

Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR AC POWER SUPPLY

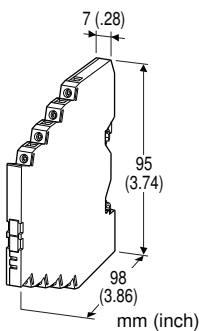
(max. 3A; ultra-slim)

Functions & Features

- High discharge current capacity 10 kA (8 / 20 μ s)
- Ultra-thin 7-mm-wide module can be mounted in high density
- Excellent protection employing multi-stage SPD circuits
- DIN rail mounting and grounding
- Power line monitor LED
- CE marking

Typical Applications

- Protecting small capacity AC control drives
- Protecting small capacity power supply units



MODEL: MD7AP-[1]

ORDERING INFORMATION

- Code number: MD7AP-[1]
- Specify a code from below for [1].
- (e.g. MD7AP-100)

[1] OPERATIONAL VOLTAGE

- 100: 100 V / 110 V / 120 V AC
- 200: 200 V / 220 V / 240 V AC

GENERAL SPECIFICATIONS

- Construction:** Slim-sized front terminal structure
- Degree of protection:** IP20
- Connection:** Euro terminal block (torque 0.3 N·m)
- Applicable wire size:** 0.2 - 2.5 mm²
- Grounding:** DIN Rail
- Housing material:** Flame-resistant resin (black)
- Monitor LED:** Green LED turns ON when the voltage is

supplied; OFF when the safety fuse is blown.

INSTALLATION

AC power supply: Max. output current 3 A

Caution: Use an AC power source with the overload current protection function.

Operating temperature: -25 to +85°C (-13 to +185°F)

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

Mounting: DIN Rail (TH35-7.5, 1-mm-thick)

Oxide film on the surface of an aluminium rail may lower the electric conductivity between this module and the ground. Use a steel or copper rail.

Weight: 85 g (3.0 oz)

PERFORMANCE

	LINE TO LINE		LINE TO EARTH
	MD7AP-100	MD7AP-200	
Max. continuous operating voltage (Uc)	140V AC	275V AC	275V AC
Voltage protection level (Up) @6kV (1.2 / 50 μ s)	±550V	±850V	±850V
Leakage current @Uc	≤1mA	≤1mA	≤1mA
Response time	≤20 nsec.	≤20 nsec.	≤20 nsec.
Max. discharge current (Imax)	10kA (8 / 20 μ s)		
Nominal current (In)	3A		

STANDARDS & APPROVALS

CE conformity:

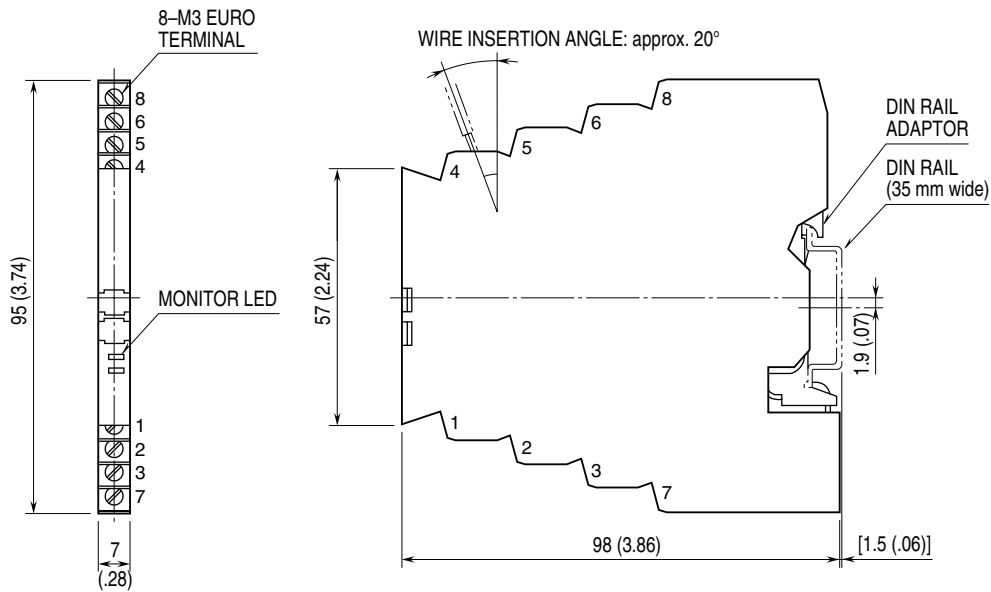
- EMC Directive (2004/108/EC)
- EMI EN 61000-6-4: 2007
- EMS EN 61000-6-2: 2005
- Low Voltage Directive (2006/95/EC)
- EN 61643-21: 2001

Surge protection:

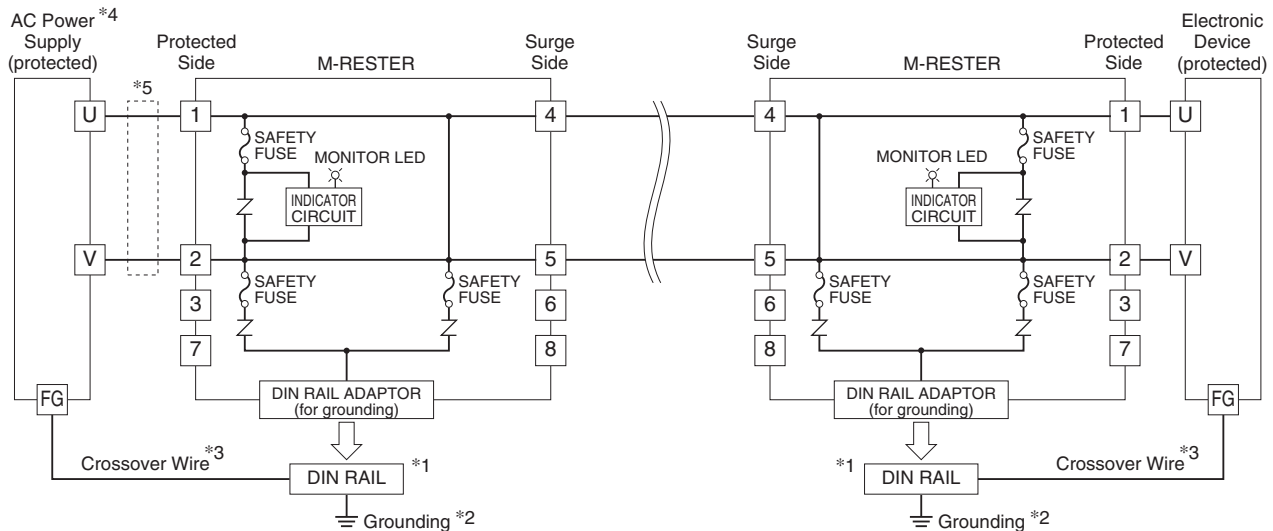
- IEC 61643-21: 2000
- EN 61643-21: 2001 (Categories C1, C2)



EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



- *1. Oxide film on the surface of an aluminium rail may lower the electric conductivity between this module and the ground. Use a steel or copper rail.
- *2. Be sure to ground the DIN rail. Recommended grounding resistance $\leq 100\Omega$
- *3. Cross-wire between the DIN rail and the metal housing of the protected device to equalize the earth potential. Ground only the surge protector when the protected device has no ground terminal.
- *4. Use an AC power source with the overload current protection function. (maximum output current 3A)
- *5. Install a current limiting element (capacity 3) when the output current exceeds 3A.



Specifications are subject to change without notice.