

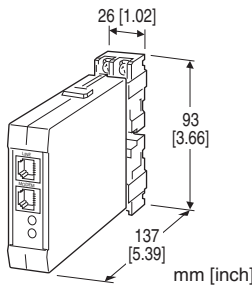
Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR ANALOG TELECOM LINE USE

(life monitor)

Functions & Features

- Designed specifically to protect telecommunication equipment from lightning surges entering through telecommunication line network
- Absorbing surges only without affecting instrumentation signal
- 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



MODEL: MDA-TL-[1]

ORDERING INFORMATION

- Code number: MDA-TL-[1]
- Specify a code from below for [1].
(e.g. MDA-TL-M)

[1] POWER INPUT

AC Power

M: 85 - 264 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

DC Power

R2: 11 - 27 V DC

(Operational voltage range 11 - 27 V, ripple 10 %p-p max.)

P: 110 V DC

(Operational voltage range 85 - 150 V, ripple 10 %p-p max.)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection

Telecom line: Modular jack or M3.5 screw terminals

(torque 0.8 N·m);

Line screw terminal connection must be handled by qualified personnel.

Ground: M3.5 screw terminals (torque 0.8 N·m)

Modular jack cord: 6-pole, 2-core

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Alarm indicators

Power: The green LED turns on while the power is supplied.

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.

Life time judged: When the number of discharges of the discharge element reaches the expected life span.

Alarm contact: The N.C. contact is on when the life span of the discharge elements has ended and/or when the power supply is removed.

Rating: 125 V AC @ 0.5 A (cos ϕ = 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

Power consumption

- **AC:** Approx. 2 VA at 100 V
Approx. 3 VA at 200 V
Approx. 4 VA at 240 V
- **DC:** Approx. 1.5 W

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

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

Mounting: Surface or DIN rail; Standard Rack Mounting
Frame BX-16H available

Weight: 150 g (0.33 lb)

PERFORMANCE

Discharge voltage (peak voltage)

Line to line: ± 190 V min.

Line to ground: ± 180 V min.

Maximum surge voltage

Line to line: ± 500 V max.

Line to ground: ± 900 V max.

(The maximum voltage that could pass through M-RESTER. Protected equipment must be able to withstand this voltage for very short time period.)

Response time: ≤ 0.01 μ sec.

Leakage current:

Line to line: ≤ 100 μ A @ ± 160 V DC

Line to ground: $\leq 100 \mu\text{A}$ @ $\pm 160 \text{ V DC}$

Discharge current capacity

Modular jack connection: 500 A (8 / 20 $\mu\text{sec.}$)

Screw terminal connection: 10000 A (8 / 20 $\mu\text{sec.}$)

Maximum load current: 200 mA

Insulation resistance: $\geq 100 \text{ M}\Omega$ with 500 V DC

(surge protector circuit to alarm output to power)

Dielectric strength: 2000 V AC @ 1 minute (surge protector

circuit to power to alarm output to ground)

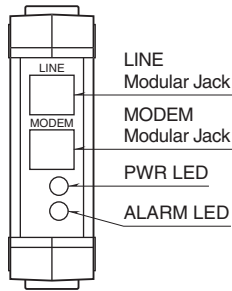
Internal series resistance: Approx. 4 Ω including return

Maximum line voltage: $\pm 160 \text{ V DC}$

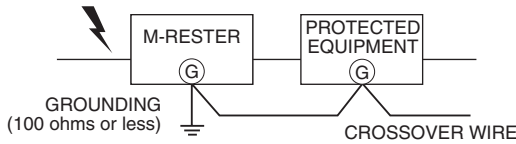
Frequency band: Approx. 100 kHz/-3 dB at 600 Ω

terminating resistance

EXTERNAL VIEW



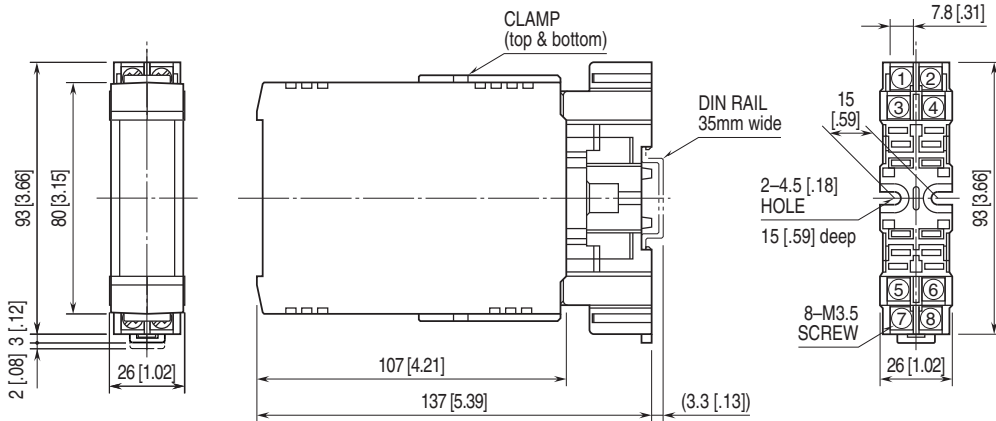
GROUNDING



A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.

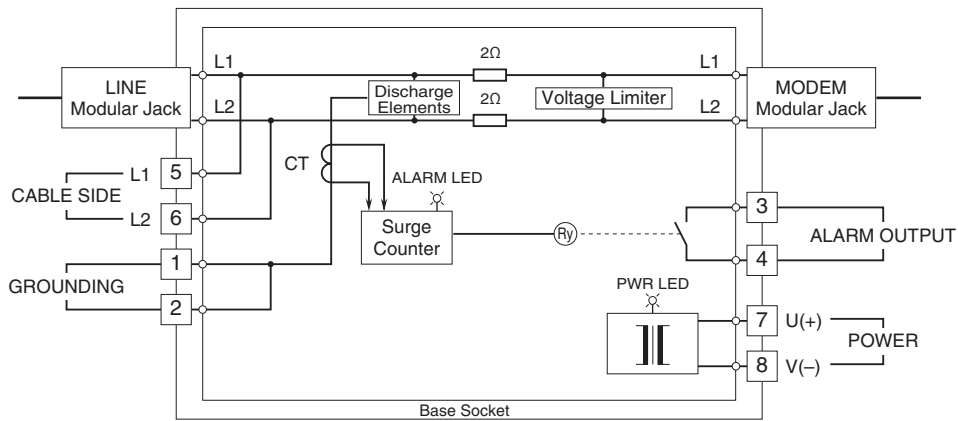
If the protected equipment has no ground terminal, ground the M-RESTER only.

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.