Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR STANDARD SIGNAL LINE & PULSE USE

Functions & Features

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

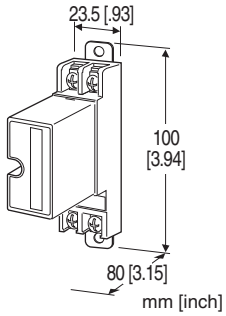
• Absorbs surges only without affecting instrumentation signal

• No interruption of signal by unplugging surge protector element

Application Examples

• Protects two-wire transmission lines

• Protects electronic instruments' I/O



CE

MODEL: MDP–65–1[1]

ORDERING INFORMATION

• Code number: MDP-65-1[1]

Specify a code from below for [1].
(e.g. MDP-65-1/A33/CE/Q)

• Specify the specification for option code /Q
(e.g. /C01)

[1] OPTIONS (multiple selections)

DIN Rail Mounting Adapter

blank: Without

/A33: With adapter (model A-33)

Standards & Approvals (must be specified)

/N: Without CE

/CE: CE marking

Other Options

blank: none

/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M4 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

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:

120 g (0.26 lb), standard

145 g (0.32 lb), with DIN rail mounting adapter

Capacitance (reference value) @ 1 MHz:

Line to line: 2000 pF

Line to earth: 100 pF

PERFORMANCE

Max. continuous operating voltage (Uc):

Line to line: 70 V

Line to earth: ±140 V

Voltage protection level (Up):

• @ 1 kV (100 A)

Line to line: 80 V

Line to earth: ±650 V

• @ 2 kV (1 kA)

Line to line: 110 V

Line to earth: ±800 V

Response time:

Line to line: ≤ 4 nsec.

Line to earth: ≤ 20 nsec.

Leakage current:

Line to line: ≤ 5 µA @ 70 V DC

Line to earth: ≤ 5 µA @ ±140 V DC

Max. discharge current (Imax): 5000 A (8 / 20 µs)

Nominal current (I_N): 100 mA

Internal series resistance: 20 Ω ±10 % (including return)

Surge protection: IEC 61643-21 Categories C1, C2, D1

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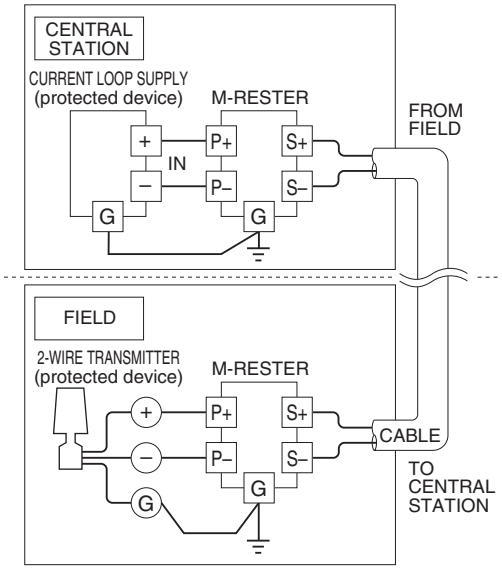
STANDARDS & APPROVALS

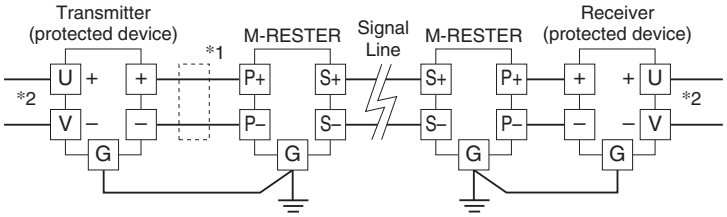
EU conformity:
EMC Directive
EMI EN 61000-6-4
EMS EN 61000-6-2
RoHS Directive

CONNECTION EXAMPLES

■ PROTECTING TWO-WIRE SIGNAL LINES

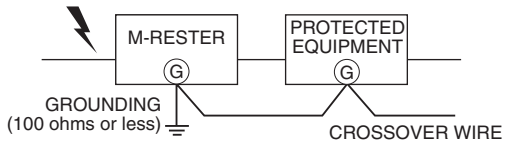


■ PROTECTING ELECTRONIC INSTRUMENTS' I/O



*1. Install a circuit protector when the transmitter output current exceeds 100mA.
*2. The M-RESTER is designed in particular to protect signal lines.
To protect power supply lines, install other types of surge protectors.

GROUNDING



A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.
If the protected equipment has no ground terminal, ground the M-RESTER only.
When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting screw of the M-RESTER.

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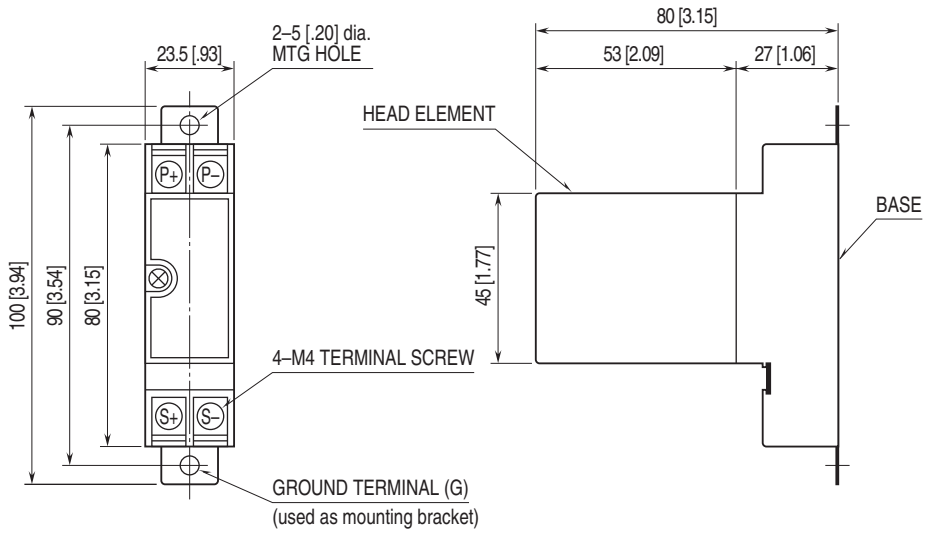
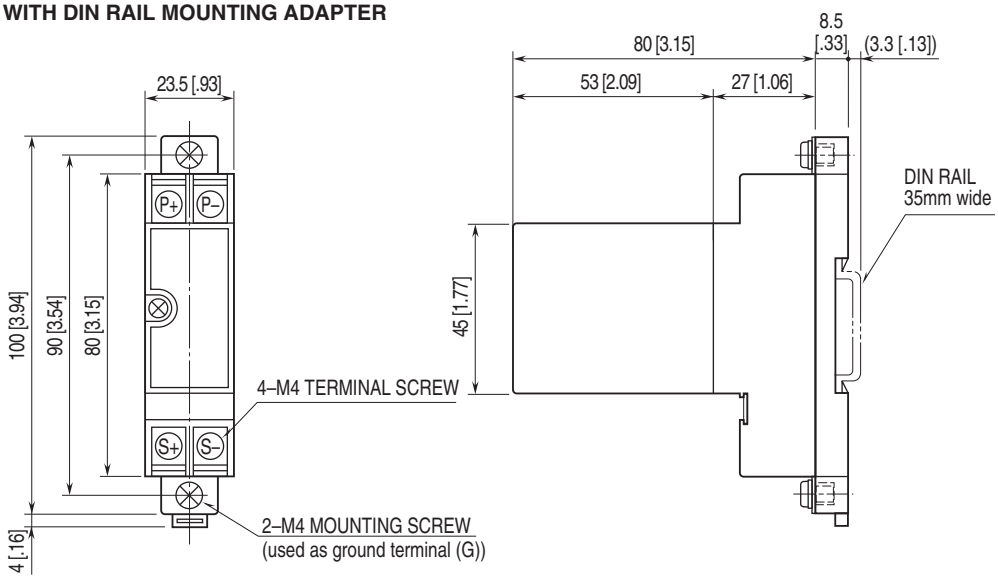
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

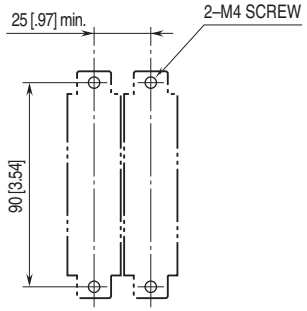
■ **STANDARD**



■ **WITH DIN RAIL MOUNTING ADAPTER**



MOUNTING REQUIREMENTS unit: mm [inch]



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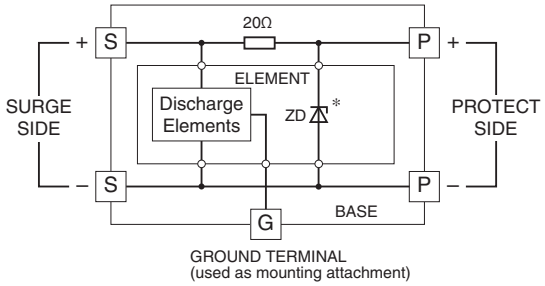
SCHEMATIC CIRCUITRY



*The zenor diode has polarity.
Zero-cross signal cannot be connected.

⚠ Specifications are subject to change without notice.

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