

Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE

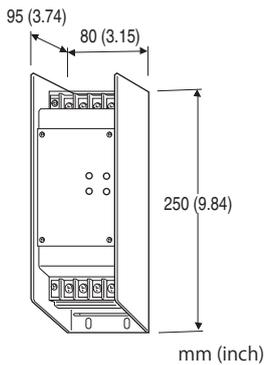
(20 A)

Functions & Features

- Designed specifically for power requirements of medium capacities (20 amps)
- Protecting electronic equipment from lightning surges that enter through power supply circuits
- Discharge current capacity 10000 A
- Surge absorber failure indicated with LED
- Detaching the discharge elements from the power supply circuits when fuses are blown

Typical Applications

- Computers and other electronic devices
- Control and telemetering systems



MODEL: MAH-[1]

ORDERING INFORMATION

- Code number: MAH-[1]
- Specify a code from below for [1].
(e.g. MAH-223)

[1] OPERATIONAL VOLTAGE

- 121:** Single phase 2-wire, 100 V / 110 V / 120 V AC
221: Single phase 2-wire, 200 V / 220 V / 240 V AC
123: Single phase 3-wire, 100 V / 110 V / 120 V AC
 (Phase voltage (line-neutrality))
223: Three phase 3-wire, 200 V / 220 V / 240 V AC

GENERAL SPECIFICATIONS

- Construction:** Stand-alone; terminal access at the front
Connection: M4 screw terminals (torque 1.6 N·m)

Screw terminal: Nickel-plated brass

Housing material: Steel plate t = 1.6 (black)

Alarm indicator LED: Red lights turn ON with power supplied; OFF at error

INSTALLATION

Operating temperature: -5 to +55°C (23 to 131°F)

Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface

Weight: 2 kg (4.4 lb)

PERFORMANCE

Response time: ≤ 0.1 μsec.

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

Maximum load current: 20 A

Voltage drop: ≤ 1 V (50/60 Hz)

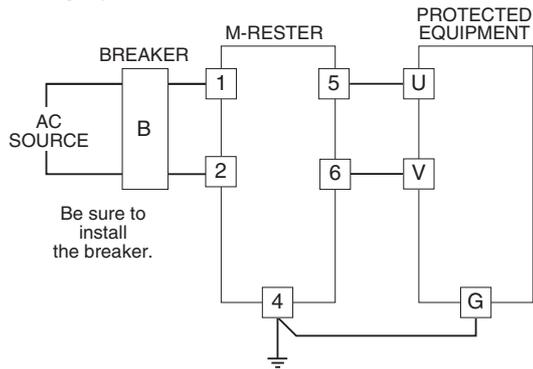
	BETWEEN LINES		LINE TO GND
	MAH-121 (MAH-123 line-neutrality)	MAH-221, 223 (MAH-123 1-3)	
Discharge volt. (peak volt.)	190V min.	380V min.	380V min.
Max. surge voltage *	350V max.	700V max.	700V max.
Leakage current	≤40mA ** @110V AC	≤40mA ** @220V AC	≤1mA @220V AC

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

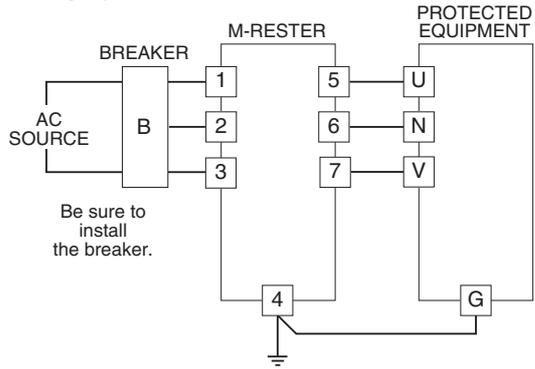
** Including the current consumed at the LEDs.

CONNECTION EXAMPLES

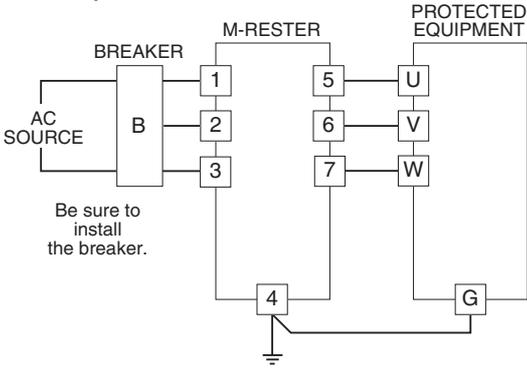
■ Single phase 2-wire



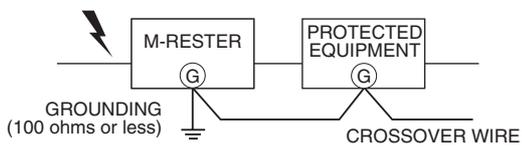
■ Single phase 3-wire



■ Three phase 3-wire



GROUNDING

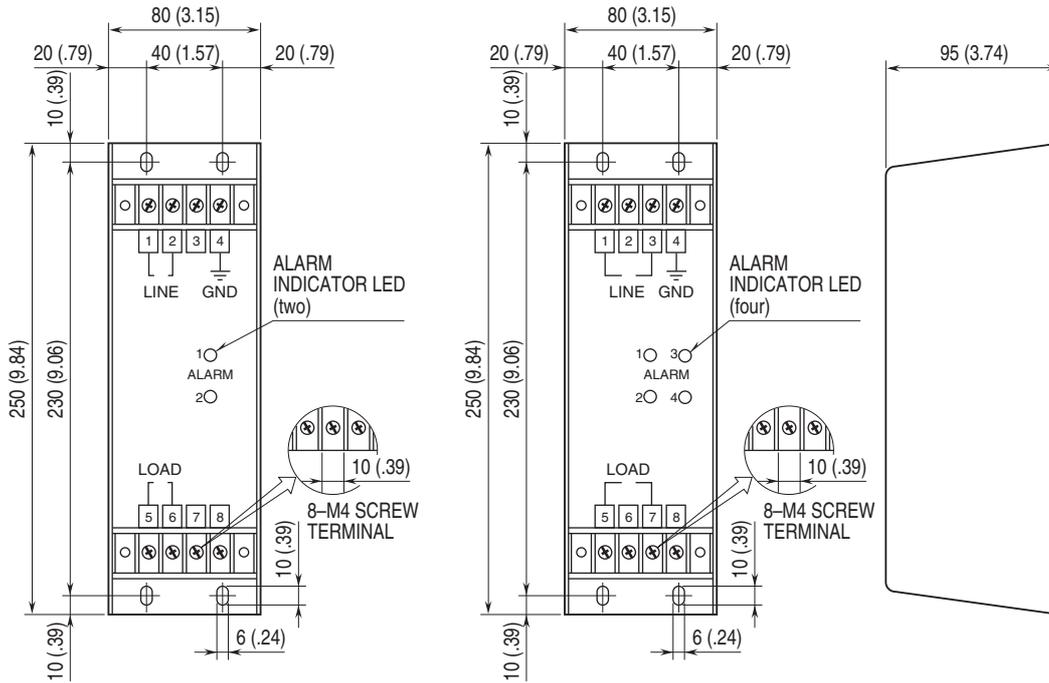


A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.
If the protected equipment has no ground terminal, ground the M-RESTER only.

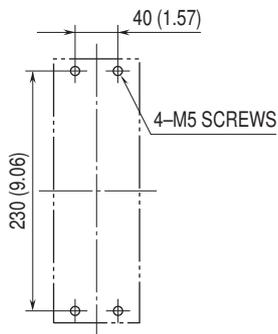
EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT unit: mm [inch]

■ 2-WIRE

■ 3-WIRE

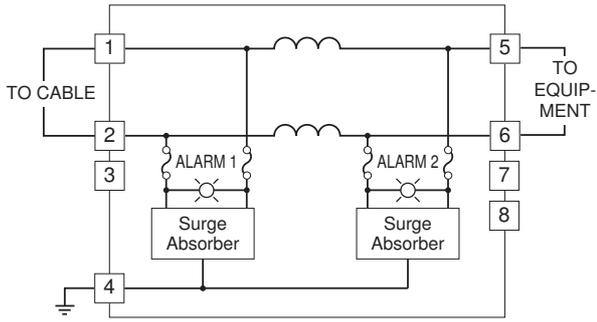


MOUNTING REQUIREMENTS unit: mm [inch]

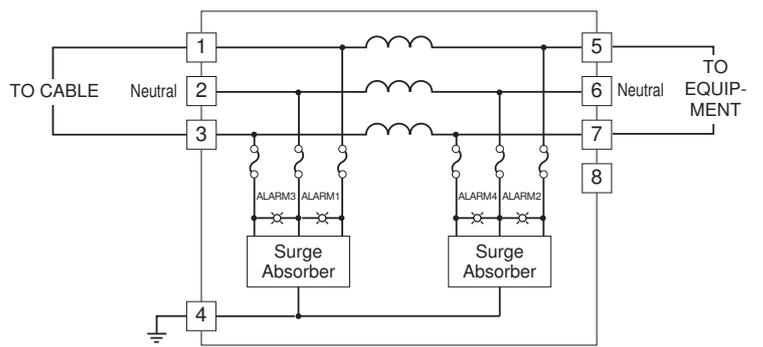


SCHEMATIC CIRCUITRY

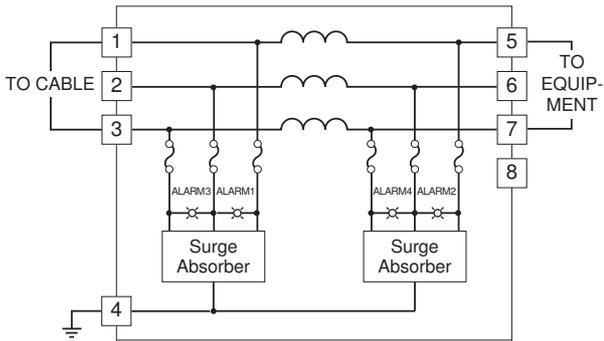
Single phase 2-wire



Single phase 3-wire



Three phase 3-wire



Specifications are subject to change without notice.