



technical datasheet

## MA3350 DC

for integration into OEM applications or DC cabinets

- 12kA (10/350 $\mu$ s) per pole Type I
- Only 38mm wide
- Highest fault current clearing, 100kA without backup fuses
- Thermal and short-circuit fusing
- Easy DIN-rail mounting
- Perfect for OEM or cabinet applications and photovoltaic (PV) applications



The **MA3350DC** is designed for use where high surge current protection is needed along with a small footprint. The device is ideal for use in solar power applications by protecting the DC/AC inverter from damage resulting from nearby lightning activity. Often located in the combiner enclosure, the MA3350DC's small profile takes up less space than other solutions. With no restriction on load-current, the MA3350DC is a versatile device designed for a multitude of applications requiring high surge-capacity in a compact casing.

**Each module is rated to a full 40kA** (8/20 $\mu$ s) and 12kA (10/350 $\mu$ s) pulse and provides protection in all types of exposed locations and environments. The high surge-capacity is provided by voltage limiting elements which ensure accurate and reliable performance for the lifetime of the product. Fully automatic in

operation the MA3350DC reacts immediately, clamping voltage surges without causing undue leakage losses in normal operation.

**The MA3350DC can be specified** with either an LED (2R-version) to monitor operation or alternatively, with a remote contact (2C-version) to signal operation faults. During normal powered operation the LED remains lit but will extinguish should a fault develop. The 2C variant provides signalling via remote contacts. The contacts open to signal normal operation, but close if a fault should occur, irrespective of whether the module is powered or not.

**All modules are DIN-rail mounted** (35mm top hat or asymmetric rail) and supplied with cables for ease of installation. The MA3350DC is a class-leading 38mm in width and offers complete protection for a 2-wire DC system.

**In addition to industry-leading surge-current ratings** the MA3350 also provides industry-leading fault-current ratings. The MA3350DC can be used on power systems with up to 100k AIC prospective fault-current ratings. This removes the need for cumbersome and costly additional fuse protection.

**The products come with an unrivalled 10-year, "no fuss" warranty** giving the user total confidence in the range of products. The MA3350DC exceeds the demands of IEC61643-11 and can be classified as a combined Class I & Class II device.

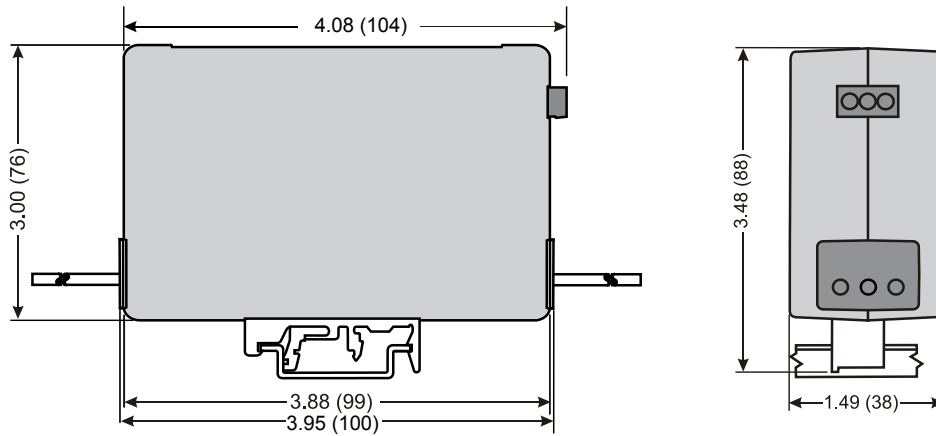
901-167 Rev H 010713

 **COOPER** Crouse-Hinds

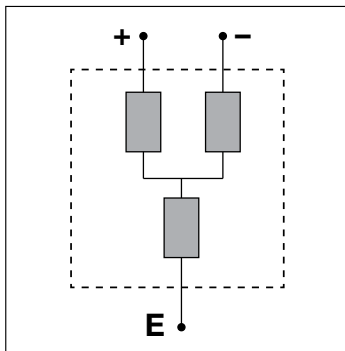
[www.mtl-inst.com](http://www.mtl-inst.com)

MA3350 DC models	MA3350DC-500-2R MA3350DC-500-2C	MA3350DC-600-2R MA3350DC-600-2C	MA3350DC-1000-2R MA3350DC-1000-2C
Protected wires	+, -, E	+, -, E	+, -, E
Typical application	DC Power	DC Power	DC Power
IEC category	I/II	I/II	I/II
Nominal voltage $U_n$	500V DC	600V DC	1000V DC
Max. Continuous voltage $U_c$ (DC)	575V DC	675V DC	1200V DC
Leakage current to PE at $U_n$	<0.3mA	<0.3mA	<0.3mA
Lightning test current $I_{imp}$ (10/350 $\mu$ S)	12kA	12kA	12kA
Max discharge surge current $I_{max}$ (8/20) per mode	40kA	40kA	40kA
Nominal discharge surge current $I_n$ (8/20) per mode	10kA	10kA	10kA
Protection level at 3kA + to - PE	<1.2kV	<1.5kV	<3.0kV
Protection level $U_p$ at $I_n$ (10kA)	<1.7kV	<2.0kV	<4.0kV
Response time $t_a$	<5ns	<5ns	<5ns
Short circuit withstand	100k AIC	100k AIC	100k AIC
Temperature range	-40°C to 80°C	-40°C to 80°C	-40°C to 80°C
Protection type (IEC 60529/EN60529)	IP20	IP20	IP20
LED Failure Indication	MA3350DC-500-2R	MA3350DC-600-2R	MA3350DC-1000-2R
Remote contact failure indication	MA3350DC-500-2C NO contacts, 0.6W DC@50mA DC max	MA3350DC-600-2C NO contacts, 0.6W DC@50mA DC max	MA3350DC-1000-2C NO contacts, 0.6W DC@50mA DC max
Duty cycle	20kA — >4,000 10kA — >6,000	20kA — >4,000 10kA — >6,000	20kA — >4,000 10kA — >6,000
Long duration (10/1000 $\mu$ s)	3,600A	3,600A	3,600A
Lead cross section	3mm <sup>2</sup> (#12 AWG)	3mm <sup>2</sup> (#12 AWG)	3mm <sup>2</sup> (#12 AWG)
Lead length (standard)	20 ± 1" (508 ± 2.5mm)		
Extended lead length - 24"(610mm) - Order code:	MA3350DC-500-2RL MA3350DC-500-2CL	MA3350DC-600-2RL MA3350DC-600-2CL	MA3350DC-1KV-2RL MA3350DC-1KV-2CL

## DIMENSIONS



## SURGE PROTECTION



MA3350 DC basic protection circuit



This symbol represents the individual high surge-capacity protection devices with fuses capable of interrupting high (100k AIC) prospective fault currents combined with state-of-the-art status monitoring electronics.

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.



EUROPE (EMEA): +44 (0)1582 723633  
enquiry@mtl-inst.com

THE AMERICAS: +1 800 835 7075  
csinfo@mtl-inst.com

ASIA-PACIFIC: +65 6 645 9888  
sales.mtlsing@cooperindustries.com

901-167 Rev H 010713