

Lightning Surge Protectors for Electronics Equipment *M-RESTER*

**LIGHTNING SURGE PROTECTOR FOR
STANDARD SIGNAL LINE & PULSE USE (life monitor)**

**MODEL MDM2A-24
MDM2A-65**

MODEL & SUFFIX CODE SELECTION

MODEL _____ **MDM2A-24** □
MDM2A-65

MDM2A-24 : 24V DC line voltage
MDM2A-65 : 48V or 65V DC line voltage

POWER INPUT _____

AC Power	DC Power
M2 : 100 – 240V AC	R : 24V DC
	P : 110V DC

ORDERING INFORMATION

Specify code number. (e.g. MDM2A-24-M2)

GENERAL SPECIFICATIONS

Construction: Plug-in
Connection: M3 screw terminals (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 (cosφ=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 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.

Degradation judged: when the leakage current at the voltage limiter exceed approx. 7.5μA.

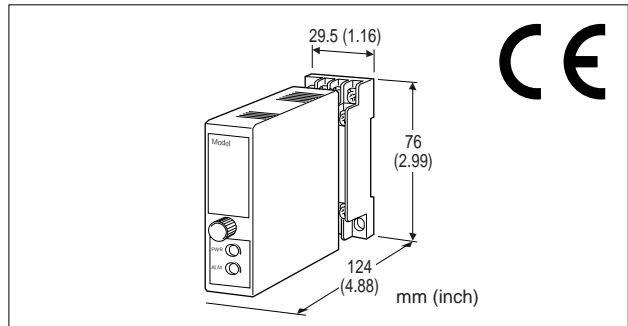
Life time judged: when the number of discharges of the discharge element reaches the expected life span.

INSTALLATION

Power input

AC: Operational voltage range 85 – 264V;
 47 – 66 Hz; approx. 2VA at 100V
 approx. 3VA at 200V; approx. 4VA at 240V

DC: Operational voltage range for R: 24V
 ±10% or P: 85 – 150V;
 approx. 1.5W (ripple 10% p-p max.)



Functions & Features

- Designed specifically for 4 – 20mA DC and pulse signal line including both 4-wire and 2-wire transmitters
- 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

Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90% RH (non-condensing)
Mounting: Surface or DIN rail
Dimensions: W29.5×H76×D124 mm (1.16"×2.99"×4.88")
Weight: 150 g (0.33 lbs)

PERFORMANCE

Discharge voltage (peak-to-peak)

Between lines: 30V min. (MDM2A-24)
 70V min. (MDM2A-65)

Line to ground: ±300V min.

Maximum surge voltage*

Between lines: 45V max. (MDM2A-24)
 85V max. (MDM2A-65)

Line to ground: ±650V 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: ≤0.1 microseconds
Discharge current capacity: 5000A (8 / 20 μsec.)
Maximum load current: 100mA
Internal series resistance: approx. 20Ω including return

Leakage current

Between lines: ≤5μA at 30V DC (MDM2A-24)
 ≤5μA at 70V DC (MDM2A-65)

Line to ground: ≤5μA at ±140V DC

Maximum line voltage: 30V (MDM2A-24)
 70V (MDM2A-65)

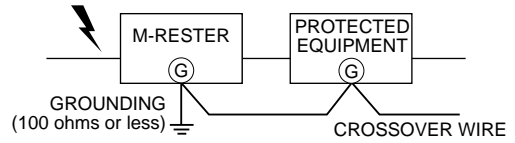
Insulation resistance: ≥100MΩ with 500V DC
Dielectric strength: 2000V AC @1 minute (surge suppression circuit to power to ground)

STANDARDS & APPROVALS

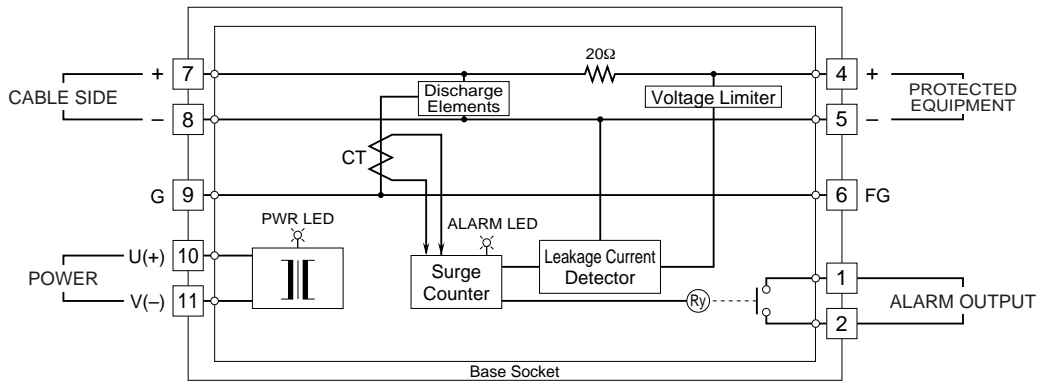
CE conformity: EMC Directive (89/336/EEC)
 EMI EN50081-2
 EMS EN50082-2 (EN61000-6-2)
 Low Voltage Directive (73/23/EEC)
 Installation category II; Pollution degree 2
 Max. operating voltage 300V
 Surge suppression circuit to power –
 Reinforced insulation

GROUNDING

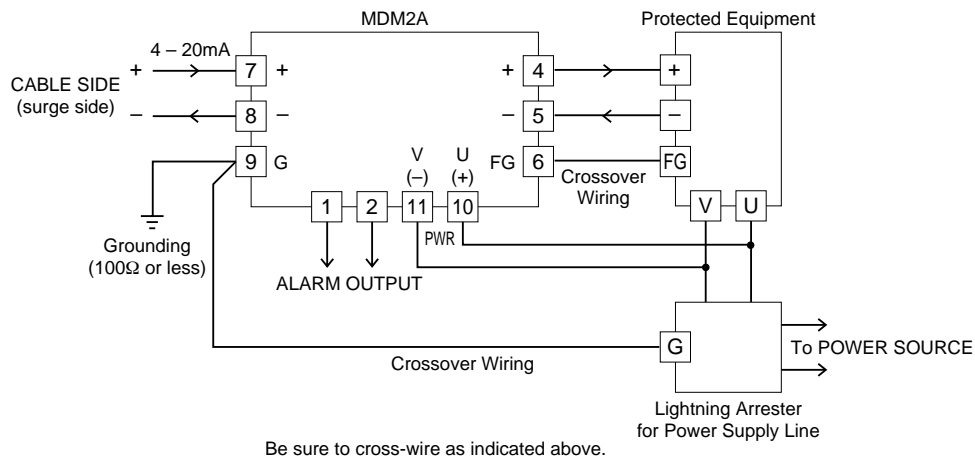
A crossover wire between the M-RESTER unit's ground and the equipment's ground or metallic housing is required for protection.



SCHEMATIC CIRCUITRY

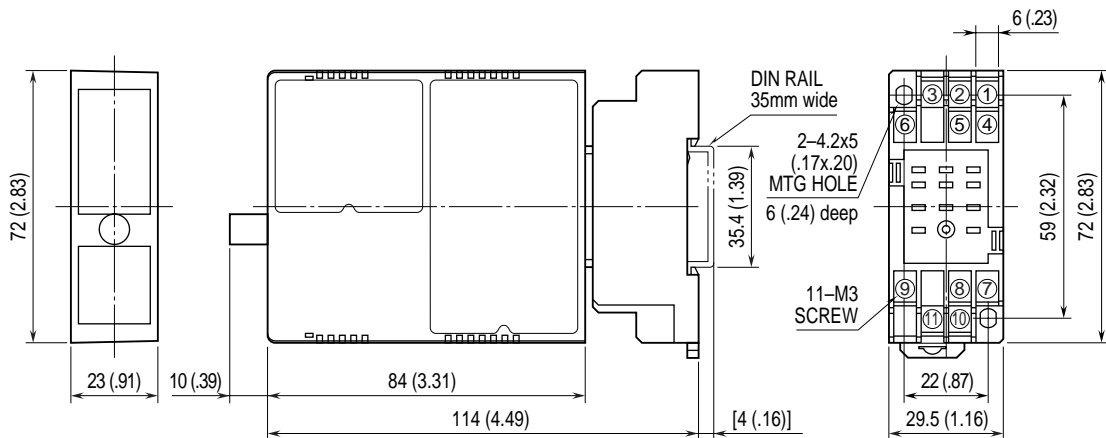


CONNECTION DIAGRAM



Be sure to cross-wire as indicated above.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT mm (inch)



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

Specifications subject to change without notice.