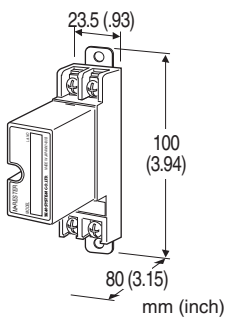


## Lightning Surge Protectors for Electronics Equipment M-RESTER

### LIGHTNING SURGE PROTECTOR FOR STRAIN GAUGE USE

#### Functions & Features

- Designed to protect strain gauge transmitters from lightning surge damage that enters on the wiring between the strain gauge and the transmitter
- Absorbs surges only without affecting instrumentation signal
- No interruption of signal by unplugging the protector element



### MODEL: MDP-LC[1]

#### ORDERING INFORMATION

- Code number: MDP-LC[1]  
Specify a code from below for [1].  
(e.g. MDP-LC/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: 100 g (0.22 lb), standard; 125 g (0.28 lb), with DIN rail mounting adapter

#### PERFORMANCE

##### Max. continuous operating voltage (Uc):

Output side:  $\pm 0.3$  V

Excitation side: 15 V

Line to earth:  $\pm 15$  V

##### Voltage protection level (Up):

- @ I<sub>max</sub>

Output side:  $\pm 15$  V

Excitation side: 30 V

Line to earth:  $\pm 30$  V

Response time:  $\leq 5$  nsec.

##### Leakage current:

Output side:  $\leq 0.2$   $\mu$ A @  $\pm 0.3$  V DC

Excitation side:  $\leq 2$   $\mu$ A @ 15 V DC

Line to earth:  $\leq 2$   $\mu$ A @  $\pm 15$  V DC

##### Max. discharge current (I<sub>max</sub>)

Output side: 100 A (8/20  $\mu$ s), 25 A (10/1000  $\mu$ s)

Excitation side: 50 A (8/20  $\mu$ s), 25 A (10/1000  $\mu$ s)

Line to earth: 50 A (8/20  $\mu$ s), 25 A (10/1000  $\mu$ s)

##### Capacitance @ 1 MHz:

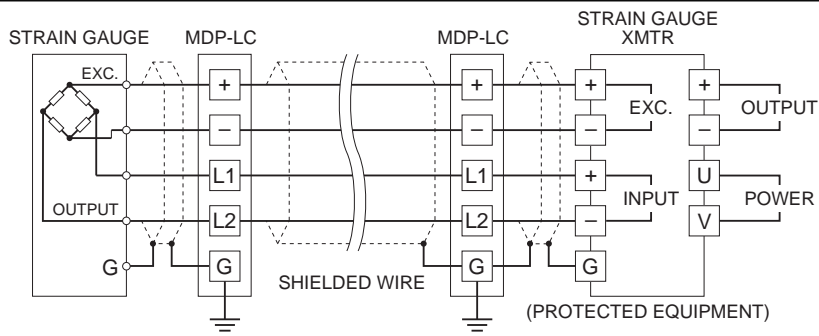
Output side:  $\leq 100$  pF

Excitation side:  $\leq 4$  nF

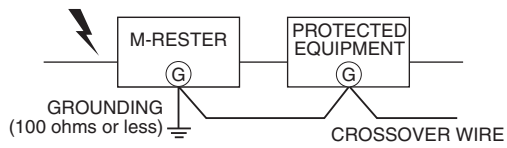
Line to earth:  $\leq 2$  nF

Surge protection: IEC 61643-21 Categories C3

## CONNECTION EXAMPLES



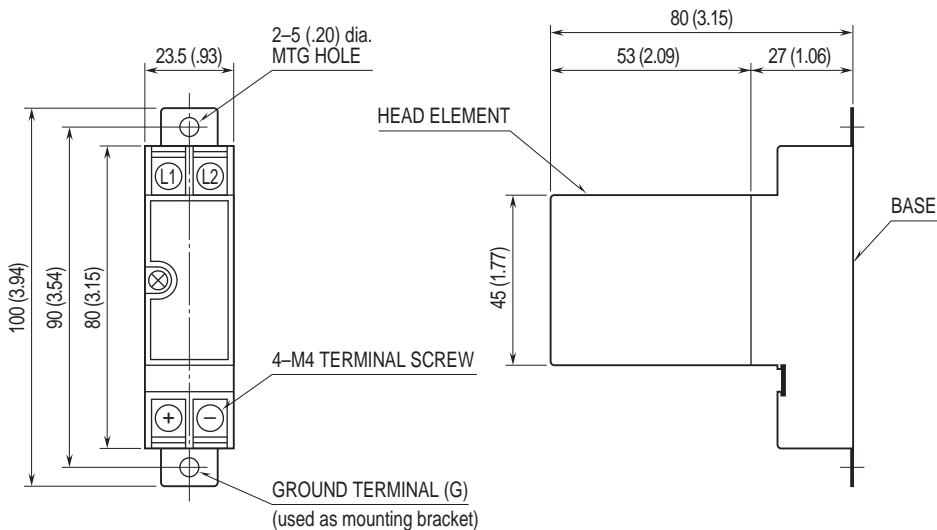
## GROUNDING



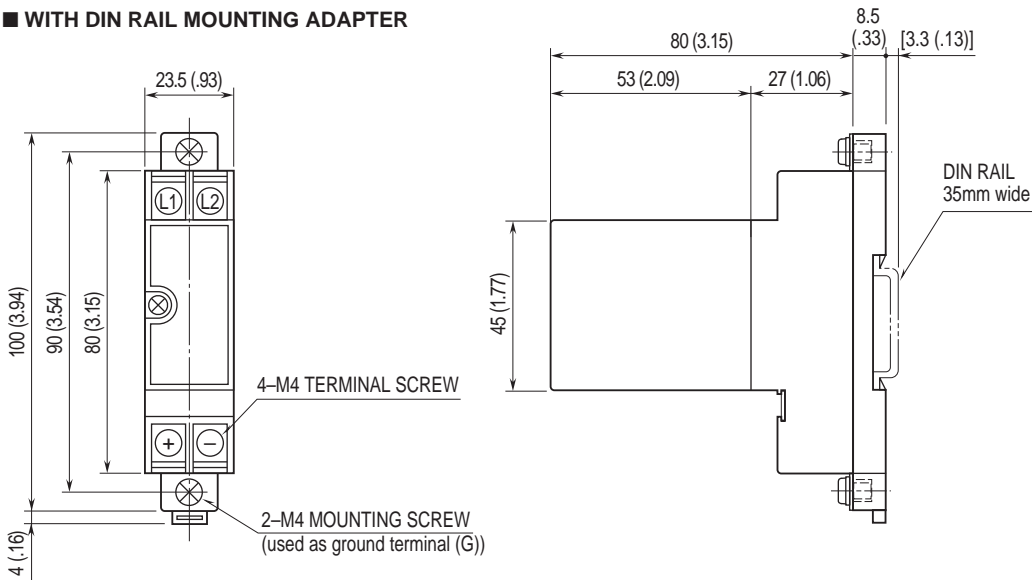
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.  
 If the protected equipment has no ground terminal, ground the M-RESTER only.  
 When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

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

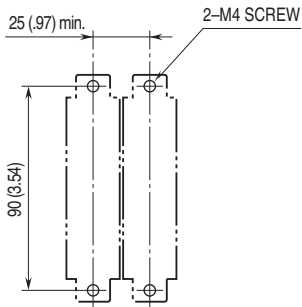
### ■ STANDARD



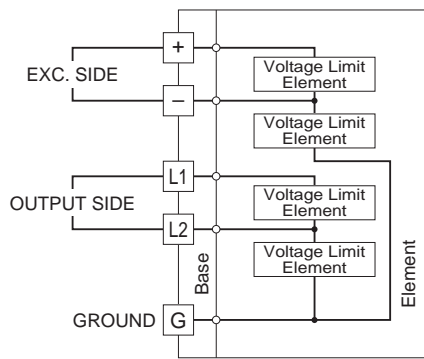
### ■ WITH DIN RAIL MOUNTING ADAPTER



## MOUNTING REQUIREMENTS unit: mm (inch)



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.