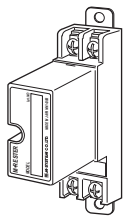


## Lightning Surge Protectors for Electronics Equipment M-RESTER

### LIGHTNING SURGE PROTECTOR FOR EC-CABLE USE

#### Functions & Features

- Designed specifically for M-System's 32-point Transmission System EC-CABLE
- Protects the transmitter model ECT and the receiver ECR from lightning surges entering through the twisted-pair cables connecting the both modules
- Applicable to transmission systems by current loops
- Absorbs surges only without affecting instrumentation signal
- No interruption of signal by unplugging the protector element



### MODEL: MDP-EC[1]

### ORDERING INFORMATION

- Code number: MDP-EC[1]  
Specify a code from below for [1].  
(e.g. MDP-EC/A33)

### [1] OPTIONS

#### DIN rail mounting adapter

blank: Without

/A33: With adapter (model A-33)

### 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:  $\pm 12$  V min

Line to earth:  $\pm 500$  V max

#### Voltage protection level (Up):

- @ 1 kV (100 A)

Line to line:  $\pm 25$  V max.

Line to earth:  $\pm 650$  V max.

- @ 2 kV (1 kA)

Line to line:  $\pm 30$  V max.

Line to earth:  $\pm 800$  V max.

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

#### Leakage current:

Line to line:  $\leq 10$   $\mu$ A @  $\pm 12$  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:** 20  $\Omega$   $\pm 10$  % (including return)

#### Capacitance @ 1 MHz:

Line to line:  $\leq 1000$  pF

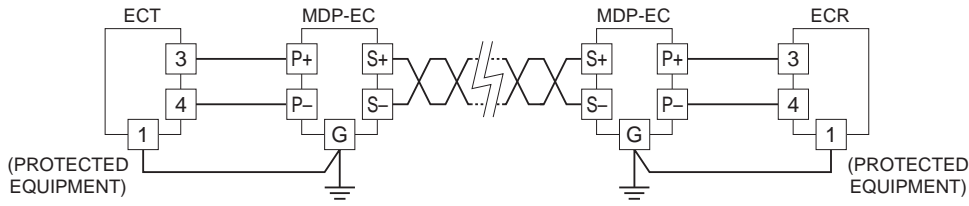
Line to earth:  $\leq 100$  pF

### STANDARDS & APPROVALS

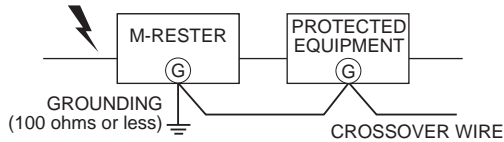
Surge protection: IEC 61643-21 (Categories C1, C2)



## CONNECTION EXAMPLES



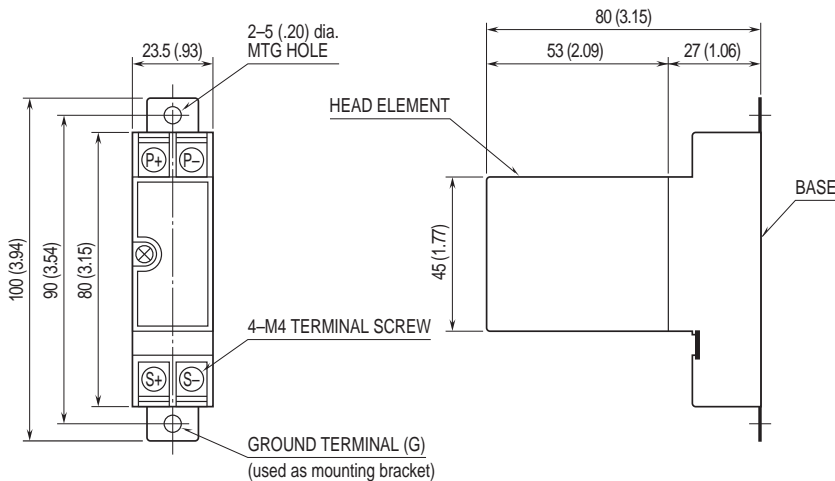
## GROUNDING



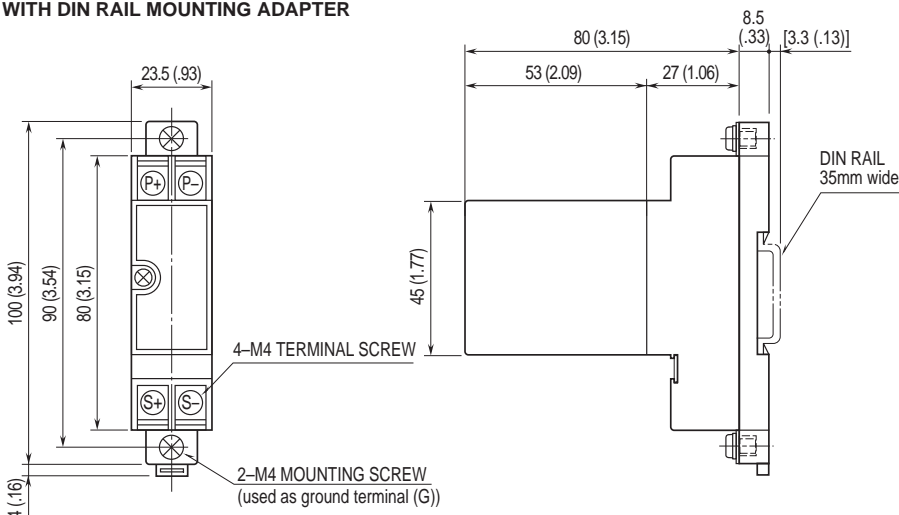
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection. If the protected equipment has no ground terminal, ground the M-RESTER only. When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

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

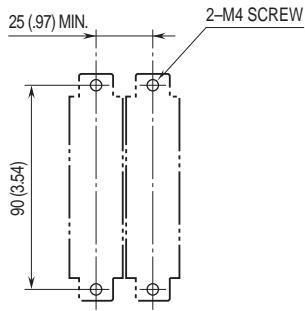
### ■ STANDARD



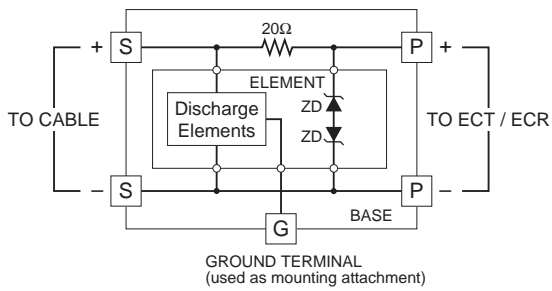
### ■ WITH DIN RAIL MOUNTING ADAPTER



**MOUNTING REQUIREMENTS unit: mm (inch)**



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



Specifications are subject to change without notice.

