

Lightning Surge Protectors for Electronics Equipment M-RESTER

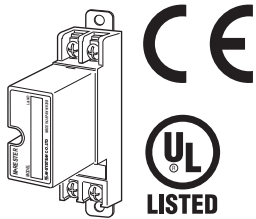
## LIGHTNING SURGE PROTECTOR FOR STANDARD SIGNAL LINE & PULSE USE

### 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
- CE marking
- UL approval

### Application Examples

- Protects two-wire transmission lines
- Protects electronic instruments' I/O



## 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)

### [1] OPTIONS

#### DIN rail mounting adapter

blank: Without

/A33: With adapter (model: A-33) (UL unavailable)

### 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 lbs), standard

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

### PERFORMANCE

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

Line to line: 70 V min

Line to earth: ±300 V min

#### Voltage protection level (Up):

- @ 1 kV (100 A)

Line to line: 80 V max.

Line to earth: ±650 V max.

- @ 2 kV (1 kA)

Line to line: 110 V max.

Line to earth: ±800 V max.

#### 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 (In): 100 mA

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

#### Capacitance @ 1 MHz:

Line to line: ≤ 1000 pF

Line to earth: ≤ 100 pF

### STANDARDS & APPROVALS

#### CE conformity:

EMC Directive (2004/108/EC)

EMI EN 61000-6-4

EMS EN 61000-6-2

#### Approval:

Protectors for Data Communications and Fire

Alarm Circuits (UL 497B)

Surge protection: IEC 61643-21 (Categories C1, C2)



幸託有限公司  
XIN TOP CORPORATION

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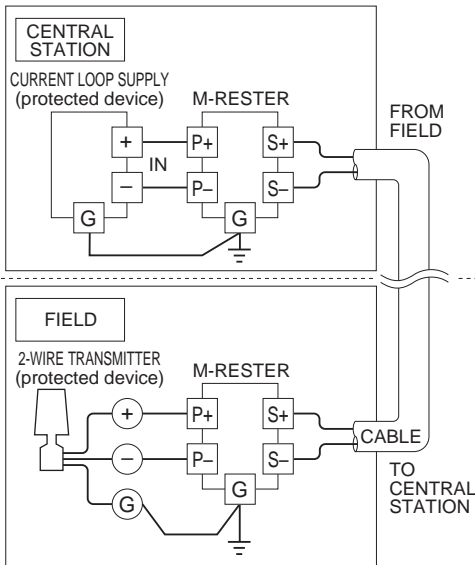
FAX : (02)2596-2331

E-mail : info@xintop.com

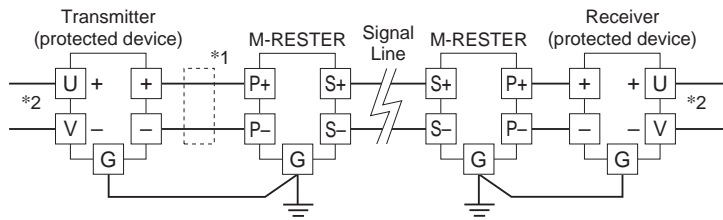
Website : www.xintop.com

## CONNECTION EXAMPLES

### ■ PROTECTING TWO-WIRE SIGNAL LINES

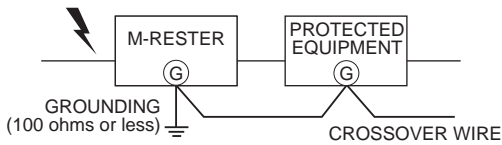


### ■ PROTECTING ELECTRONIC INSTRUMENTS' I/O



- \*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.

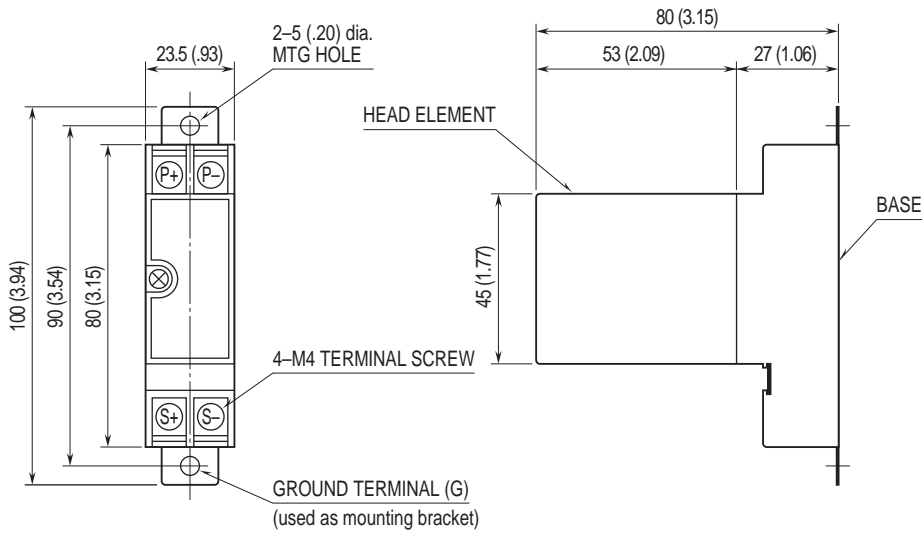
## GROUNDING



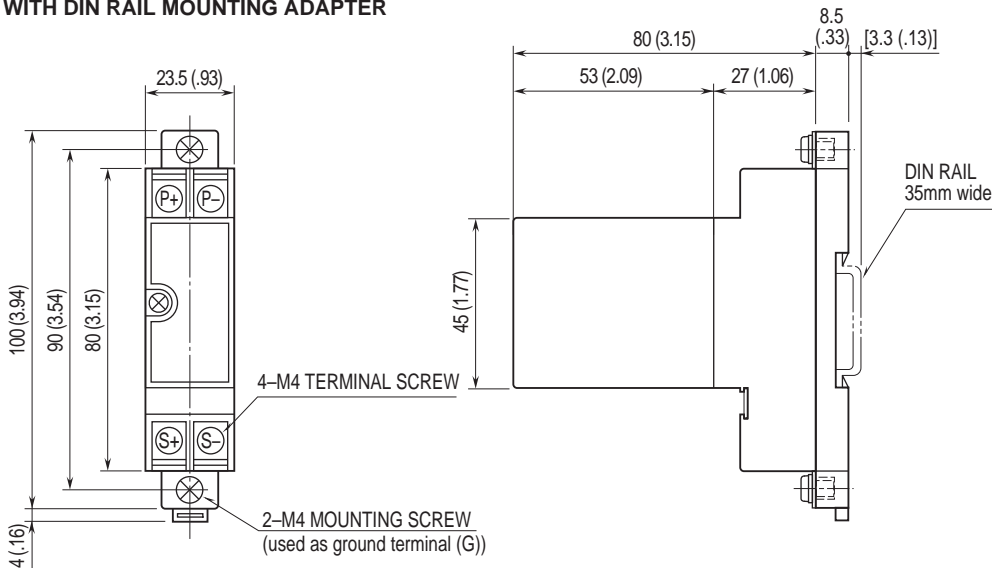
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.  
If the protected equipment has no ground terminal, ground the M-RESTER only.  
When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

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

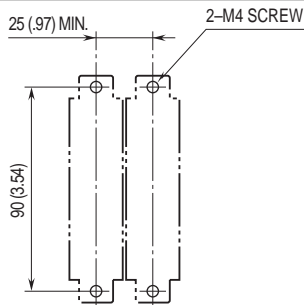
### ■ STANDARD



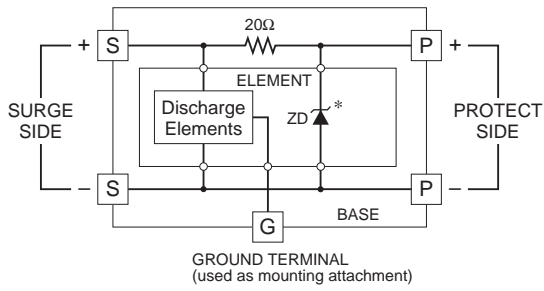
### ■ WITH DIN RAIL MOUNTING ADAPTER



## MOUNTING REQUIREMENTS unit: mm (inch)



**SCHEMATIC CIRCUITRY**



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



Specifications are subject to change without notice.

