

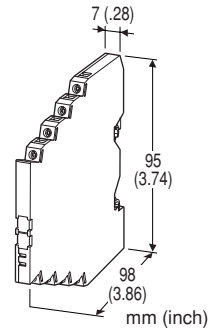
**Lightning Surge Protectors for Electronics Equipment *M-RESTER***

**LIGHTNING SURGE PROTECTOR FOR DC POWER SUPPLY (max. 1.2A; ultra-slim)**

MODEL **MD7DP**

**MODEL & SUFFIX CODE SELECTION**

MODEL \_\_\_\_\_ MD7DP-□  
 NOMINAL VOLTAGE \_\_\_\_\_  
 12: 12V DC  
 24: 24V DC



**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

**ORDERING INFORMATION**

Specify code number. (e.g. MD7DP-24)

**GENERAL SPECIFICATIONS**

**Ingress protection:** IP 20  
**Connection:** Euro terminal block (torque 0.3 N·m)  
**Applicable wire size:** 0.2 – 2.5 mm<sup>2</sup>  
**Housing material:** Flame-resistant resin (black)  
**Grounding:** DIN Rail  
**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 1.2A  
 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 coating of an aluminum rail may lower the electric conductivity between this module and the ground. Use a steel or copper rail.  
**Dimensions:** W7×H98×D95 mm (0.28"×3.86"×3.74")  
**Weight:** 70 g (2.5 oz)

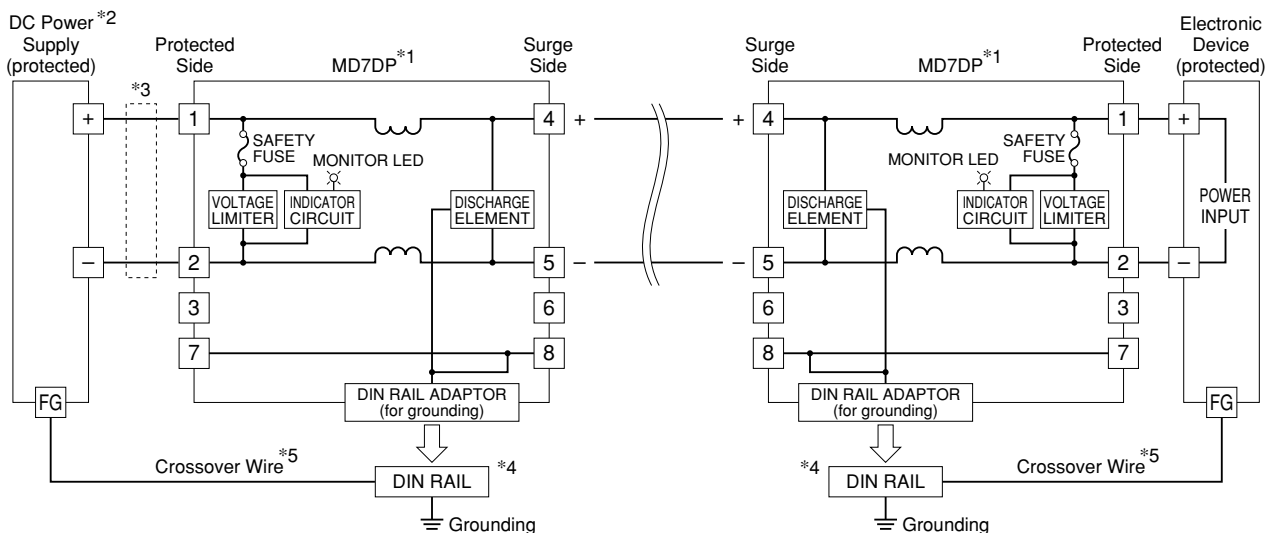
**PERFORMANCE**

	LINE TO LINE		LINE TO
	MD7DP-12	MD7DP-24	EARTH
Max. continuous operating voltage (Uc)	14V	27V	±160V
Voltage protection level (Up) @4kV (1.2 / 50 μs)	±150V max.	±170V max.	±1200V max.
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 (89/336/EEC)  
 EMI EN61000-6-4  
 EMS EN61000-6-2  
**Surge protection:** IEC 61643-21  
 (Categories C1, C2, D1)

**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. Be sure to ground the DIN rail. Recommended grounding resistance  $\leq 100\Omega$
- \*5. 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.

**EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENT (unit: mm)**

