

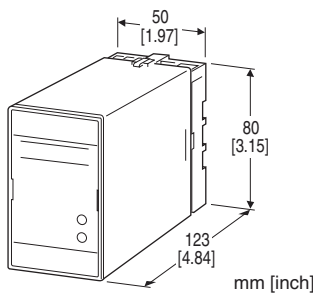
Lightning Surge Protectors for Electronics Equipment M-RESTER

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



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 output: 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 ($\cos \theta = 1$)

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 lb)

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 μsec .)

Maximum load current: 5 A

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

STANDARDS & APPROVALS

EU conformity:

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

Low Voltage Directive

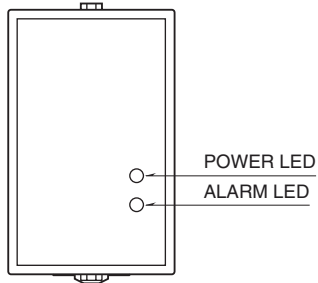
EN 61010-1

Measurement Category II (alarm output)

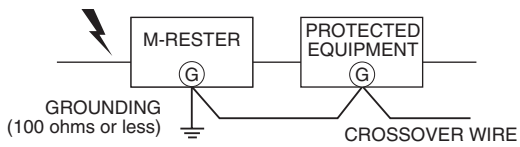
Installation Category II (power)

Pollution degree 2
 Alarm output to power: Reinforced insulation (300 V)
 RoHS Directive

EXTERNAL VIEW

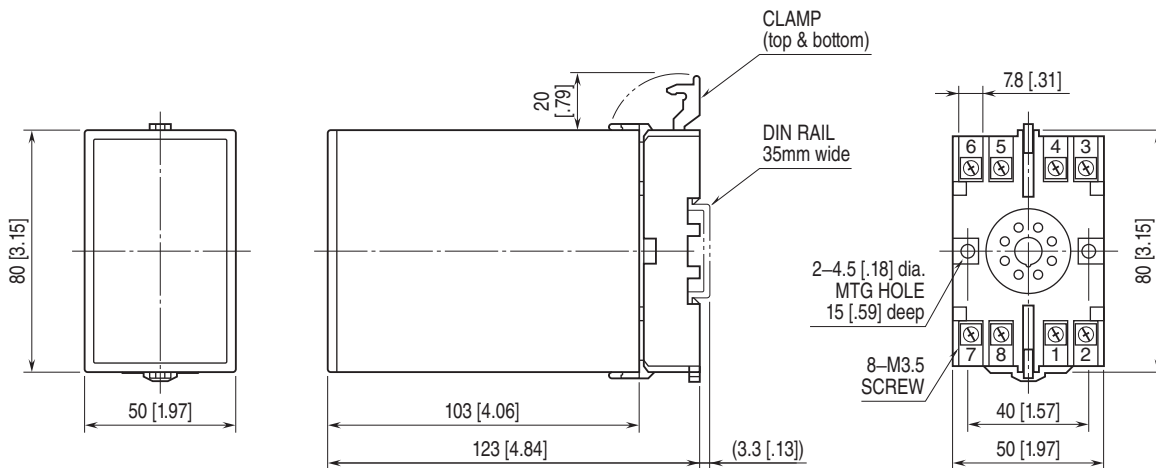


GROUNDING



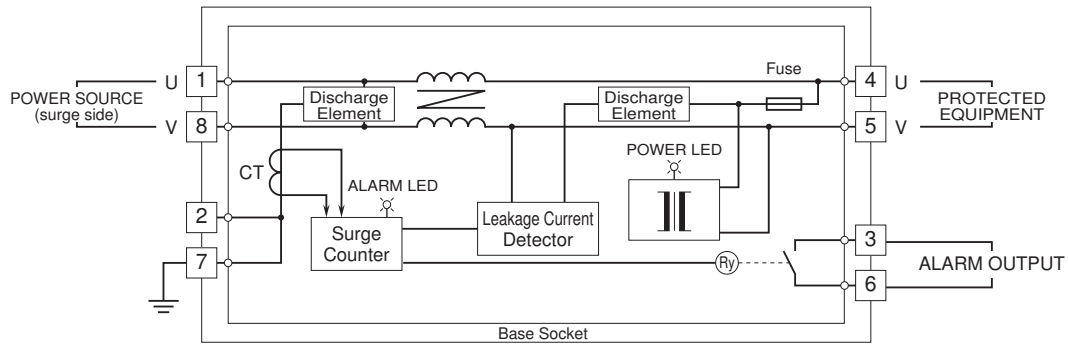
A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.
 If the protected equipment has no ground terminal, ground the M-RESTER only.

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.