

## Lightning Surge Protectors for Electronics Equipment M-RESTER

### LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE

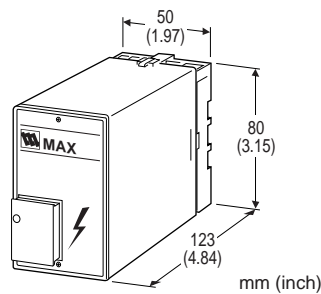
(5 A; high discharge current capacity)

#### Functions & Features

- Designed specifically for AC power supplies up to 5 A
- Discharge current capacity 10000 A
- Absorbing surges only without affecting instrumentation signal
- No power supply interruption even when the surge absorber is broken
- Relay contact turns ON with surge absorber failure
- Surge absorber element replaceable without power interruption

#### Typical Applications

- High discharge current capacity is beneficial for use in area with frequent lightnings



### MODEL: MAX-[1]

#### ORDERING INFORMATION

- Code number: MAX-[1]
- Specify a code from below for [1].  
(e.g. MAX-100)

#### [1] OPERATIONAL VOLTAGE

100: 100 V / 110 V / 120 V AC  
200: 200 V / 220 V / 240 V AC

#### RELATED PRODUCTS

- Lightning surge protector for standard signal line use (model: MMD-24)
- Surge absorber element (model: MEL)

#### GENERAL SPECIFICATIONS

- Construction:** Plug-in  
**Connection:** M3.5 screw terminals (torque 0.8 N·m)  
**Screw terminal:** Chromated steel  
**Housing material:** Flame-resistant resin (black)  
**Alarm indicator:** Surge absorber failure indicator turns white when the fuse is blown.  
**Alarm contact:** Turns ON with surge absorber failure (when the fuse is blown or when the surge absorber element is extracted.)
- **Rating:**  
125 V AC @1 A (cos  $\phi$  = 1)  
30 V DC @1 A (resistive load)
  - **Maximum switching voltage:** 220 V AC, 250 V DC
  - **Maximum switching power:** 125 VA, 100 W
  - **Minimum load:** 5 V DC @1 mA

#### INSTALLATION

- Operating temperature:** -10 to +55°C (14 to 131°F)  
**Operating humidity:** 30 to 90 %RH (non-condensing)  
**Mounting:** Surface or DIN rail  
**Weight:** 470 g (1.04 lb)

#### PERFORMANCE

##### Discharge voltage (peak-to-peak)

- Line to line:  
 $\geq 190$  V (MAX-100)  
 $\geq 410$  V (MAX-200)  
 Line to ground:  $\geq 640$  V

##### Maximum surge voltage

- Line to line:  
 $\leq 350$  V (MAX-100)  
 $\leq 700$  V (MAX-200)  
 Line to ground:  $\leq 800$  V

(Withstand voltage of protected equipment between circuit and metal housing must be 1000 V AC or more.)

Note: This is the maximum voltage that could pass through M-RESTER. Protected equipment must be able to withstand this voltage for very short time period.

**Response time:**  $\leq 0.01$   $\mu$ sec.

##### Leakage current

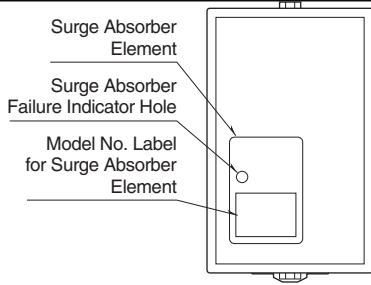
- Line to line:  
 $\leq 1$  mA at 150 V DC (MAX-100)  
 $\leq 1$  mA at 300 V DC (MAX-200)  
 Line to ground:  $\leq 1$  mA at 300 V DC

**Discharge current capacity:** 10000 A (8/ 20  $\mu$ sec.)

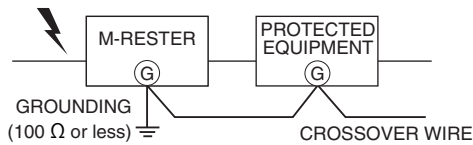
**Maximum load current:** 5 A

**Internal series resistance:**  $\leq 0.5$   $\Omega$  including return

## EXTERNAL VIEW

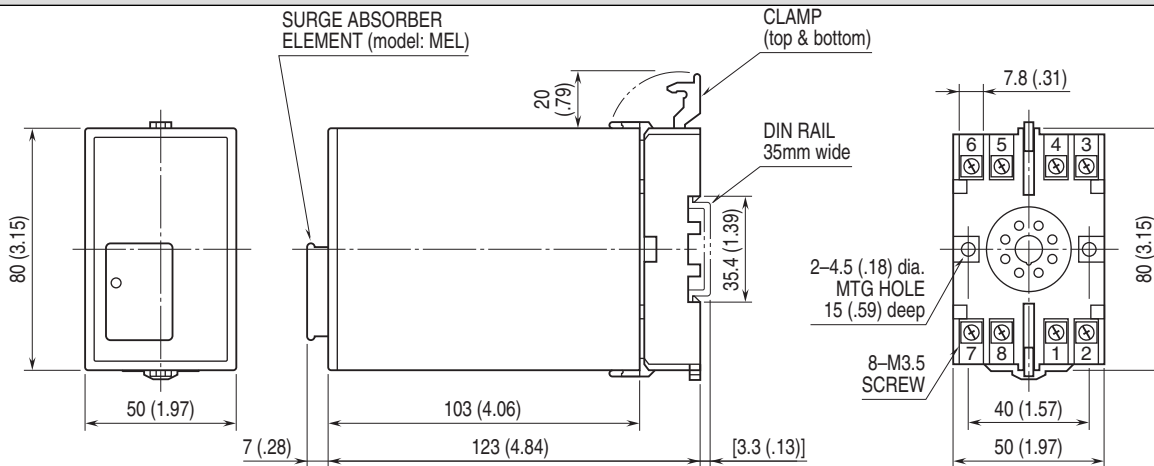


## GROUNDING



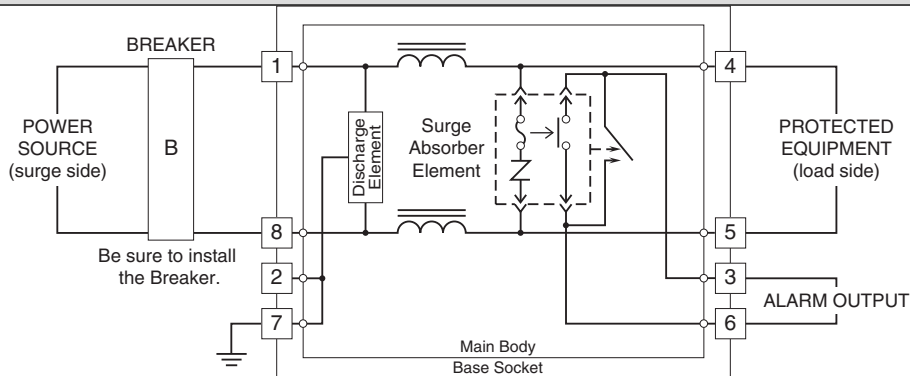
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.

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



•When mounting, no extra space is needed between units.

## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM





Specifications are subject to change without notice.