

## Lightning Surge Protectors for Electronics Equipment M-RESTER

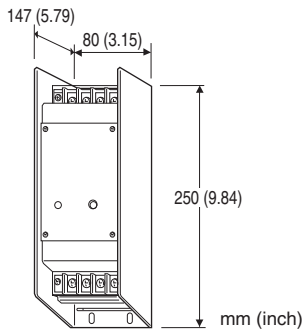
**LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE**  
(10A, 200 / 220 / 240 V AC)

### 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-210A

### ORDERING INFORMATION

- Code number: MH-210A

### 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:** Red 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  $\phi$  = 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: 410 V min.
- Line to ground: 410 V min.

#### Maximum surge voltage

- Line to line: 700 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 300 V DC
- Line to ground:  $\leq 1 \text{ mA}$  at 300 V DC

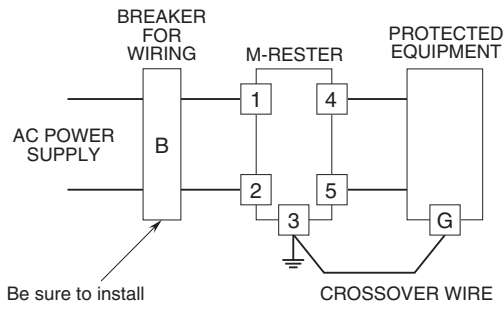
**Discharge current capacity:** 10000 A (8/ 20  $\mu\text{sec}$ .)

**Maximum load current:** 10 A

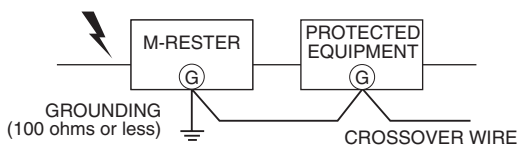
**Voltage drop:**  $\leq 2 \text{ V}$  (50/60 Hz)

**Rated line voltage:** 200 V / 220 V / 240 V AC

## CONNECTION EXAMPLES

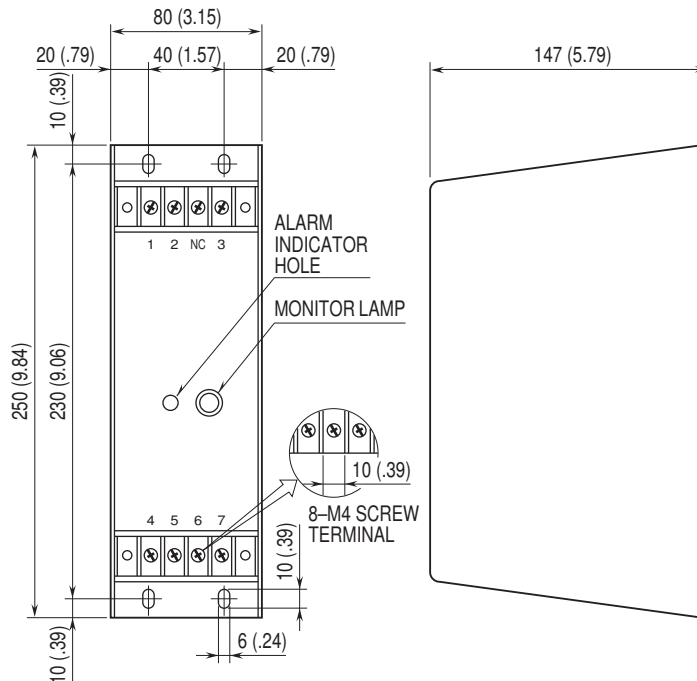


## GROUNDING

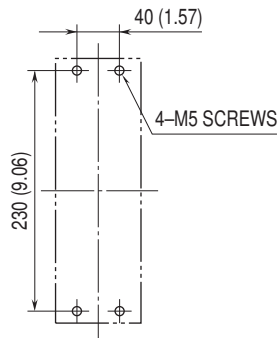


A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.  
If the protected equipment has no ground terminal, ground the M-RESTER only.

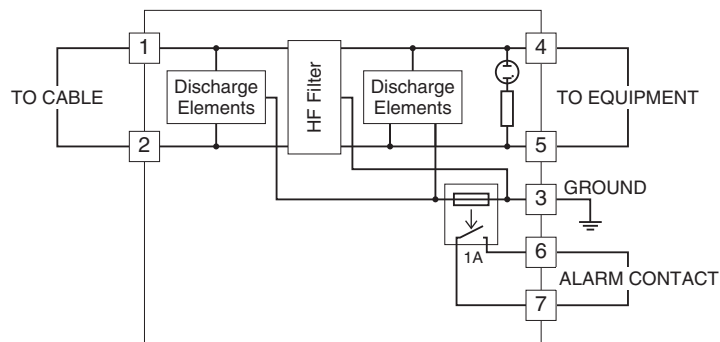
## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT unit: mm [inch]



**MOUNTING REQUIREMENTS unit: mm [inch]**



**SCHEMATIC CIRCUITRY**



Specifications are subject to change without notice.