# Lightning Surge Protectors for Electronics Equipment M-RESTER

# LIGHTNING SURGE PROTECTOR FOR POWER SUPPLY USE

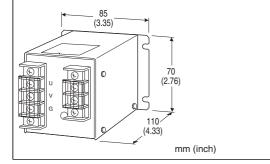
(10 A; high speed/high discharge current capacity)

#### **Functions & Features**

- Designed specifically for AC power supplies up to 10 A
- Discharge current capacity 20000 A
- Absorbing surges only without affecting instrumentation signal
- Indicator LED turns off with surge absorber anomaly
- Fuse provided for preventing ignition caused by failure of surge absorber

#### **Typical Applications**

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



**MODEL:** MMAH-[1]

#### ORDERING INFORMATION

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

#### [1] OPERATIONAL VOLTAGE

**100**: 100 V / 110 V / 120 V AC, 10 A **200**: 200 V / 220 V / 240 V AC, 10 A

#### **RELATED PRODUCTS**

• Lightning arrester for standard signal line (model: MMDH-24)

## **GENERAL SPECIFICATIONS**

Construction: Wall-mounted, front terminals; terminal cover

provided

Connection: M4 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

**Housing material**: Steel plate t = 1.6 (black) **Fuse**: Protecting voltage limiting element

Alarm indicator: Green LED turns off when the fuse is blown.

#### **INSTALLATION**

Operating temperature: -5 to +55°C (23 to 131°F)
Operating humidity: 30 to 90 %RH (non-condensing)

Mounting: Surface Weight: 640 g (1.41 lb)

#### **PERFORMANCE**

Discharge voltage (peak voltage)

Line to line:

190 V min. (MMAH-100) 410 V min. (MMAH-200) Line to ground: 680 V min.

Maximum surge voltage

Line to line:

400 V max. (MMAH-100) 750 V max. (MMAH-200) Line to ground: 800 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: 4 nsec.
Leakage current

Line to line:

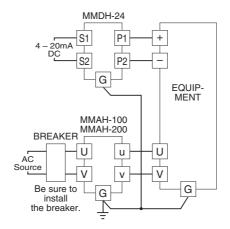
 $\leq$  4 mA at 150 V DC (MMAH-100)  $\leq$  4 mA at 300 V DC (MMAH-200) Line to ground:  $\leq$  0.1 mA at 300 V DC

Discharge current capacity: 20000 A (8 / 20 µsec.)

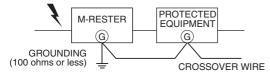
Maximum load current: 10 A

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

### **CONNECTION EXAMPLES**



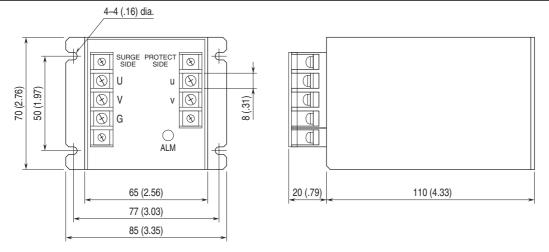
# **GROUNDING**



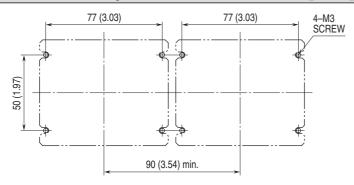
A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.

If the protected equipment has no ground terminal, ground the M-RESTER only.

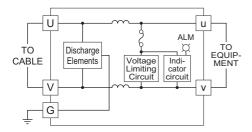
## **DIMENSIONS unit: mm (inch)**



# MOUNTING REQUIREMENTS unit: mm [inch]



# **SCHEMATIC CIRCUITRY**



 $\Lambda$ 

Specifications are subject to change without notice.