Lightning Surge Protectors for Electronics Equipment *M-RESTER*

LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE
(5A; high discharge current capacity; life monitor)

MODEL **MAA**

MODEL & SUFFIX CODE SELECTION

MAA–❑

MODEL
LINE VOLTAGE
100 : 100V/110V/120V AC, 5A
200 : 200V/220V/240V AC, 5A

ORDERING INFORMATION

Specify code number. (e.g. MAA-100)

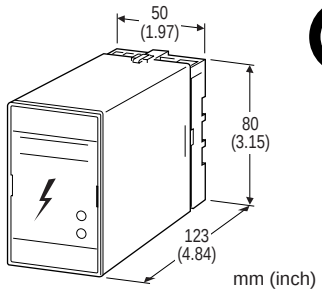
GENERAL SPECIFICATIONS

Construction: Plug-in
Connection: M3.5 screw terminals
(chromated steel; torque ≤0.8 N·m)
Housing material: Flame-resistant resin (black)
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: 125V AC @0.5A (cosø=1)
30V DC @1A (resistive load)
Maximum switching voltage: 125V AC or 110V DC
Maximum switching power: 62.5VA or 30W
Minimum load: 5V DC @1mA
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.

Degradation judged: when the leakage current at the voltage limiter exceed approx. 3mA; or when the fuse is blown.
Life time judged: when the number of discharges of the discharge element reaches the expected life span.

INSTALLATION

Power input: Operational voltage range for MAA-100: 90 – 132V AC, MAA-200: 180 – 264V AC, 50/60 Hz, approx. 2VA
Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90% RH (non-condensing)



CE

Functions & Features

- Designed specifically for AC power supplies up to 5 amps
- Discharge current capacity 10000A
- 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

Mounting: Surface or DIN rail
Dimensions: W50×H80×D123 mm (1.97"×3.15"×4.84")
Weight: 500 g (1.10 lbs)

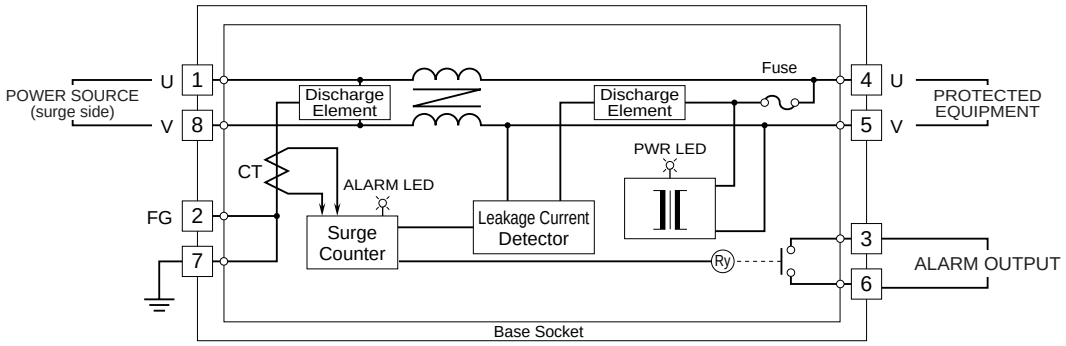
PERFORMANCE

Discharge voltage (peak-to-peak)
Between lines: 190V min. (MAA-100)
410V min. (MAA-200)
Line to ground: 400V min.
Maximum surge voltage*
Between lines: 380V max. (MAA-100)
700V max. (MAA-200)
Line to ground: 800V max.
Withstand voltage of protected equipment between the circuit and the metal housing must be 1000V AC or more.
Leakage current
Between lines: ≤26mA at 100V AC (MAA-100)
≤13mA at 200V AC (MAA-200)
Line to ground: ≤0.1mA at 300V AC
Response time: ≤0.01 microseconds
Discharge current capacity: 10000A (8 / 20 μsec.)
Maximum load current: 5A
Internal series resistance: ≤0.5Ω including return
*The maximum voltage that could pass through M-RESTER. Protected equipment must be able to withstand this voltage for very short time period.

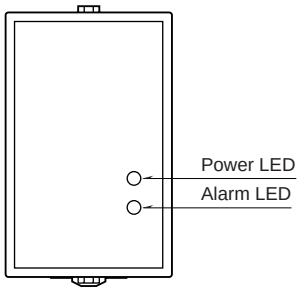
STANDARDS & APPROVALS

CE conformity: EMC Directive (89/336/EEC)
EMI EN50081-2
EMS EN50082-2 (EN61000-6-2)
Low Voltage Directive (73/23/EEC)
Installation category II; Pollution degree 2
Max. operating voltage 300V
Alarm contact to power – Reinforced insulation

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM

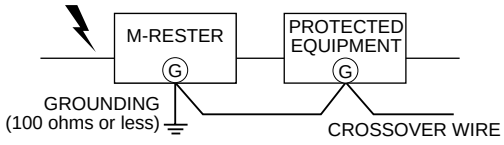


FRONT PANEL CONFIGURATION

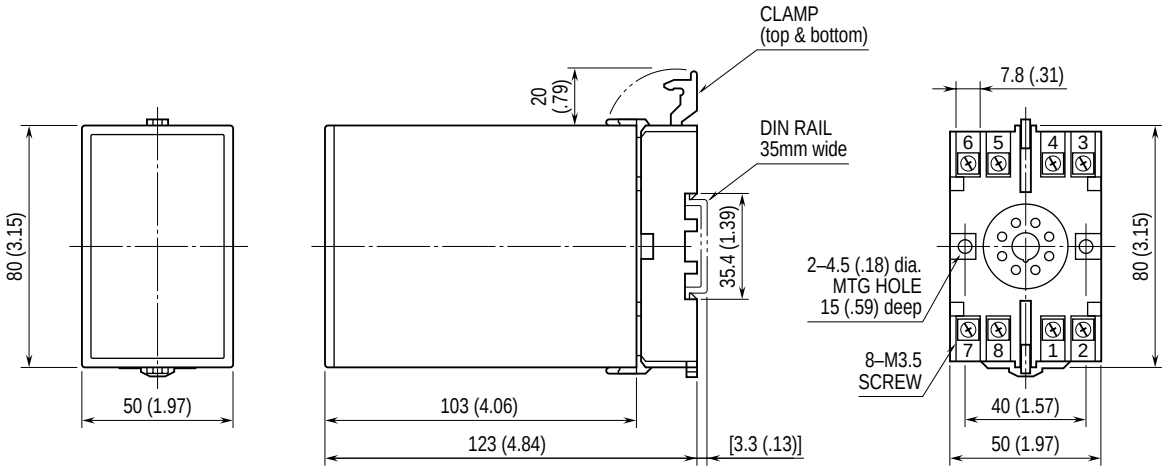


GROUNDING

A crossover wire between the M-RESTER unit's ground and the equipment's ground or metallic housing is required for protection.



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT mm (inch)



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

Specifications subject to change without notice.