technical datasheet

MA3160 (1 Pole) Class I

Cost effective surge protection designed 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
- Class I single pole I_{peak} of 50kA (10/350µs)
- Multiple pole I_{peak} of >100kA (10/350µs)

The MA3100 Series offers cost effective, DIN rail mounted, surge protection for applications described by IEC61312 The Class I surge arrestor fits into the cascade philosophy alongside Class II & Class III devices.

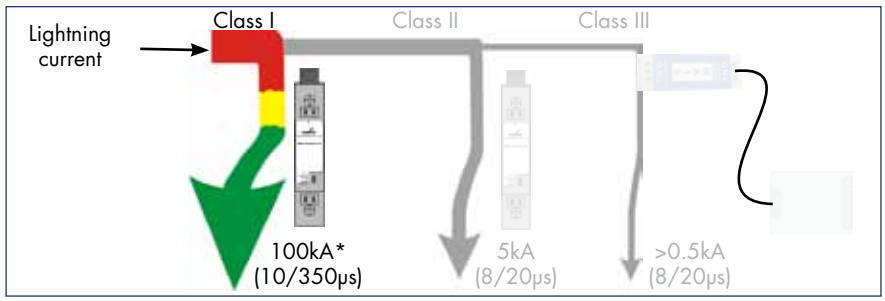
All modules are DIN rail mounted for ease of installation and have very small footprints therefore minimising the space required. Each device is simply connected in parallel with the power.

The Class I surge current arrester is designed for location at the service entrance in the transition between Zone 0A and 0B as per IEC61312 coordinated surge protection. A single width module withstands surge currents up to 50,000 amps with a 10/350µs waveform. The single width module gives excellent flexibility when applying to the different supply configurations worldwide.

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 (10/350µs). Class II surge protectors are characterized by their ability to protect against 8/20µs impulses up to 50kA, 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.

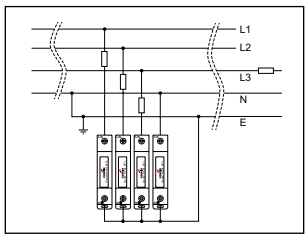
Cascade Effect Example

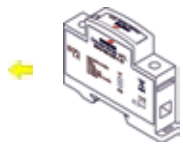


*Total over a 3 phase system

COOPER Crouse-Hinds

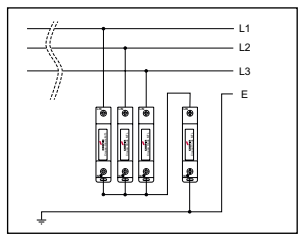
TN-C-S SYSTEM





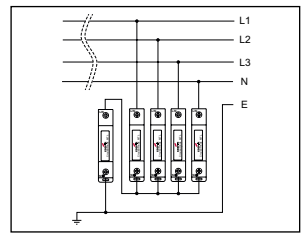
MA3160-230-1-0

VARIATIONS FOR IT



MA3160-230-1-0

VARIATIONS FOR TT



MA3160-230-1-0

CLASS I SURGE PROTECTION DEVICE

Technical data	**MA3160**	**230-1-0**
Dimensions:		See Figure 1
IEC category/VDE requirement class:		I/B
Max. continuous operating voltage U_c:		250V 50/60Hz
Leakage current:		<1µA
Lightning test current I_{imp} (10/350µs)	peak value/charge:	50kA/30As
	multi-pole:	>100kA/>50As
	specific energy:	1000kJ/W
Protection level U_p:		≤4kV
Response time t_a:		≤100ns
Quenching short circuit current I_f		1.5kA/250V
Max. required backup fuse:		125A gL-type
Temperature range:		-40°C to +80°C
Perm. relative air humidity:		≤95%
Protection type according to IEC 60 529/EN 60 529:		IP20
Flammability class according to UL94:		VO
Maximum wire size:		25mm^2
Torque:		4.5Nm
Weight (typ.):		115g
Approvals: CE		
Test standards:		IEC 61643-1:1998-02 E DIN VDE 0675 PART 6:1989-11/A2:1196-10

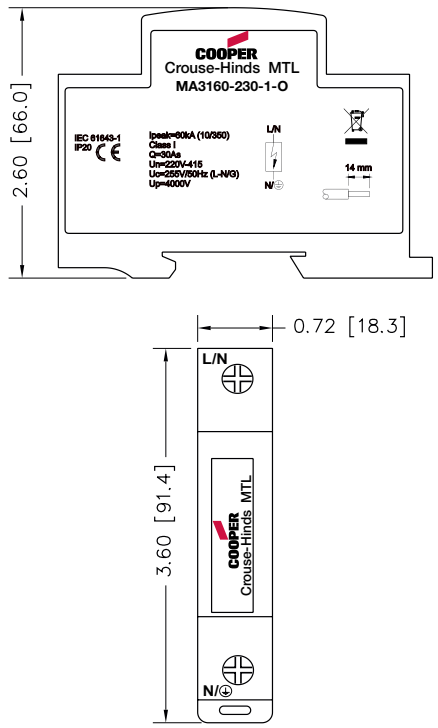


Figure 1 Class I dimensions

TO ORDER CLASS I SURGE PROTECTION DEVICES, SPECIFY -

MA31	60	230	1	0

0 = Remote contacts not present

1 = 1 module width

230 = operating voltage

60 = Product series

MA31 = (Product range name)

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.

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