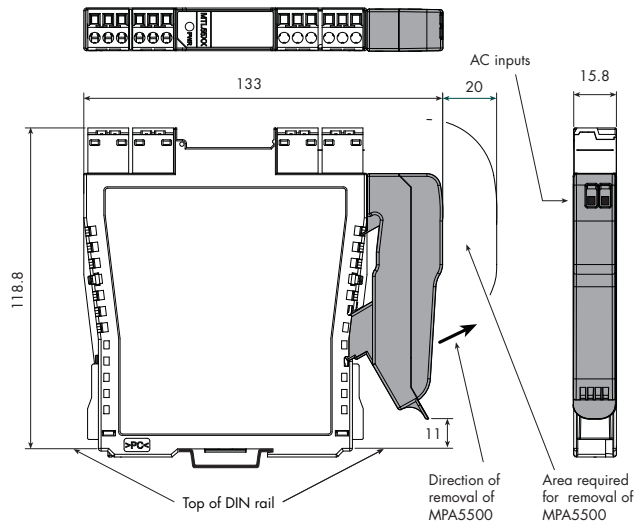


MPA5500

A.C. POWER ADAPTOR

The MPA5500 enables any MTL5500 Series module that is normally powered from a nominal 24V DC supply (i.e. those that are not loop-powered) to be powered from a high-voltage AC supply.

It plugs into the power socket (terminals 13 and 14) of an MTL5500 module and clips securely onto the module housing. The 25V DC power output from the adaptor is sufficient to supply a single module and can be connected to any normal AC power source.



SPECIFICATION

Input voltage

85 – 265V AC, (45–65Hz)

Efficiency

71% typ. at 230V AC

Power dissipation

1.2W typ at 230V AC.

Input terminals

Cage-clamp terminals accommodating conductors up to 1.5mm² stranded or 16AWG single-core

Input protection

internal fuse, not user serviceable

Output voltage

25Vdc ± 10%

Output current

120mA at 25V

Ambient temperature

Operating: –20 to +60°C

Storage: –40 to +80°C

Mounting

Plugs into and clips onto MTL5500 Series I/O module
It is not for use with any equipment other than MTL5500.

Humidity

5 to 95% relative humidity

Mechanical

Ingress Protection: IP20

Material: polycarbonate

Weight: 28g approx.

Standards compliance

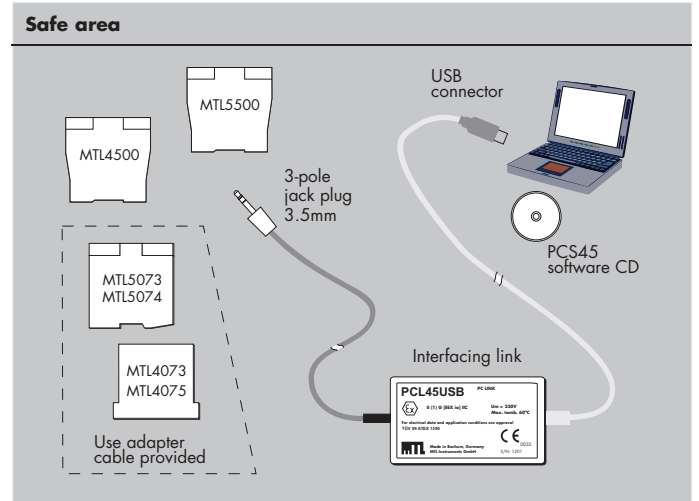
EN 61326, EN 61010

PCS45/PCL45USB

CONFIGURATOR

FOR MTL CONVERTERS

The PCS45/PCL45USB configurator allows MTL converters to be configured from a standard PC running a Microsoft® Windows® operating system. It comprises PC software, provided on a CD (PCS45), and an ATEX certified interfacing link (PCL45USB). Converters can be configured from the safe area, while on-line, and configurations can be saved to disk and printed out when required. It is suitable for use with MTL4000, MTL4500, MTL5000 and MTL5500 series products.



SPECIFICATION

PCL45USB hardware

Location

Safe area

Connections

PC side: USB B(F) socket

Converter side: cable with 3.5mm jackplug, 3-pole for MTL4500 and MTL5500 series converters. An adapter cable is provided for other earlier MTL converters.

Cable lengths

Converter side (fitted): 1.5m

USB cable A(M) to B(M) (supplied): 2m

Ambient temperature limits

–10°C to +60°C operating

–20°C to +70°C storage

Humidity

5 to 95% relative humidity (non-condensing)

Weight

200g

PCS45 Configuration software

Compatible with Windows 2000 or Windows XP.

Consult MTL for operation with any other operating system, e.g. Windows Vista™.

Software medium

PCS45 supplied on CD

Updates are available at www.mtl-inst.com

Recommended minimum PC configuration

Microsoft Windows 2000 or Windows XP

20MB of available hard disc space

CD ROM drive

Available USB port

Printer (local or network)

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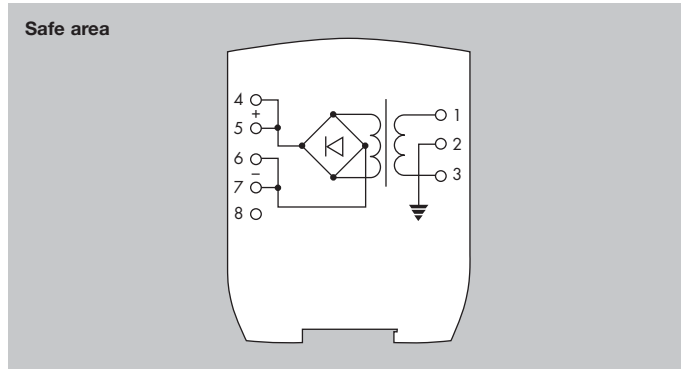
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EPS45/5500 Rev3 250310

MTL5991 24V DC POWER SUPPLY

A DIN-rail mounted unit for locations where a dc supply is not readily available. The wide input power supply range makes this unit universally applicable and the 24V dc, 2A output will drive a useful number of MTL5000 and MTL5500 series modules.



SPECIFICATION

Power supply

85 to 264V ac 47 to 63Hz

Power dissipation within unit

7.2W @ 2A

Mounting

35mm DIN (top hat) rail

Output voltage

24V dc nom (23.64 min/24.36 max)

Output current

2A maximum (1.7A with <105V ac input)

LED indicators

Green: Power indication

Weight

310g

Ambient temperature

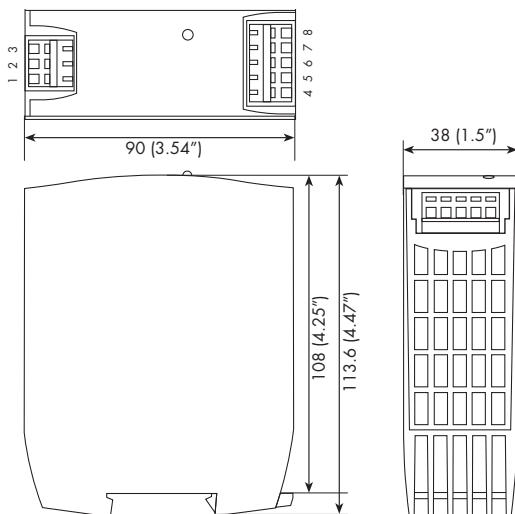
Operating temperature -10°C to +50°C

Storage temperature -40°C to +85°C

Terminals

Cage clamp type accommodating conductors up to 2.5mm², stranded or single-core

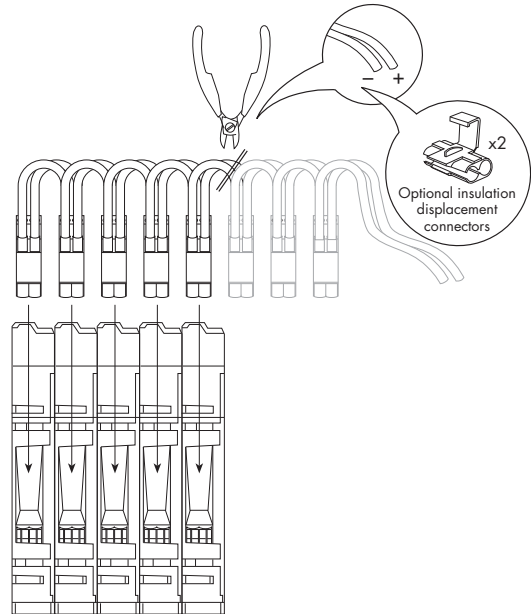
Note: Segregation between hazardous and safe area wiring must be maintained.



MTL5500 SERIES POWERBUS KITS

PB - 8T,16T,24T,32T

A quick and easy way to distribute DC power to MTL5500 Series modules. Each powerbus kit includes 4 single ferrules, 4 twin ferrules and 2 insulation displacement connectors (Scotchlok).



SPECIFICATION

Available in 4 different lengths:

PB - 8T	= 8 connectors and loops
PB - 16T	= 16 connectors and loops
PB - 24T	= 24 connectors and loops
PB - 32T	= 32 connectors and loops

Insulation material :

PVC

Conductor :

24 strands of 0.2mm dia (0.75mm²) standard copper

Insulation thickness :

0.5 to 0.8 mm

Current rating :

12A max

Operating temperature range :

- 20°C to +60°C

Max voltage drop on 32 modules drawing 130mA max :

0.5V

CHOOSING A POWERBUS KIT

Choose a powerbus where the number of power plugs is greater than or equal to the number of isolators to be powered and if necessary cut the powerbus to the required number of terminations.

Note: To reduce the risk of excessive voltage drop or overcurrent do not connect powerbuses in series.

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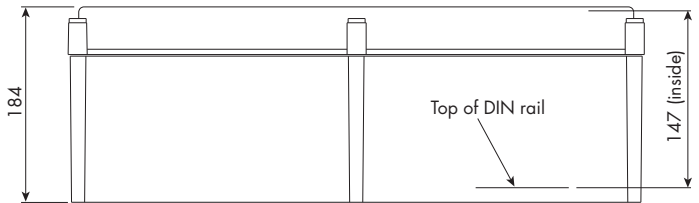
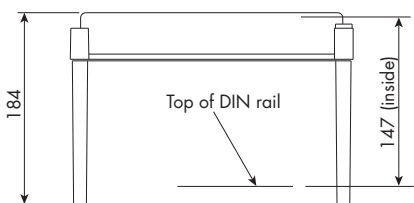
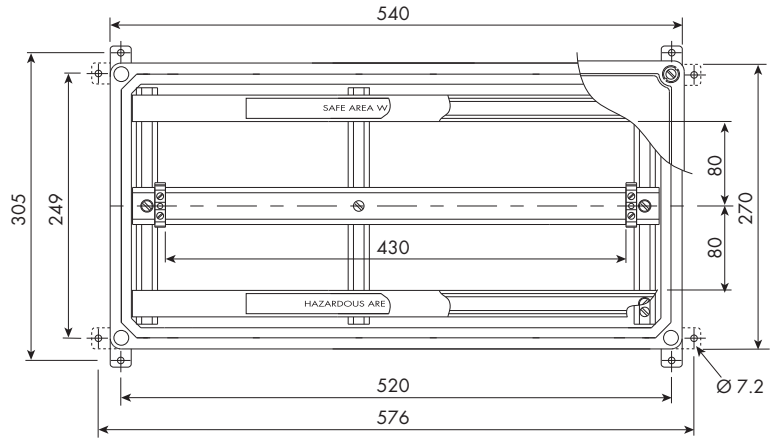
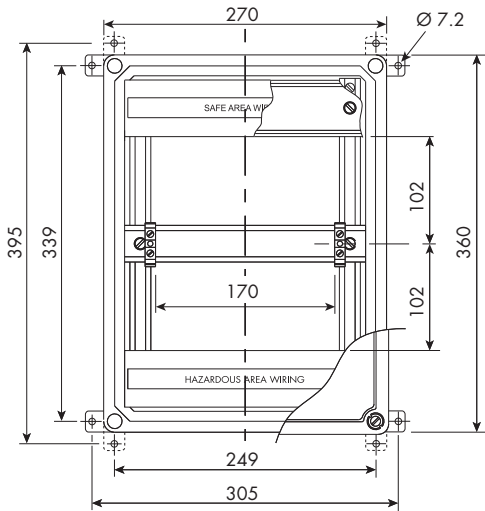
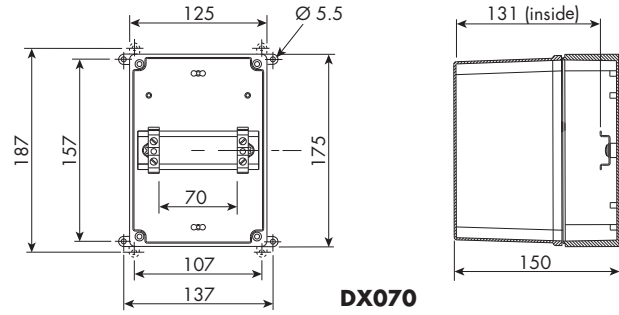
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EPS45/5500 Rev3 250310

MTL5500 SERIES ENCLOSURES

DIMENSIONS (mm) AND MOUNTING



SPECIFICATION

Construction

- Glass reinforced polycarbonate base - DX070
- Glass reinforced polyester base - DX170, DX430
- Transparent polycarbonate lid

Protection

Dust-tight and water-jet proof to IEC529:IP65

Lid fixing

Captive fixing screws

Weight (excluding barriers/isolators) kg

- DX070 0.8
- DX170 2.6
- DX430 4.1

Items provided

- DIN rail - fitted
- ETL7000 Earth terminals (2 x) - fitted
- "Take care IS" front adhesive label
- Cable trunking (except DX070)

Note: Isolators are not included.

Mounting

Wall fixing lugs provided. For further details refer to INM5500.

Tagging and earth rail

Accommodates MTL5500 Series accessories.

Permitted location

Safe (non-hazardous) area

Note: N. America/Canada - Enclosures are rated NEMA 4X so can be used in Class 1, Division 2 (gases) location, but check with local requirements and ensure all cable entries also conform. Additional warning label will be required on or near the enclosure, see installation details. Not suitable for Class II or III, Division 2 hazardous locations.

Approximate capacities (on DIN rail between earth terminals)

* Use these figures when IMB57 mounting blocks for tagging/earth are included.

	Number of MTL5500 isolators	
DX070	4	(2)*
DX170	10	(8)*
DX430	26	(24)*

Ambient temperature limits

Dependent on units fitted. See instruction manual INM5500.

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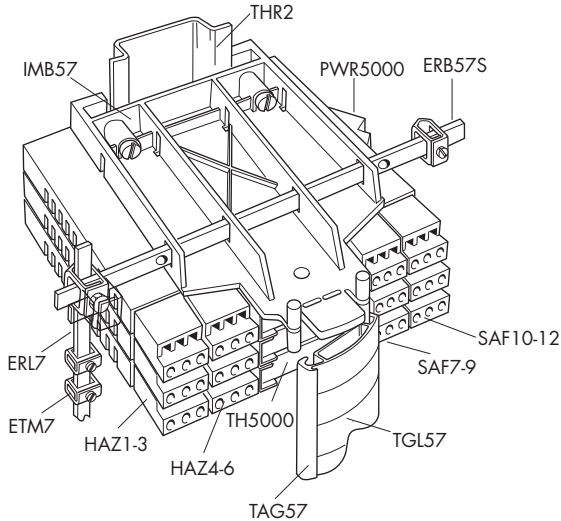
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EPS45/5500 Rev3 250310

MTL5500 SERIES ACCESSORIES

MTL5500 Series isolators mount quickly and easily onto standard DIN rail. A comprehensive range of accessories simplifies earthing and tagging arrangements.



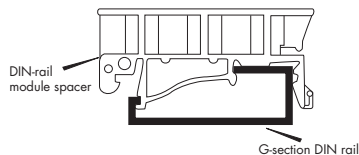
MOUNTING

THR2 DIN rail, 1m length

DIN rail to EN50022; BS5584; DIN46277

MS010 DIN rail module spacer, 10mm, pack of 5

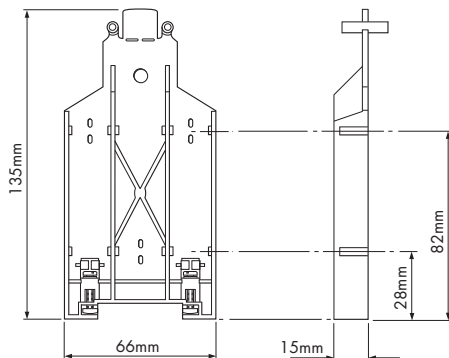
Grey spacer, one required between each MTL5995 and any adjacent module on a DIN rail, to provide 10mm air-circulation space between modules



EARTH RAILS AND TAG STRIP

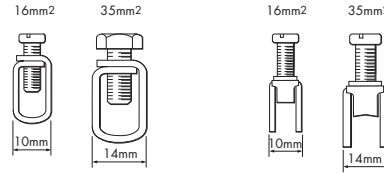
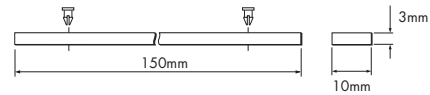
IMB57 Insulating mounting block

One required at each end of a tagging strip/earth rail. Suitable for low-profile (7.5mm) and high-profile (15mm) symmetrical DIN rail.



ERB57S Earth-rail bracket, straight

Nickel-plated; supplied with two push fasteners, one (14mm, 35mm²) earth-rail clamp and one (10mm, 16mm²) earth clamp.



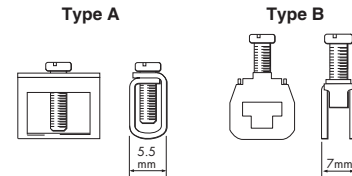
ERL7 Earth rail, 1m length

Nickel-plated; may be cut to length.



ETM7 Earth terminal, bag of 50

For terminating cable screens and 0V returns on the ERL7 earth rail. For cables ≤ 4mm². Exact dimension dependent on manufacturer.



TAG57 Tagging strip, 1m length

Cut to size. Supplied with tagging strip label suitable for MTL5000 or MTL5500 modules.



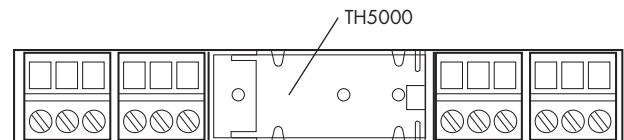
TGL57 Tagging strip labels, set of 10 x 0.5m

Spares replacement, for use with TAG57 tagging strip. Suitable for MTL5000 or MTL5500 modules.

INDIVIDUAL ISOLATOR IDENTIFICATION

TH5000 tag holders

Each isolator may be fitted with a clear plastic tag holder, as shown below. Order TH5000, pack of 20.



CONNECTORS

Each MTL5500 unit is supplied with signal and power connectors, as applicable.

Spares replacement connectors are available separately; see ordering information.

See also
'MTL5500 Series powerbus kits'

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EPS45/5500 Rev3 250310

CUSTOM, STANDARD AND UNIVERSAL BACKPLANES FOR EASY DCS INTEGRATION

- Total flexibility
- Reduce wiring
- Simplify installation
- Special functions
- Signal conditioning
- HART® integration

The MTL4500 Series backplanes, enclosures and other accessories provide comprehensive, flexible and remarkably compact mounting facilities for system vendors, original equipment manufacturers and end users alike.

CUSTOMISED BACKPLANES

MTL provides a complete design and manufacturing service for customised backplanes. Customised backplanes give the vendors and users of process control and safety systems the opportunity to integrate MTL4500/HART® modules directly into their system architecture. As there are no hazardous-area circuits on the backplanes, customised versions can be produced without the need for IS certification, so simplifying design and lowering costs.

UNIVERSAL CUSTOM BACKPLANES

The 'universal' backplane allows a fast and economic approach to providing a custom interface. Where tight time schedules exist, the backplane can be installed to allow the panel building and wiring to be completed. The customised adapter card can then be plugged in at any time up to integrated test.

ADAPTER CARDS

Adapter cards already exist for many of the DCS companies. In addition there is a range of general purpose cards that offer reduced wiring for use with specific MTL modules. These are also available in left- and right-hand versions to ease panel wiring.

STANDARD MTL BACKPLANES

Standard MTL backplanes are available to accommodate 4, 8, 16, or 24 modules using screw-clamp connectors for the safe-area circuits. On an individual backplane, any module can be plugged into any position and module types can be mixed. For 8-, 16- and 24-way backplanes, screw-clamp connectors which plug into the backplanes provide primary and secondary 24V dc power supplies. Power to several 8- or 16-way backplanes can be interconnected to reduce and simplify wiring – see instruction manual INM4500 for details.

MTL CPS STANDARD BACKPLANES

Backplane model no.	Number of modules	Safe-area connections	MOUNTING KITS			ACCESSORIES		
			Surface	DIN-rail (T or G)	19-inch rack	Earth-rail kit	Tagging strip kit	Spare fuse pack
CPS04	4	Screw-clamp	SMS01	DMK01	–	–	–	F US1.0ATE5
CPS08	8	Screw-clamp	SMS01	DMK01	–	ERK08	TSK08	FUS1.0ATE5
CPS16	16	Screw-clamp	SMS01	DMK01	–	ERK16	TSK16	F S2.0ATE5
CPS24	24	Screw-clamp	SMS01	DMK01	HMP24	–	TSK24	FUS4.0ATE5

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OPTIONAL ACCESSORIES

Optional accessories include colour coded tagging strip kits for all three sizes of backplane and earth rail kits for 8 and 16-way versions. Mounting accessories are available for surface (all backplanes), T-section and G-section DIN-rail (8- and 16-way versions), and a horizontal plate for mounting 24-way backplanes in 19-inch racks.

WEATHERPROOF ENCLOSURES

Weatherproof enclosures are available for applications where separate safe-area enclosures are required for backplanes with modules. Available to accommodate one 4-way or one 8-way backplane, they are manufactured from GRP giving protection against dust and water to IEC529:IP65. The lids are made from transparent high-strength polycarbonate so that LEDs, switches, etc, on the tops of the modules are easy to see.

DCS VENDORS/SYSTEMS SUPPORTED:

ABB Automation

S100, INFI90

Rockwell Automation

Bently-Nevada

Foxboro

IA FBM & FBM2xx

Siemens-Moore

APACS, Quadlog

Honeywell

TDC, Plantscape

Honeywell-SMS

FSC

ICS

Triplex, Plantguard

Triconex

Tricon, Trident

Yokogawa

Centum XL, µXL, CS1000, CS3000, R3

Yokogawa Industrial Safety Systems

ProSafe & ProSafe RS



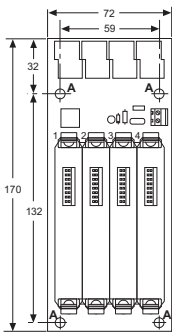
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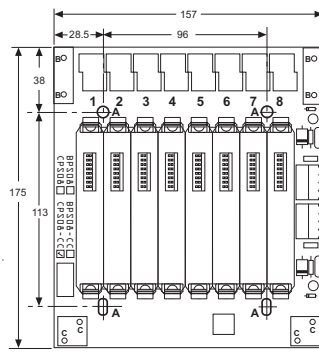
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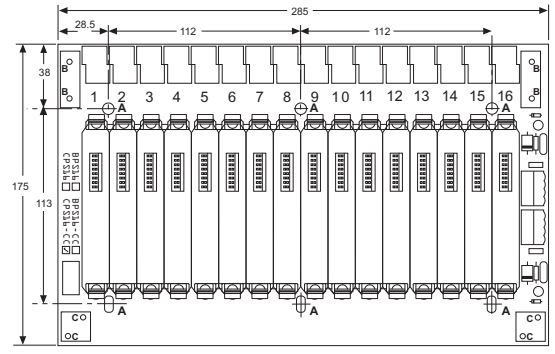
CPS BACKPLANE dimensions (mm)



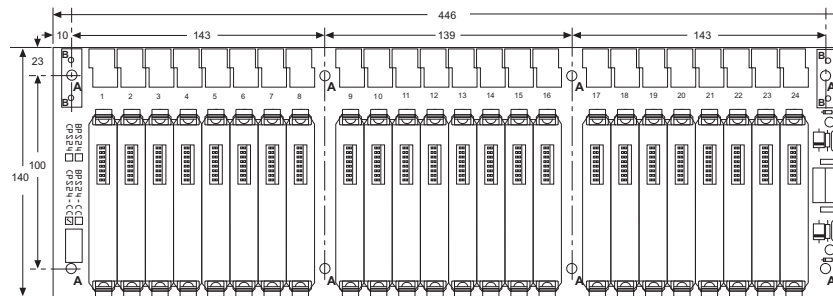
CPS04



CPS08



CPS16



CPS24

Power requirements, Vs

21V dc to 35V dc through plug-in connectors

Safe-area connections

CPS: 2.5mm² screw-clamp terminals – 6 positions per module

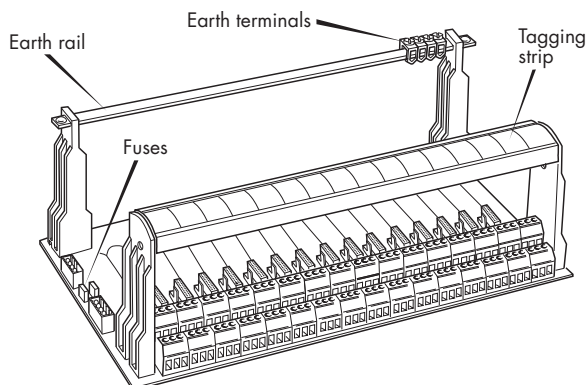
Power sense

Through separate plug-in crimp connector

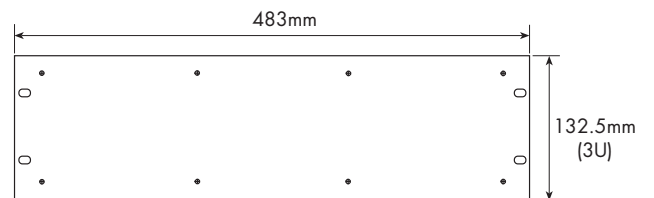
Weight (without modules or accessories)

CPS04:	96g
CPS08:	225g
CPS16:	419g
CPS24:	592g

BACKPLANE ACCESSORIES



HMP24 MOUNTING PLATE FOR 19 INCH RACK



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ORDERING INFORMATION



MTL4500/5500 Series isolators

Specify part number: eg, **MTL4511**, **MTL5575**

Individual isolator identification

TH5000 Tag holder (Pack of 20)

Connectors - MTL4500 & MTL5500

HAZ1-3 Hazardous-area plug, terminals 1, 2 and 3

HAZ4-6 Hazardous-area plug, terminals 4, 5 and 6

HAZ-CJC Hazardous-area plug, terminals 1 and 3 with cold-junction sensor

HAZ-CJC2 Hazardous-area plug, terminals 4 and 6 with cold-junction sensor

SAF1-3 Safe-area plug, terminals 1, 2 and 3

SAF4-6 Safe-area plug, terminals 4, 5 and 6

Connectors - MTL5500 only

SAF7-9 Safe-area plug, terminals 7, 8 and 9

SAF10-12 Safe-area plug, terminals 10, 11 and 12

PWR5000 Power connector, terminals 13 and 14

PowerBus - MTL5500 only

PB-8T Powerbus Kit for up to 8 isolators

PB-16T Powerbus Kit for up to 16 isolators

PB-24T Powerbus Kit for up to 24 isolators

PB-32T Powerbus Kit for up to 32 isolators

MTL5500 Mounting accessories

THR2 1m length of DIN rail to EN 50022; BS 5584; DIN 46277

MS010 DIN-rail module spacer, 10mm (pack of 5)

MTL5500 Earth-rail and tag strip accessories

IMB57 Insulating mounting block

ERB57S Earth-rail bracket, straight

ERL7 Earth-rail, 1m length

ETM7 Earth terminal, bag of 50

TAG57 Tagging strip, 1m length

TGL57 Tagging strip labels, set of 10 x 0.5m



MTL5500 Enclosures

DX070 Enclosure for MTL5500 x 4

DX170 Enclosure for MTL5500 x 10

DX430 Enclosure for MTL5500 x 26



MTL4500 Standard Backplanes

CPS04 4-way backplane screw-clamp connector

CPS08 8-way backplane screw-clamp connector

CPS16 16-way backplane screw-clamp connector

CPS24 24-way backplane screw-clamp connector

MTL4500 Custom Backplanes

Contact MTL for options and advice



MTL4500 Backplane mounting accessories

DMK01 DIN-rail mounting kit, T- or G-section (pack of 40)
8-way backplanes require 4,
16-way backplanes require 6

SMS01 Surface mounting kit (pack of 40)
4- and 8-way backplanes require 4,
16-way backplanes require 6,
24-way backplanes require 8

HMP24 Horizontal mounting plate and screws for 19-inch rack mounting
24-way backplanes only

BMK08 Mounting kit for one 4- or 8-way backplane

BMK16 Mounting kit for one 16-way backplane

MTL4500 Backplane accessories

ERK08 Earth rail kit for CPS08 backplane

ERK16 Earth rail kit for CPS16 backplane

TSK08 Tagging strip kit for CPS08 backplane

TSK16 Tagging strip kit for CPS16 backplane

TSK24 Tagging strip kit for CPS24 backplane

FUS1.0ATE5 Fuse kit for 4- and 8-way backplanes, (10 per pack)

FUS2.0ATE5 Fuse kit for 16-way backplane, (10 per pack)

FUS4.0ATE5 Fuse kit for 24-way backplanes, (10 per pack)

MCK45 MTL4000 backplane conversion kit (16 clip pairs per pack)

SCK45 Module 4-clip strips (10 strips + 40 rivets per pack)

MPL01 Module position label (blank) (50 per pack)



Literature

INM5500 MTL5500 Series instruction manual

INM4500 MTL4500 Series instruction manual

Configurator and software

PCL45USB Configurator, PC interface and software

PCS45 PC software

Please go to our website at www.mtl-inst.com for the latest information regarding safety approvals, certificates and entity parameters.

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