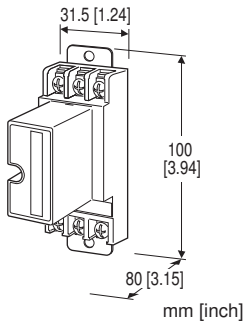


## Lightning Surge Protectors for Electronics Equipment M-RESTER

### LIGHTNING SURGE PROTECTOR FOR MsysNet USE

#### Functions & Features

- Designed specifically for the network
- No interruption of transmission signal by unplugging the head element module



### MODEL: MDP-DM3[1]

#### ORDERING INFORMATION

- Code number: MDP-DM3[1]  
Specify a code from below for [1].  
(e.g. MDP-DM3/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 our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

#### RELATED PRODUCTS

- Repeater (model: DALx)
- Multi-transmission module (model: 22LAX)
- Multi-transmission unit (model: DLAX)

#### APPLICABLE NETWORK

SIN-NET (conform to RS-422), MsysNet, MsysNet-mini, MuNet (RS-485), EC Cable (model ECx-5P)

#### 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):

B to C:  $\pm 5$  V

B or C to A: 5 V

Line to earth:  $\pm 140$  V

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

• @ 1 kV (100 A)

2 to 3:  $\pm 10$  V

2 or 3 to 1: 10 V

Line to earth:  $\pm 650$  V

• @ 2 kV (1 kA)

2 to 3:  $\pm 20$  V

2 or 3 to 1: 20 V

Line to earth:  $\pm 800$  V

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

##### Leakage current:

B to C:  $\leq 0.2$  mA @  $\pm 5$  V DC

B or C to A:  $\leq 0.2$  mA @ 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:** 4  $\Omega$   $\pm 10$  % (including return)

##### Capacitance @ 1 MHz:

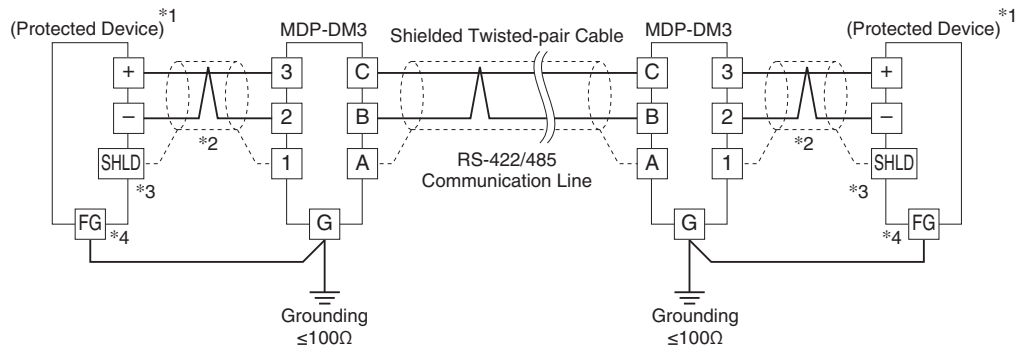
Line to line:  $\leq 20$  nF

Line to earth:  $\leq 50$  pF

**Input attenuation:** -0.5 dB or less @ DC to 100 kHz, Zo = 110  $\Omega$

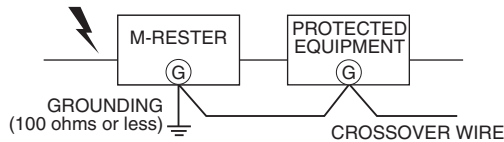
**Surge protection:** IEC 61643-21 Categories C1, C2, D1

## CONNECTION EXAMPLES



- \*1. Applicable devices: our MsysNet or SIN-NET devices which employ RS-422/485 communication standards.
- \*2. Recommended cable length between the surge protector and the protected device: 1 meter at the maximum
- \*3. No connection is required if the protected device has no shield terminal.
- \*4. Cross wire between the protected device's FG terminal and the surge protector's G terminal, and ground to the earth at the surge protector side.  
Ground only the surge protector if the protected device has no FG terminal.

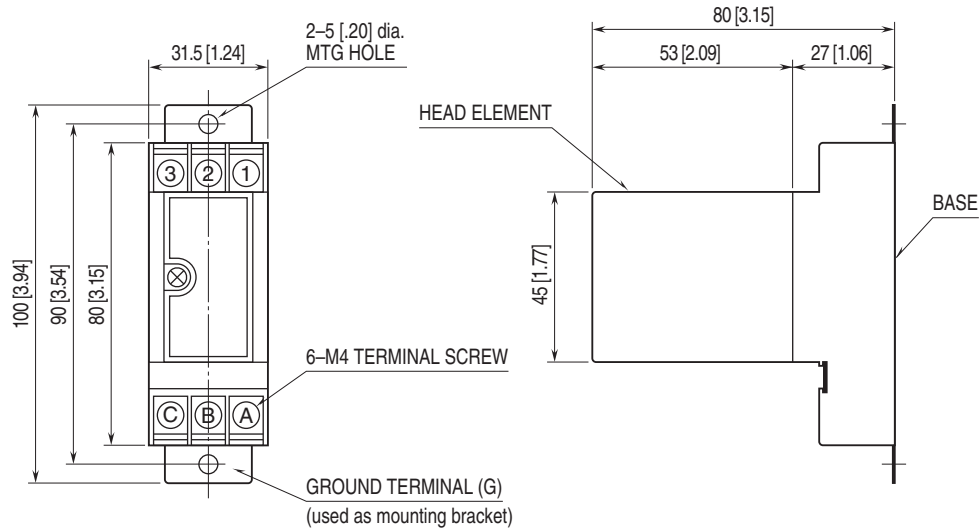
## GROUNDING



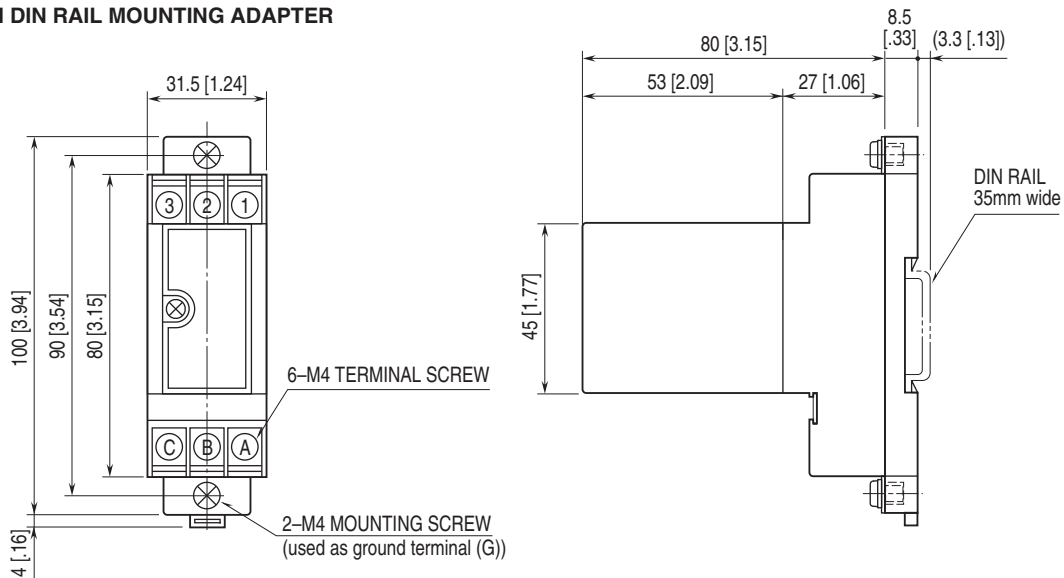
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.  
If the protected equipment has no ground terminal, ground the M-RESTER only.  
When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

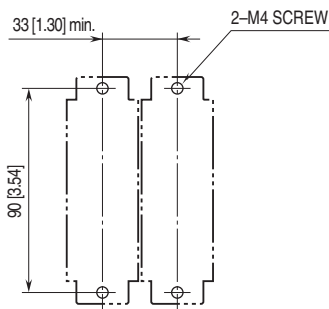
### ■ STANDARD

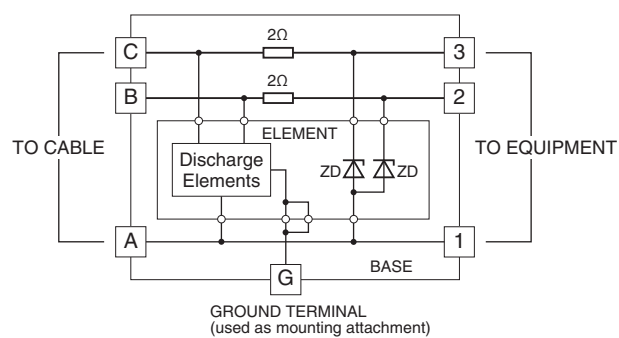


### ■ WITH DIN RAIL MOUNTING ADAPTER



## MOUNTING REQUIREMENTS unit: mm [inch]



**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**

Specifications are subject to change without notice.