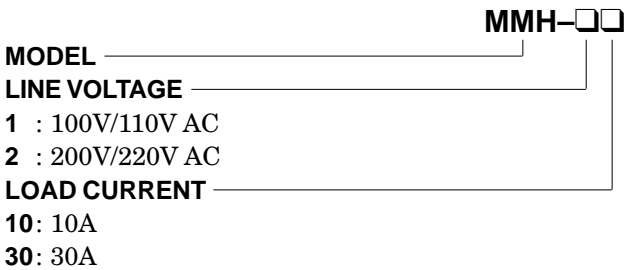


Lightning Surge Protectors for Electronics Equipment *M-RESTER*

| | | |
|--|-------|------------|
| LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE (10 – 30A; replaceable arrester module) | MODEL | MMH |
|--|-------|------------|

MODEL & SUFFIX CODE SELECTION



Functions & Features

- Designed specifically for power requirements of medium capacities (10 or 30 amps)
- Separating the arrester module when a leak current is detected at the module
- Relay contact and front LED turn ON in case of the arrester module failure
- The plug-in type arrester module can be easily replaced

Typical Applications

- Control panels
- Telemetering panels
- PLC panels
- Computer systems

ORDERING INFORMATION

Specify code number. (e.g. MMH-130)

RELATED PRODUCTS

- Lightning arrester for standard signal line (model: MMD-24)
- Arrester module (model: MEH)

GENERAL SPECIFICATIONS

- Construction:** wall-mounted, front terminals; terminal cover provided
- Connection:** M4 screw terminals (nickel-plated brass; torque ≤1.6 N·m)
- Housing material:** SPCC t=1.6 (black)
- Alarm contact:** turns ON when the arrester module (model: MEH) is failed or extracted or when the power supply is removed.
- Rating:** 110V AC @1A (cosφ=1)
24V DC @1A (resistive load)
electrical life 2 × 10⁵ cycles (rate 30/min.)
- Maximum switching voltage:** 250V AC or 125V DC
- Maximum switching power:** 110VA or 24W
- Minimum load:** 12V DC @10mA
- Mechanical life:** 5 × 10⁷ cycles
- Monitor LED (arrester module)**
 - RUN:** green LED turns on in normal conditions
 - ALARM:** red LED turns on in an abnormality; alarm detecting current approx. 100mA

ALARM CONTACT

If a leak current greater than approx. 100mA is detected from the surge absorber element inside the MEH, the relay driver circuit turns on the alarm contact output of the MMH and the ALARM LED (red). When the alarm contact is output, unplug the MEH and then plug it back in to check the ALARM LED status and confirm that the element is failed. If the ALARM LED remains ON, install a new MEH module. (Refer to the instruction manual for MMH for replacing procedure.)

During NORMAL operation, it is possible for the ALARM LED to remain OFF and the ALARM contact to turn ON momentarily when experiencing lightning surges. Please continue use of the unit as this is standard operation.

INSTALLATION

- Power input:** 90 – 120V or 180 – 242V AC, 50/60 Hz, 10VA max.
- Operating temperature:** -5 to +55°C (23 to 131°F)
- Operating humidity:** 30 to 90% RH (non-condensing)
- Mounting:** surface
- Dimensions:** W80×H250×D120 mm (0.31"×9.84"×4.72")
- Weight:** 3 kg (6.61 lbs)

PERFORMANCE

AC discharge voltage

Between lines: 130V AC min. (MMH-1□)
285V AC min. (MMH-2□)

Line to ground: 285V AC min.

Maximum surge voltage (peak-to-peak)*

Between lines: 350V max. (MMH-1□)
700V max. (MMH-2□)

Line to ground: 800V max.

(Usable for those instruments which can withstand 1000V AC between the circuit and housing)

*The maximum voltage that could pass through M-RESTER. Protected equipment must be able to withstand this voltage for very short time period.

Leakage current

Between lines: ≤50mA at 110V AC (MMH-1□) or
≤30mA at 220V AC (MMH-2□)
including driving current for the MEH
and relay

Line to ground: ≤1mA at 220V AC

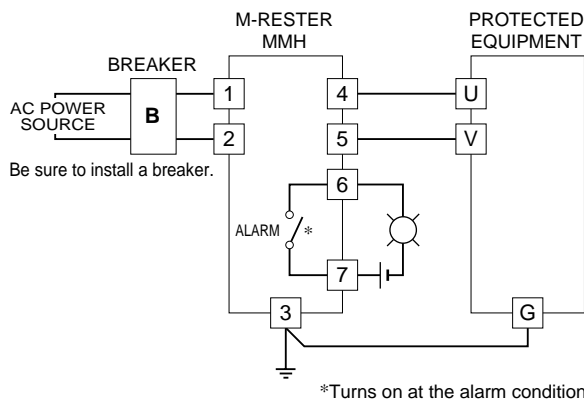
Response time: ≤0.01 microseconds

Discharge current capacity: 10000A (8 / 20 μsec.)

Maximum load current: 10A (MMH-□10)
30A (MMH-□30)

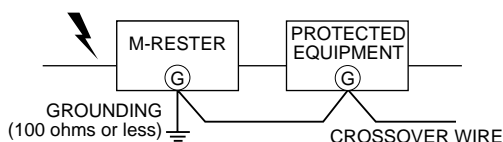
Voltage drop: ≤1V (50/60 Hz)

CONNECTION DIAGRAM

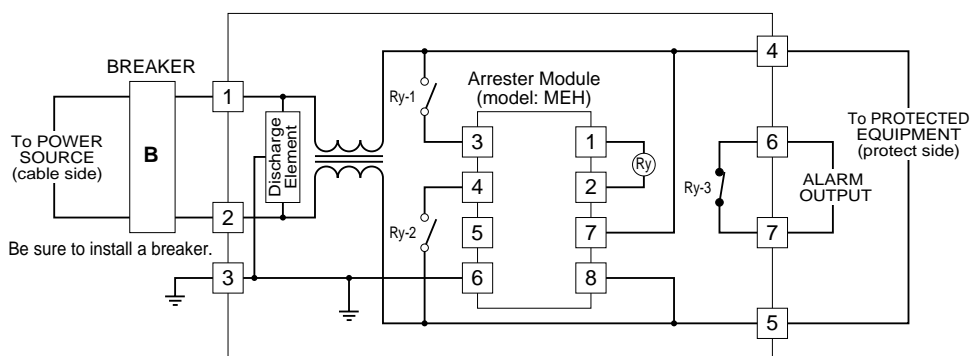


GROUNDING

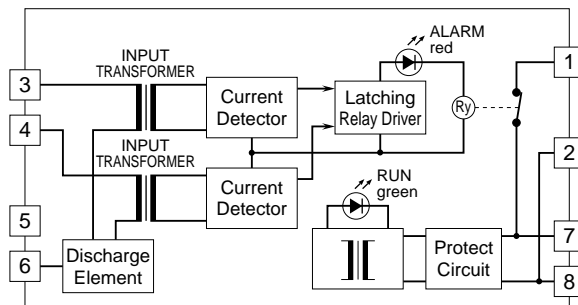
A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.



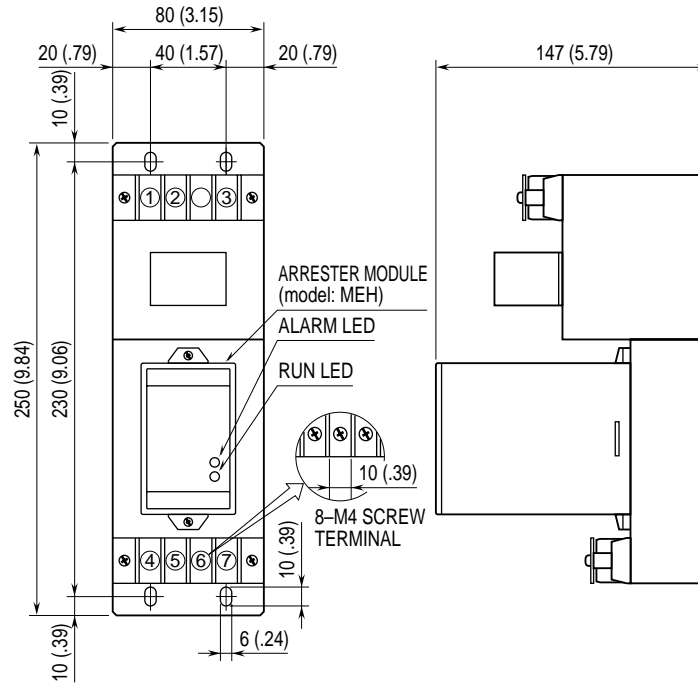
SCHEMATIC CIRCUITRY



• Arrester Module (model: MEH)



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT mm (inch)



MOUNTING REQUIREMENTS mm (inch)

