

## Lightning Surge Protectors for Electronics Equipment M-RESTER

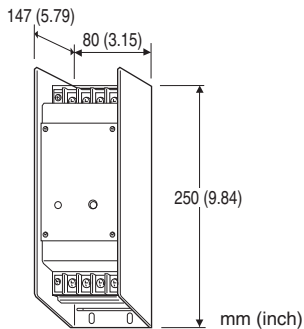
### LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE (10 A, 100 / 110 / 120 V AC)

#### Functions & Features

- Designed specifically for power requirements of medium capacities
- Protecting electronic equipment from lightning surges that enter through substations and step-down transformers
- Discharge element failure triggers the fuse blown and alarm contact closed
- Also effective in rejecting switching transients generated by thyristors, circuit breakers, motor starters, etc.

#### Typical Applications

- Control panels
- Telemetry systems



## MODEL: MH-110A

### ORDERING INFORMATION

- Code number: MH-110A

### GENERAL SPECIFICATIONS

- Connection:** M4 screw terminals (torque 1.6 N·m)
- Screw terminal:** Nickel-plated brass
- Housing material:** Steel plate  $t = 1.6$  (black)
- Alarm indicator:** Discharge element failure indicator turns white when the fuse is blown.
- Monitor lamp:** Green neon lamp turns on when the power is supplied.
- Alarm relay contact:** Turns ON with discharge element failure (when the fuse is blown)
- **Rated load:** 100 V AC @ 250 mA ( $\cos \theta = 1$ )  
100 V DC @ 250 mA (resistive load)
  - **Maximum switching voltage:** 125 V AC or 125 V DC
  - **Maximum switching power:** 25 VA or 25 W
  - **Minimum load:** 5 V DC @ 10 mA

### INSTALLATION

- Operating temperature:** -5 to +55°C (23 to 131°F)
- Operating humidity:** 30 to 90 %RH (non-condensing)
- Mounting:** Surface
- Weight:** 3.0 kg (6.6 lb)

### PERFORMANCE

#### Discharge voltage (peak voltage)

- Line to line: 190 V min.
- Line to ground: 410 V min.

#### Maximum surge voltage

- Line to line: 350 V max.
- Line to ground: 700 V max.

(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:**  $\leq 0.1 \mu\text{sec}$ .

#### Leakage current

- Line to line:  $\leq 1 \text{ mA}$  at 150 V DC
- Line to ground:  $\leq 1 \text{ mA}$  at 300 V DC

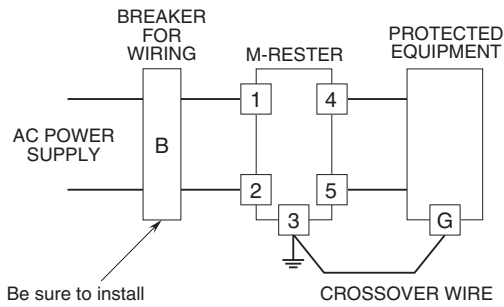
**Discharge current capacity:** 10000 A (8/ 20  $\mu\text{sec}$ .)

**Maximum load current:** 10 A

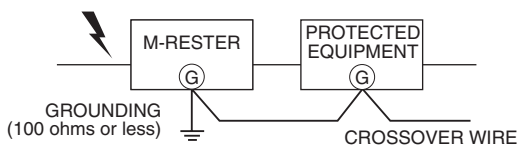
**Voltage drop:**  $\leq 2 \text{ V}$  (50/60 Hz)

**Rated line voltage:** 100 V / 110 V / 120 V AC

## CONNECTION EXAMPLES

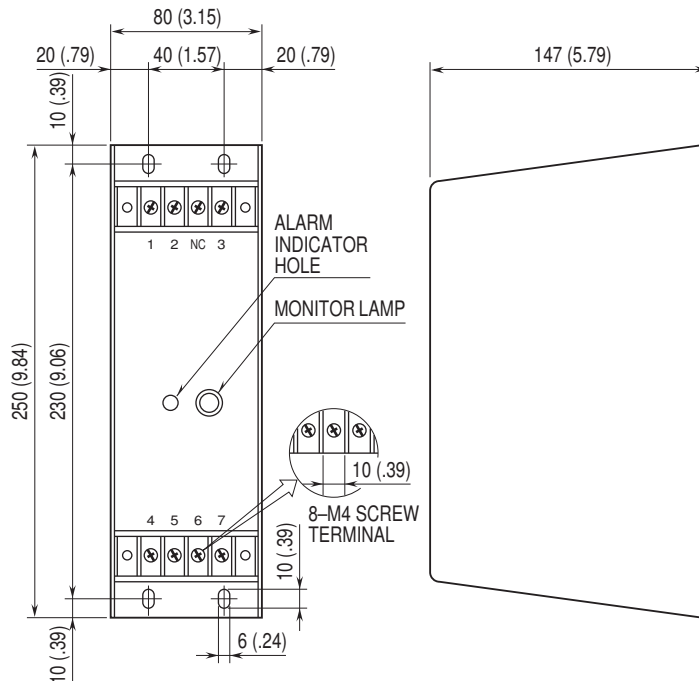


## GROUNDING

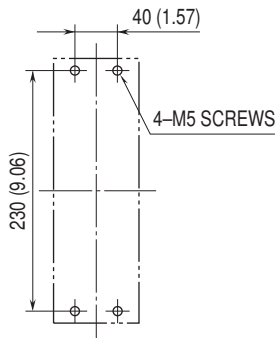


A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.  
If the protected equipment has no ground terminal, ground the M-RESTER only.

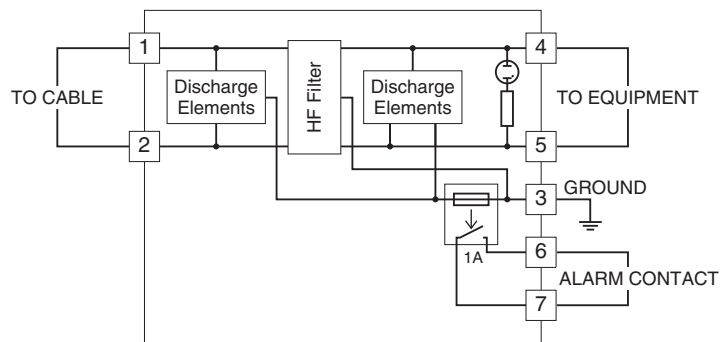
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT unit: mm (inch)



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



**SCHEMATIC CIRCUITRY**



Specifications are subject to change without notice.