MODFI: MDM2A-24

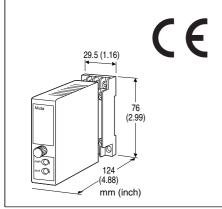
Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR STANDARD SIGNAL LINE & PULSE USE

(life monitor, 24 V DC line voltage)

Functions & Features

- Designed specifically for 4 20 mA DC and pulse signal line including both 4-wire and 2-wire transmitters
- Absorbs surges only without affecting instrumentation
- Life monitor function helps you to decide when you should replace the surge protector; reduces maintenance and prevents downtime
- LED display and alarm contact output indicate the degradation and life span of the surge protection circuits
- CE marking



MODEL: MDM2A-24-[1]

ORDERING INFORMATION

Code number: MDM2A-24-[1] Specify a code from below for [1] (e.g. MDM2A-24-M2)

[1] POWER INPUT

AC Power

M2: 100 - 240 V AC (Operational voltage range 85 - 264 V, 47 - 66 Hz)

DC Power

R: 24 V DC

(Operational voltage range 24 V ±10 %, 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: M3 screw terminals (torque 0.8 N·m) Housing material: Flame-resistant resin (black)

Alarm indicators

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

ALM: 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.

 \cdot **Red**: The life span has ended.

Degradation judged: When the leakage current at the

voltage limiter exceed approx. 7.5 μA.

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, when the voltage limiter has degraded, and/or when the power supply is removed.

Rating: 125 V AC @ 0.5 A ($\cos \emptyset = 1$)

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 Weight: 150 g (0.33 lbs)

PERFORMANCE

Discharge voltage (peak voltage)

Line to line: 30 V min. Line to ground: ±300 V min. Maximum surge voltage

Line to line: 45 V max. Line to ground: ±650 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**: $\leq 0.1 \, \mu sec.$

Leakage current:

Line to line: \leq 5 μ A @ 30 V DC Line to ground: $\leq 5 \mu A @ \pm 140 V DC$

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MODEL: MDM2A-24

Discharge current capacity: 5000 A (8 / 20 µsec.)

Max. load current: 100 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 ground)

Internal series resistance: $20 \Omega \pm 10 \%$ (including return)

Maximum line voltage: 30 V

STANDARDS & APPROVALS

CE conformity:

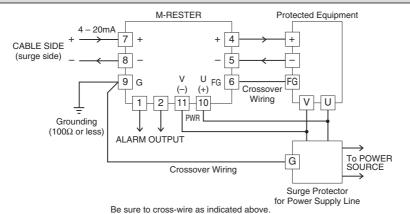
EMC Directive (2004/108/EC) EMI EN 61000-6-4: 2007 EMS EN 61000-6-2: 2005

Low Voltage Directive (2006/95/EC)

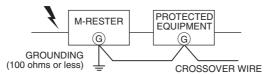
EN 61010-1: 2001 Installation Category II Pollution Degree 2

Surge suppression circuit to power: Reinforced insulation (300 V)

CONNECTION EXAMPLES



GROUNDING

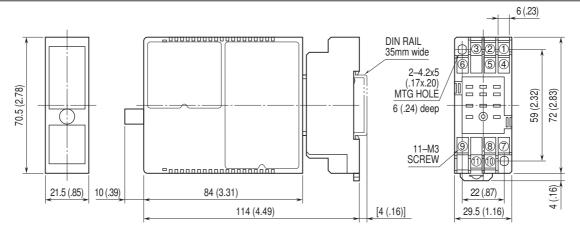


A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection. If the protected equipment has no ground terminal, ground the M-RESTER only.

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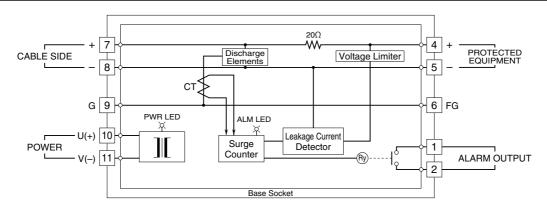
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EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



[·] When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





Specifications are subject to change without notice.

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