

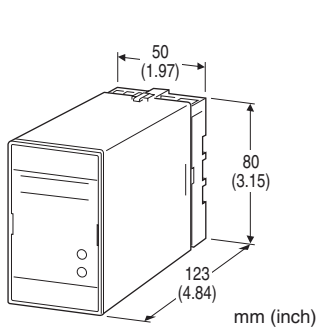
Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE

(5 A; high discharge current capacity; life monitor)

Functions & Features

- Designed specifically for AC power supplies up to 5 amps
- Discharge current capacity 10000 A
- Life monitor function helps you to decide when you should replace the M-RESTER; reduces maintenance and prevents downtime
- LED display and alarm contact output indicate the degradation and life span of the surge protection circuits
- No power supply interruption even when the unit is degraded or at the end of its life
- CE marking



MODEL: MAA-[1]

ORDERING INFORMATION

- Code number: MAA-[1]
Specify a code from below for [1].
(e.g. MAA-100)

[1] OPERATIONAL VOLTAGE

- 100:** 100 V / 110 V / 120 V AC
200: 200 V / 220 V / 240 V AC

GENERAL SPECIFICATIONS

- Construction:** Plug-in
Connection: M3.5 screw terminals (torque 0.8 N·m)
Screw terminal: Chromated steel
Housing material: Flame-resistant resin (black)
Alarm indicators
Power: The green LED turns on while the circuit is alive and the internal fuse is not blown; and is off when the power supply is removed or the fuse is blown.
Alarm: Tricolor LED (green/amber/red)

- Remains off when the power supply is first turned on.
 - Green: The unit has received one or more surges.
 - Amber: Replacement is recommended.
 - Red: The life span has ended.
- Alarm contact:** The N.C. contact is on when the life span of the discharge elements has ended, when the voltage limiter has degraded, and/or when the power supply is removed.

Rating: 125 V AC @ 0.5 A ($\cos \phi = 1$)
30 V DC @ 1 A (resistive load)

Maximum switching voltage: 125 V AC or 110 V DC

Maximum switching power: 62.5 VA or 30 W

Minimum load: 5 V DC @ 1 mA

INSTALLATION

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 500 g (1.1 lbs)

PERFORMANCE

Operational voltage range:

90 - 132 V AC (MAA-100)

180 - 264 V AC (MAA-200)

50/60 Hz, approx. 2 VA

Discharge voltage (peak voltage)

Line to line: 190 V min. (MAA-100)

410 V min. (MAA-200)

Line to ground: 400 V min.

Maximum surge voltage

Line to line: 380 V max. (MAA-100)

700V max. (MAA-200)

Line to ground: 800 V max.

Withstand voltage of protected equipment between the circuit and the metal housing must be 1000 V AC or more.

Response time: $\leq 0.01 \mu\text{sec.}$

Leakage current

Line to line: $\leq 26\text{mA}$ at 100 V AC (MAA-100)

$\leq 13 \text{ mA}$ at 200 V AC (MAA-200)

Line to ground: $\leq 0.1 \text{ mA}$ at 300 V AC

Discharge current capacity: 10000 A (8/ 20 $\mu\text{sec.}$)

Maximum load current: 5 A

Internal series resistance: $\leq 0.5 \Omega$ including return

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

Low Voltage Directive (2006/95/EC)

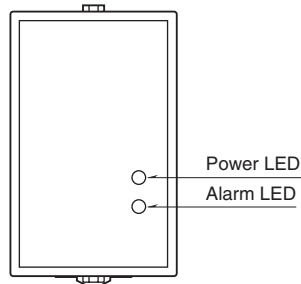
EN 61010-1: 2001

Installation Category II

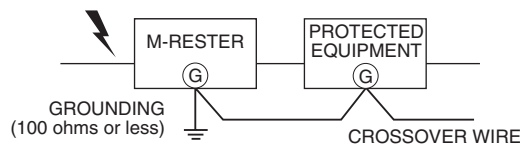


Pollution Degree 2
 Alarm contact to power: Reinforced insulation (300 V)

EXTERNAL VIEW

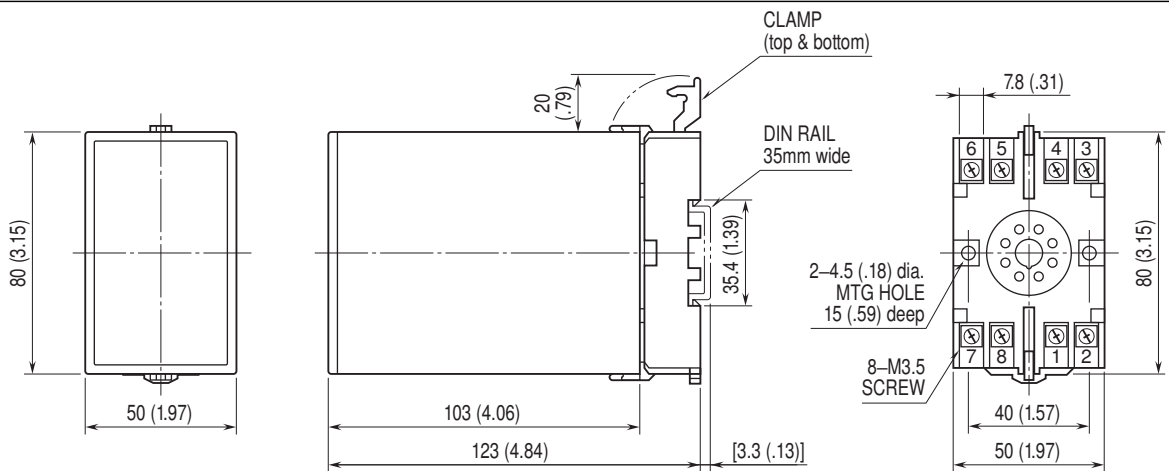


GROUNDING



A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.
 If the protected equipment has no ground terminal, ground the M-RESTER only.

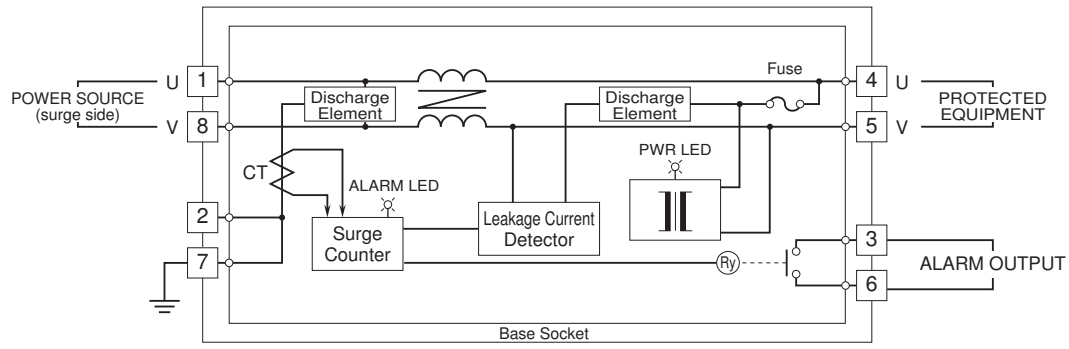
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



• When mounting, no extra space is needed between units.



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



Specifications are subject to change without notice.

