

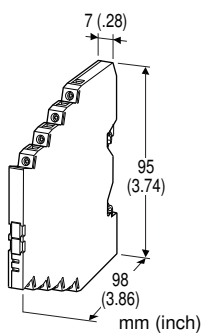
**Lightning Surge Protectors for
Electronics Equipment M-RESTER**

**LIGHTNING SURGE PROTECTOR FOR
DC POWER SUPPLY**

(max. 1.2 A; ultra-slim)

Functions & Features

- High discharge current capacity 20 kA (8/20 μs), 1 kA (10/350 μs)
- Ultra-thin 7-mm-wide module can be mounted in high density
- Excellent protection employing multi-stage SPD circuits
- DIN rail mounting and grounding
- Shield terminal provided
- CE marking



MODEL: MD7DP-[1]

ORDERING INFORMATION

- Code number: MD7DP-[1]
- Specify a code from below for [1]
- (e.g. MD7DP-24)

[1] NOMINAL VOLTAGE

- 12: 12 V DC
- 24: 24 V DC

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

- DC power supply:** Max. output current 1.2 A
- Caution:** Use a DC 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:** 70 g (2.5 oz)

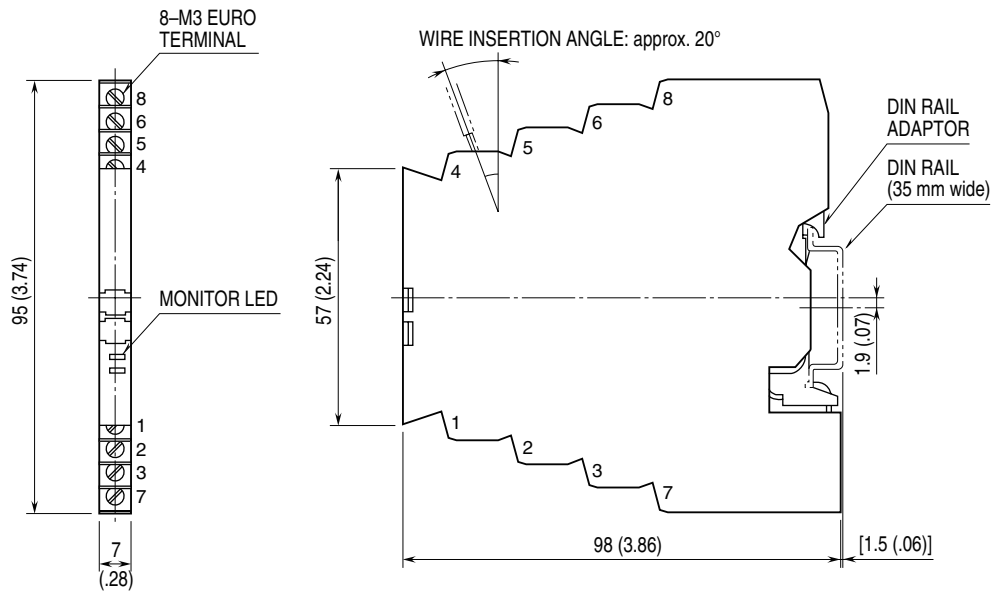
PERFORMANCE

	LINE TO LINE		LINE TO EARTH
	MD7DP-12	MD7DP-24	
Max. continuous operating voltage (Uc)	14V	27V	±160V
Voltage protection level (Up) @4kV (1.2 / 50 μs)	±150V	±170V	±1200V
Leakage current @Uc	≤6mA	≤6mA	≤5μA
Response time	≤4 nsec.	≤4 nsec.	≤20 nsec.
Max. discharge current (Imax)	20kA (8 / 20 μs)		1.0kA (10 / 350 μs)
Nominal current (IN)	1.2A		
Internal series resistance	≤0.8Ω including return		

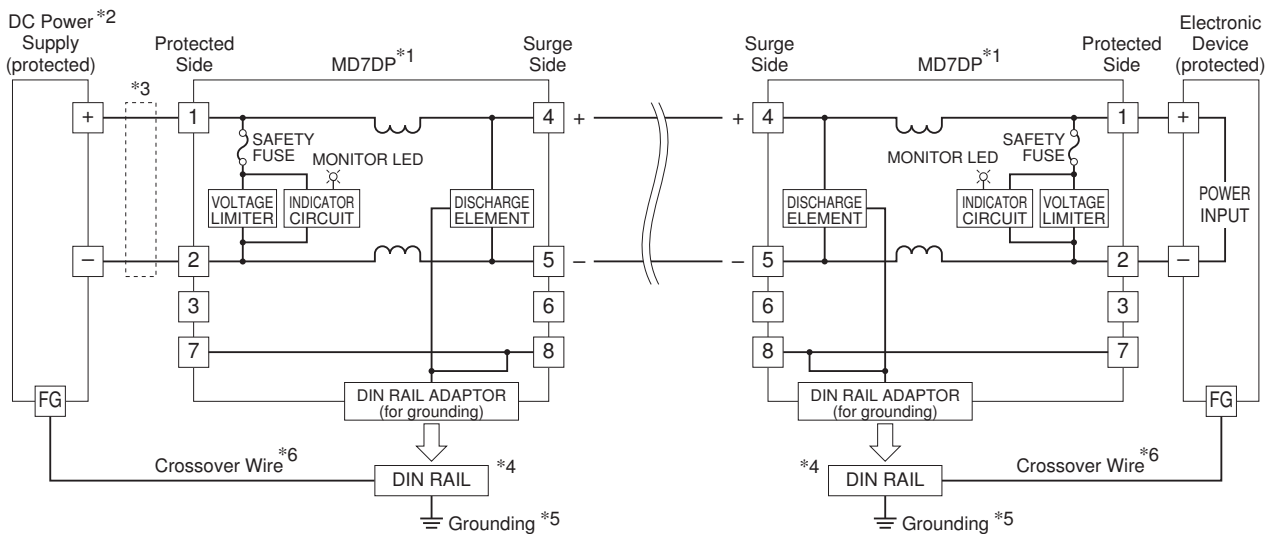
STANDARDS & APPROVALS

- CE conformity:**
- EMC Directive (2004/108/EC)
- EMI EN 61000-6-4: 2007
- EMS EN 61000-6-2: 2005
- Surge protection:** IEC 61643-21: 2000 (Categories C1, C2, D1)

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



- *1. The MD7DP is not applicable to protect two-wire transmitters. To protect two-wire transmitters, model MD7ST designed to yield only small leakage current is suitable.
Confirm the polarity of the terminals when connecting this module to a protected device.
- *2. Use a DC power source with the overload current protection function. (maximum output current 1.2A)
- *3. Install a current limiting element (capacity 1.2A) when the output current exceeds 1.2A.
- *4. Oxide coating of an aluminium rail may lower the electric conductivity between this module and the ground.
Use a steel or copper rail.
- *5. Be sure to ground the DIN rail. Recommended grounding resistance ≤ 100
- *6. 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.



Specifications are subject to change without notice.