

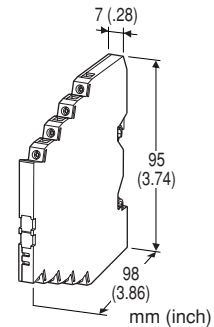
**Lightning Surge Protectors for Electronics Equipment *M-RESTER***

**LIGHTNING SURGE PROTECTOR FOR  
RS-485 / RS-422 (ultra-slim)**

MODEL **MD74R**

**MODEL & SUFFIX CODE SELECTION**

MODEL \_\_\_\_\_ MD74R-□  
 SHIELD TERMINAL (to earth) \_\_\_\_\_  
 FF : Floating  
 FG : Grounding



**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. MD74R-FG)

**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

**INSTALLATION**

**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)

**STANDARDS & APPROVALS**

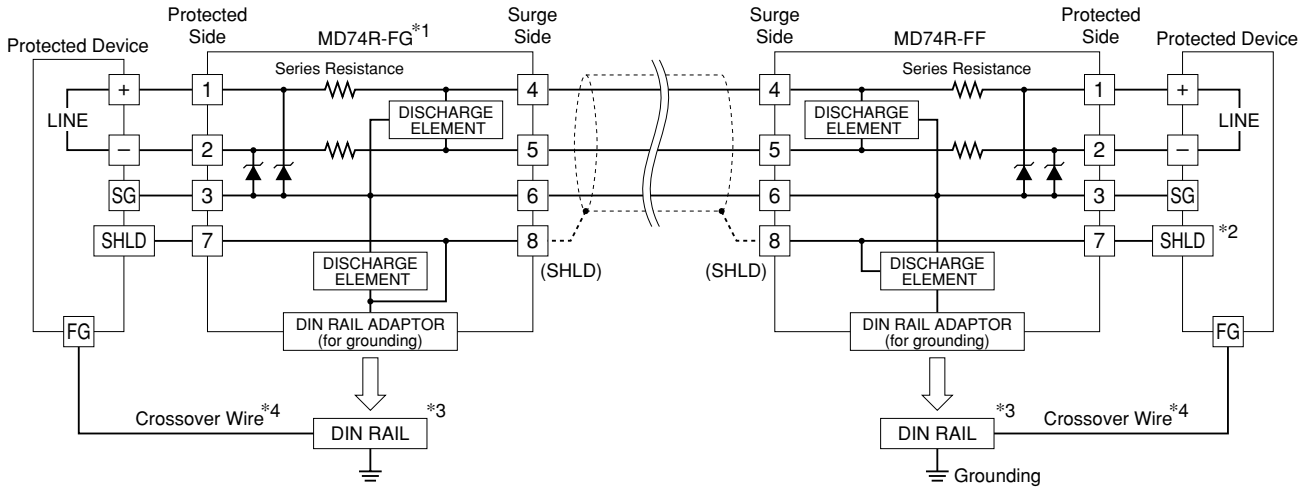
**CE conformity:** EMC Directive (89/336/EEC)  
 EMI EN61000-6-4  
 EMS EN61000-6-2  
**Surge protection:** IEC 61643-21  
 (Categories C1, C2, D1)

**PERFORMANCE**

	LINE TO LINE	LINE TO SG	LINE/SG TO EARTH	SHLD TO EARTH
Max. continuous operating voltage (Uc)	±5V	5V	±160V	±160V *1
Voltage protection level (Up) @4kV (1.2 / 50 μs)	±25V max.	25V max.	±800V max.	±800V max.*1
Leakage current @Uc	≤200μA	≤200μA	≤10μA	≤10μA*1
Response time	≤4 nsec.	≤4 nsec.	≤20 nsec.	≤20 nsec.*1
Max. discharge current (Imax)	20kA (8 / 20 μs), 1.0kA (10 / 350 μs)			
Nominal current (In)	100mA			
Internal series resistance	2Ω ±10% per line			
Input attenuation	-0.5 dB max. @DC...2.0 MHz, Z <sub>0</sub> = 110Ω			

\*1. Values for the MD74R-FF. Shortcircuited for the MD74R-FG.

**SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM**



- \*1. Choose the MD74R-FG when the shield wire is to be grounded.
- \*2. When SHLD and SG terminals are not isolated, DO NOT connect the surge protector's terminal 7 to SHLD.
- \*3. Be sure to ground the DIN rail. Recommended grounding resistance max. 100 ohms.
- \*4. Cross-wire from the DIN rail to the metal housing of the protected device to equalize the ground potential. Ground only the surge protector when the protected device has no grounding terminal.

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

