

## MTL 3145 (4 Pole) Class II

Cost effective surge protection to cope with secondary currents as described in IEC 61312

- Space saving design, DIN-rail mounting
- Full range of AC mains power applications
- Coordinated surge protection to IEC 61312; rated according to IEC 61643
- Single module for three phase applications on TN-C-S systems



The MA3100 Series offers cost effective, DIN-rail mounted, surge protection for applications described by IEC 61312. The Class II range of surge arrestors fit in to the cascade philosophy along side Class I & Class III devices.

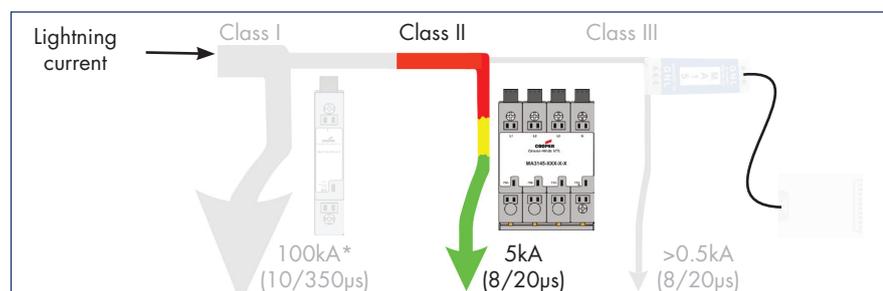
All modules are DIN-rail mounted for ease of installation and have very small footprints therefore minimising the space required. Each device is simply connected in parallel with the power.

The Class II surge current arrester is designed to work as both a standalone device and in cascade coordination with Class I lightning arrester. A 4 pole width module withstands surge currents up to 40,000 amps with 8/20 $\mu$ s waveform. The Class II arresters offer protection for three phase systems type TN-C-S. The 4 pole Class II arresters have remote monitoring capabilities as a standard feature. Voltage free, normally open, normally closed contacts can be used for a variety of monitoring tasks.

### Coordinated IEC 61643 Class I, Class II and Class III surge protection

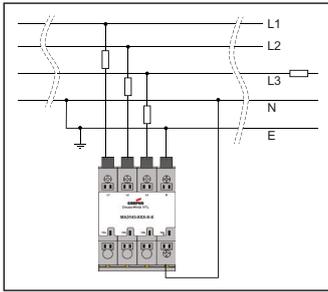
The MA3100 range offers cost effective surge protection for applications described by IEC 61312, where the AC mains supply can carry a partial share of the lightning surge current. Class I surge protectors (rated according to IEC 61643) are designed to carry up to 50kA (10/350 $\mu$ s). Class II surge protectors are characterized by their ability to protect against 8/20 $\mu$ s impulses up to 40kA, possibly resulting from the operation of a Class I device. Finally Class III devices are used to protect individual pieces of equipment. An excellent example of a class III device is the MA15.

#### Cascade Effect Example

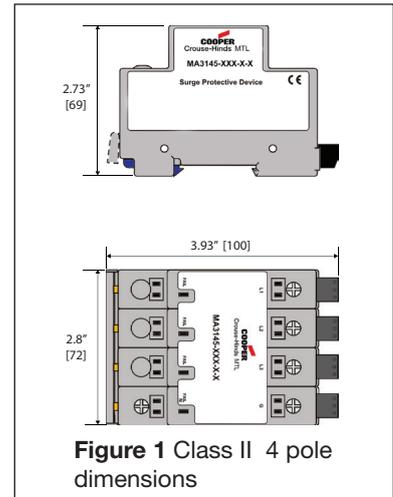
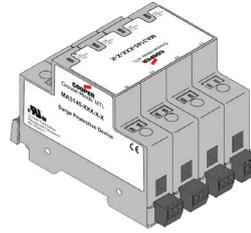


\*Total over a 3 phase system

**TN-C-S SYSTEM**



MA3145-230-4-R



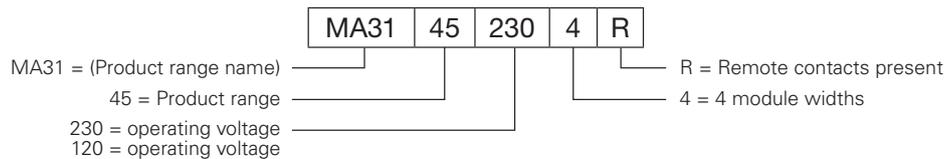
**Figure 1** Class II 4 pole dimensions

**CLASS II SURGE PROTECTION DEVICE**

Technical data	MA3145-230-4-R	120-4-R
Dimensions	See Figure 1	See Figure 1
IEC category/VDE requirement class:	II/C	II/C
Nominal voltage $U_n$ :	230/400V AC	120/208V AC
Max. continuous operating voltage $U_c$ :	320V AC	150V AC
Lightning test current $I_{imp}$ (10/350 $\mu$ s)	peak value/charge:	15kA
	Q charge:	7.5As
Leakage current to PE at $U_n$ :	$\leq 0.3$ mA	$\leq 0.3$ mA
Nominal discharge surge current $I_n$ (8/20 $\mu$ s):	20kA	20kA
Max. discharge surge current $I_{max}$ (8/20 $\mu$ s):	40kA	40kA
Protection level $U_p$ :	2.8kV	1.2kV
Residual voltage at 5kA:	1040V	570V
Response time $t_a$ :	$\leq 25$ ns	$\leq 25$ ns
Max. required backup fuse:	N/R	N/R
Short-circuit current rating (SCCR)	200kA AIC	200kA AIC
Remote indication contact: max. permitted operating voltage $U_{max}$	125V AC/110V DC	125V AC/110V DC
	max. permitted operating current $I_{max}$ AC or DC	3A
Temperature range:	-40°C to +80°C	-40°C to +80°C
Protection type according to IEC 60 529/EN 60 529:	IP20	IP20
Flammability class according to UL94:	VO	VO
Stripping length: Biconnect terminal blocks/remote indicator contact:	14.5/7mm	14.5/7mm
Torque: Biconnect terminal blocks/remote indicator contact:	4.5Nm/0.25Nm	4.5Nm/0.25Nm
Weight (typ.):	290g	290g

Approvals: Test standards: UL1449 3rd Edition; IEC 61643-11:2011-03

**To order Class I surge protection devices, specify -**



**Eaton Electric Limited,**  
Great Marlings, Butterfield, Luton  
Beds, LU2 8DL, UK.  
Tel: + 44 (0)1582 723633 Fax: + 44 (0)1582 422283  
E-mail: [mtlenquiry@eaton.com](mailto:mtlenquiry@eaton.com)  
[www.mtl-inst.com](http://www.mtl-inst.com)

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**EUROPE (EMEA):**  
+44 (0)1582 723633  
[mtlenquiry@eaton.com](mailto:mtlenquiry@eaton.com)

**THE AMERICAS:**  
+1 800 835 7075  
[mtl-us-info@eaton.com](mailto:mtl-us-info@eaton.com)

**ASIA-PACIFIC:**  
+65 6 645 9888  
[sales.mtlsing@eaton.com](mailto:sales.mtlsing@eaton.com)

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