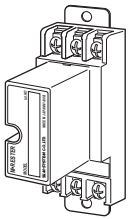


## Lightning Surge Protectors for Electronics Equipment M-RESTER

### LIGHTNING SURGE PROTECTOR FOR POTENTIOMETER USE

#### Functions & Features

- Designed specifically for potentiometer or slidewire circuits
- Protects potentiometer transmitters from lightning surge damage that enters on the wiring between the potentiometer and the transmitter
- Absorbs surges only without affecting instrumentation signal
- No interruption of signal by unplugging the protector element



### MODEL: MDP-PM[1]

#### ORDERING INFORMATION

- Code number: MDP-PM[1]  
Specify a code from below for [1].  
(e.g. MDP-PM/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:  $\pm 7.5$  V

B or C to A: 7.5 V

Line to earth:  $\pm 140$  V

**Voltage protection level (Up):**

• @ 1 kV (100 A)

2 to 3:  $\pm 16$  V

2 or 3 to 1: 16 V

Line to earth:  $\pm 650$  V

• @ 2 kV (1 kA)

2 to 3:  $\pm 25$  V

2 or 3 to 1: 25 V

Line to earth:  $\pm 800$  V

**Response time:**  $\leq 0.1$   $\mu$ sec.

**Leakage current:**

B to C:  $\leq 10$   $\mu$ A @  $\pm 7.5$  V DC

B or C to A:  $\leq 10$   $\mu$ A @ 7.5 V DC

Line to earth:  $\leq 10$   $\mu$ A @  $\pm 140$  V DC

**Max. discharge current (Imax):** 5000 A (8 / 20  $\mu$ s)

**Nominal current (In):** 100 mA

**Internal series resistance:** 10  $\Omega$   $\pm 0.1$  %, 30 ppm/°C (17 ppm/°F)

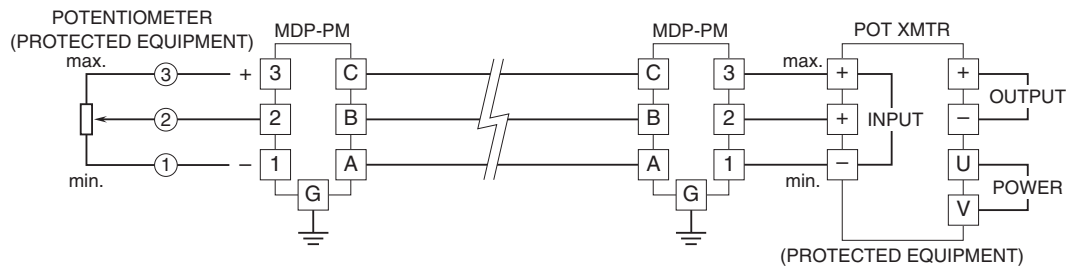
**Capacitance @ 1 MHz:**

Line to line:  $\leq 2000$  pF

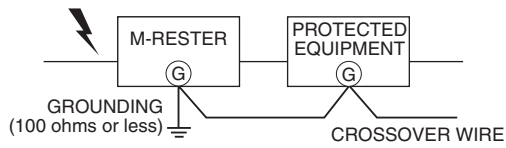
Line to earth:  $\leq 100$  pF

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

## CONNECTION EXAMPLES



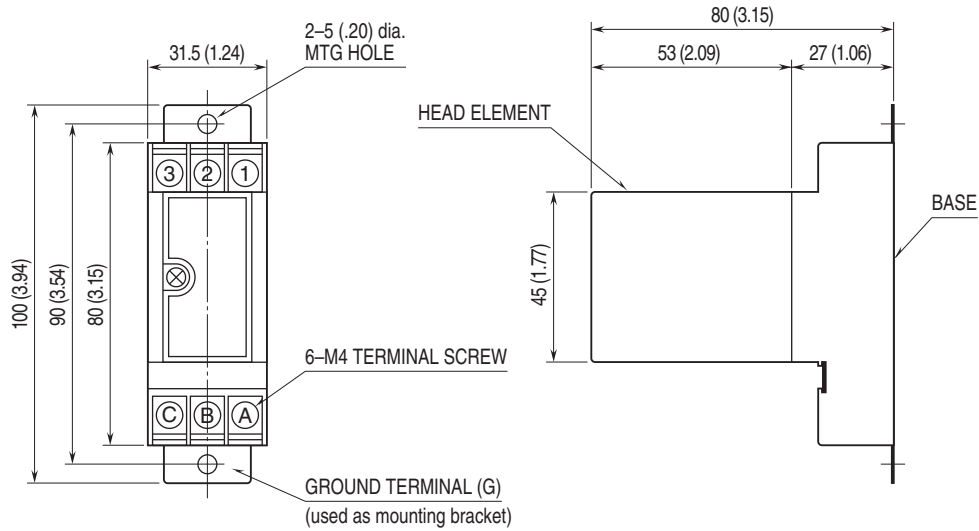
## GROUNDING



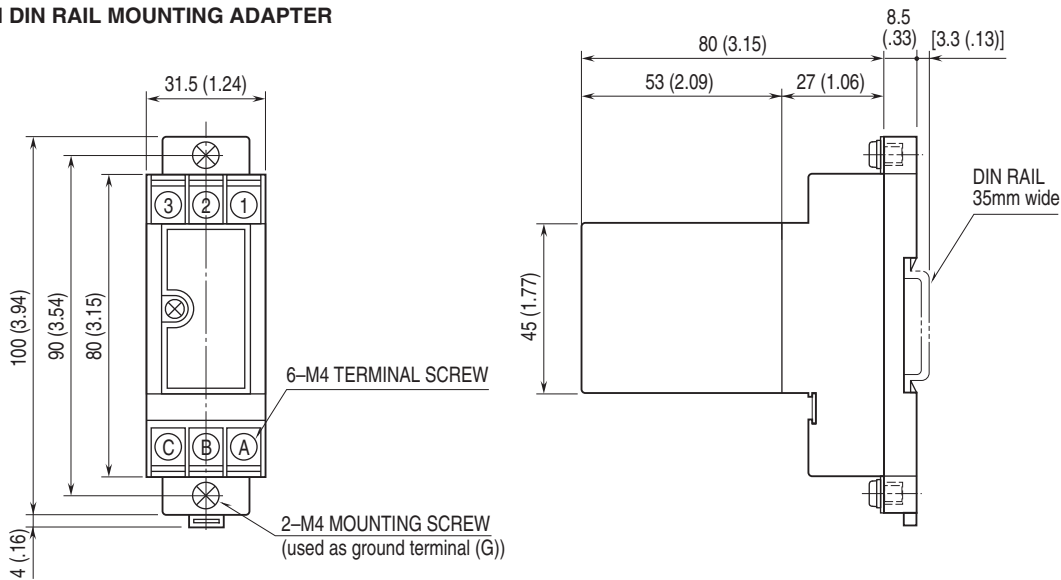
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.  
 If the protected equipment has no ground terminal, ground the M-RESTER only.  
 When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)

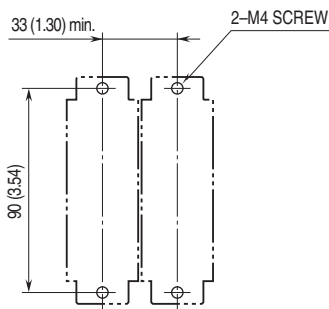
### ■ STANDARD



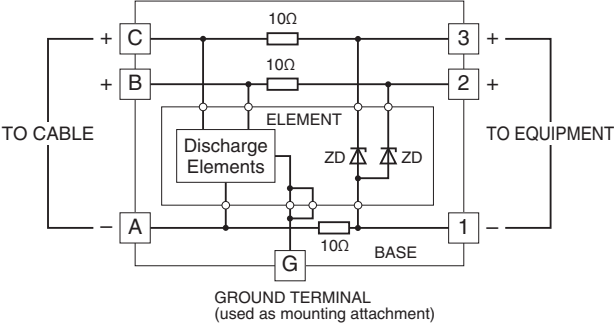
### ■ WITH DIN RAIL MOUNTING ADAPTER



## MOUNTING REQUIREMENTS unit: mm (inch)



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.