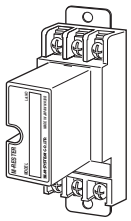
Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR RTD USE

Functions & Features

• Designed specifically for resistance temperature detector (RTD) circuits
• Protecting RTD and RTD transmitters from damage caused by surges on the RTD wiring
• Absorbs surges only without affecting instrumentation signal
• No interruption of signal by unplugging the protector element



CE

MODEL: MDP–RB[1]

ORDERING INFORMATION

• Code number: MDP-RB[1]
Specify a code from below for [1].
(e.g. MDP-RB/A33/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)
Other Options
blank: none
/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to M-System's 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: 140 g (0.31 lb), standard
165 g (0.36 lb), with DIN rail mounting adapter

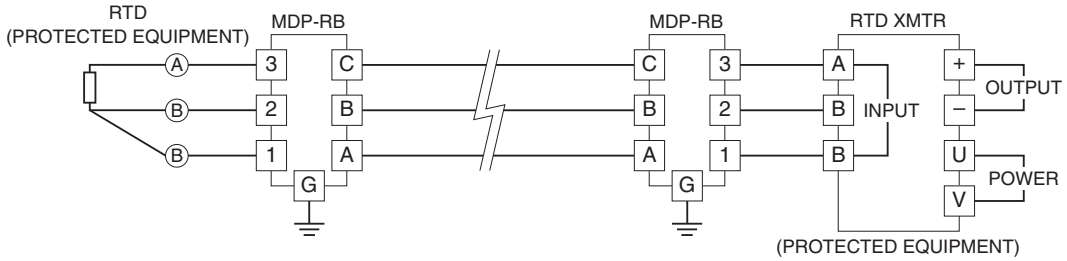
PERFORMANCE

Max. continuous operating voltage (Uc):
B to C: ±6 V
B or C to A: ±3 V
Line to earth: ±140 V
Voltage protection level (Up):
• @ 1 kV (100 A)
2 to 3: ±32 V
2 or 3 to 1: ±16 V
Line to earth: ±650 V
• @ 2 kV (1 kA)
2 to 3: ±40 V
2 or 3 to 1: ±25 V
Line to earth: ±800 V
Response time: ≤ 0.1 µsec.
Leakage current:
B to C: ≤ 2 µA @ ±6 V DC
B or C to A: ≤ 2 µA @ ±3 V DC
Line to earth: ≤ 2 µA @ ±140 V DC
Max. discharge current (Imax): 5000 A (8 / 20 µs)
Nominal current (I_N): 100 mA
Internal series resistance: 10 Ω ±0.1 %, 30 ppm/°C (17 ppm/°F)
Capacitance @ 1 MHz:
Line to line: ≤ 1000 pF
Line to earth: ≤ 100 pF
Surge protection: IEC 61643-21 Categories C1, C2, D1

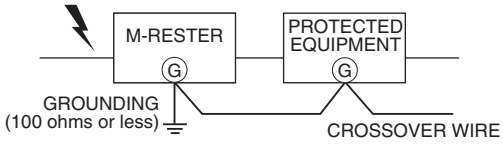
STANDARDS & APPROVALS

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

CONNECTION EXAMPLES



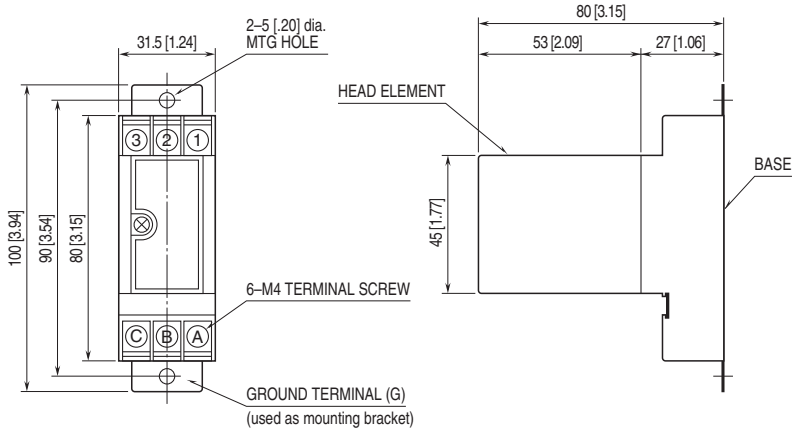
GROUNDING



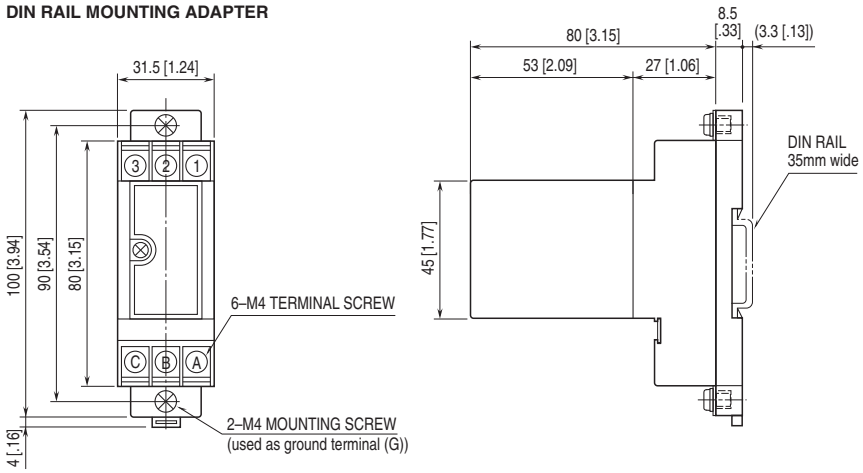
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.
If the protected equipment has no ground terminal, ground the M-RESTER only.
When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

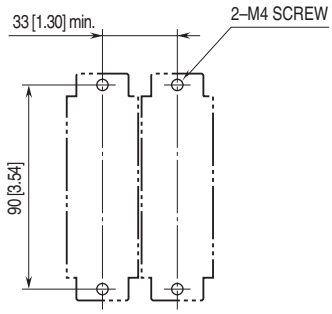
■ **STANDARD**



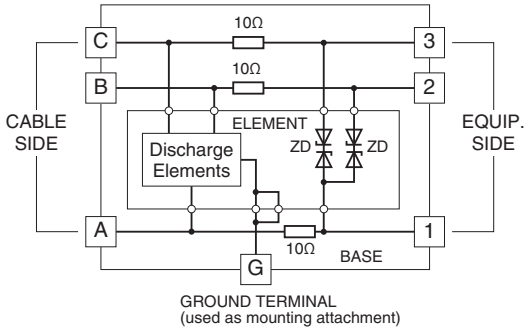
■ **WITH DIN RAIL MOUNTING ADAPTER**



MOUNTING REQUIREMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



⚠ Specifications are subject to change without notice.

M-SYSTEM CO., LTD.
https://www.m-system.co.jp/