January 2017 EPS 901-123 Rev R

CROUSE-HINDS SERIES

MTL IOP range

Cost effective surge protection for digital and analogue I/O

- IOP32D and IOP-AC each provide surge protection for two loops or 4 wires
- IOP32 provides surge protection for one loop or 2 wires
- IOP HC32 provides surge protection for one high current loop, up to 5A
- IOP-AC provides surge protections for two 120V or 240V AC loops
- Hybrid protection circuit 20kA rated surge current
- ATEX & FM certification for IOP32 and IOP32D
- Space saving width per loop: IOP32D & IOP-AC 6mm IOP32 & IOP HC32 12mm

The IOP was conceived to offer protection for both digital I/O and analogue I/O. The IOP range is the most economical surge protection solution for I/O offered by Eaton. High packing-density, high protection level and low price combine to make the IOP a value solution.

The IOP range is cost-effective and still retains a hybrid circuit comprising 20kA gas discharge tubes and solid state components. This impressive product is designed to exhibit exceptionally low line resistance and therefore adds only a tiny voltage drop to the circuit.

Removable terminals are used on the IOP range for ease of installation, maintenance and for providing a loop disconnect by simply unplugging the terminals from the side of the module. Wire entry is angled to assist wiring within limited space enclosures.

The IOP HC32 is ideal for applications requiring up to 5A of load current. Protection of circuits to drive solenoids, relays, and actuators is now possible. The IOP AC is ideal for 120V and 240V AC circuit loops

Fully automatic in operation, IOP devices react immediately to make sure that equipment is never exposed to damaging surges between lines or the lines and ground. Reacting instantaneously, the IOP redirects surges safely to ground and then resets automatically.

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The versatile design minimizes space. The IOP32D and IOP-AC models have protection for two loops in a package that is only 12mm wide. The effective space taken, per loop, is therefore only 6mm. For customers desiring single channel integrity, the IOP32 fits this need exactly.

One simple manual operation clamps modules securely onto DIN rail, which automatically provides the essential high-integrity ground connection.

A 10 Year 'No Fuss' warranty is available, as standard, for the IOP, so if a correctly connected device should fail for any reason, simply return it for a free replacement.

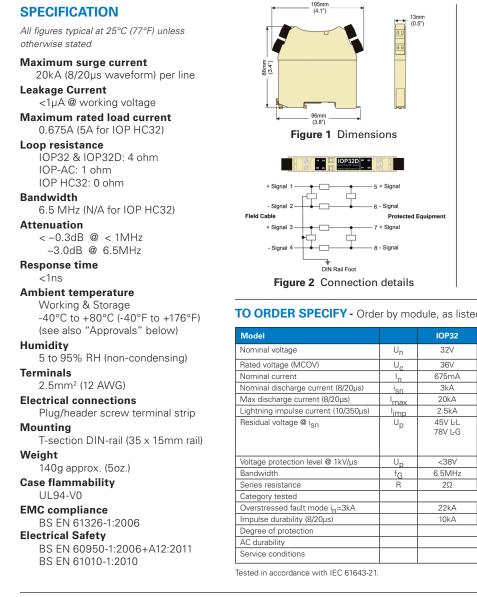
'Top-hat' (T-section) DIN rail is generally suitable for mounting IOP modules although for adverse environments, a specially-plated version is available from Eaton's MTL Surge Technologies.



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HAZARDOUS AREA APPROVALS

Country (Authority)	Standard	Certificate/ File No.	Approved for	Product
Europe (Bassefa)	IEC 60079-0:2011 EN 60079-11:2012	Baseefa12ATEX0066X	Ex ia IICT4 Ga	IOP32D
Europe (Bassefa)	IEC 60079-0:2011 EN 60079-11:2012	Baseefa06ATEX0036X	Ex ia IICT4 Ga	IOP32
EU (Eaton)	EN 60079-14:2009 EN 60069-15:2010	MTL06ATEX0132X	Ex n IIC T4 Ga	IOP32D IOP32D
USA (FM)	Class 3600 (1998), Class 3610 (2010), Class 3611 (1999), Class 3615 (1989), Class 3810 incl. Supp 1 (1995-07 (1989-03), ANSI/ISA 60079-0 (2009), ANSI/ISA 60079-0 (2009), ISA-S12.0.01 (1999)	3011208	IS/I/1/A-D, I/0/AEx ia IIC, I/0/AEx ia IIB, NI//2/A-D NI//2/IIC	IOP32 IOP32D
Canada (FM)	C22.2 No. 213, 142, 94, 157, 30 ANSI/NEMA 250 CAN/CSA-E79-0, CAN/CSA-E79-11	3025374C	IS/I/1/A-D, I/0/AEx ia IIC, I/0/AEx ia IIB, NI/I/2/A-D NI/I/2/IIC	IOP32 IOP32D



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ASIA-PACIFIC: +65 6 645 9888 sales.mtlsing@eaton.com The given data is only intended as a product description and should not be regarded as a legal warranty of properties or guarantee. In the interest of further technical developments, we reserve the right to make design changes.

	+ Signal - Signal Protected I + Signal - Signal		fot over one edge of the DIN rail	DIN rail					
ER SPECIFY - Order by module, as listed in the specification table below.									
		IOP32	IOP32D	IOP HC32	IOP-AC				
tage	Un	32V	32V	32V	240V				
je (MCOV)	Uc	36V	36V	36V	275V				
rent	l _n	675mA	675mA	5A	1.75A				
charge current (8/20µs)	i _{sn}	3kA	3kA	ЗkА	3kA				

Locate the DIN rail foot over one edge of the DIN rail

20kA

2.5kA

45V L-L

90V L-G

<38V

6.5MHz

2Ω

22kA

10kA

1Arms, 5T

A2, B2, C1, C2, C3, D1

IP20

80kPa- 160kPa 5%- 95% RH

20kA

2.5kA

65VL-L

(250V

sparkover) 65V L-G

<38V

N/A

0Ω

22kA

10kA

20kA

2.5kA

800V L-L

800V L-G

500V

N/A

0.5Ω

22kA

10kA

N/A