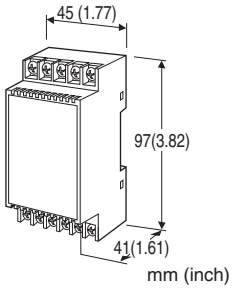
Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR RS-485 / RS-422

(full-duplex)

Functions & Features

•Designed specifically for RS-485 or RS-422 transmission line



MODEL: MDW5-4R

ORDERING INFORMATION

• Code number: MDW5-4R

GENERAL SPECIFICATIONS

Construction: Terminal block

Connection

Surge side: M3 screw terminals (torque 0.8 N·m)

Protected device side: M3.5 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

INSTALLATION

Operating temperature: -5 to +55°C (23 to 131°F)

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

Mounting: DIN rail

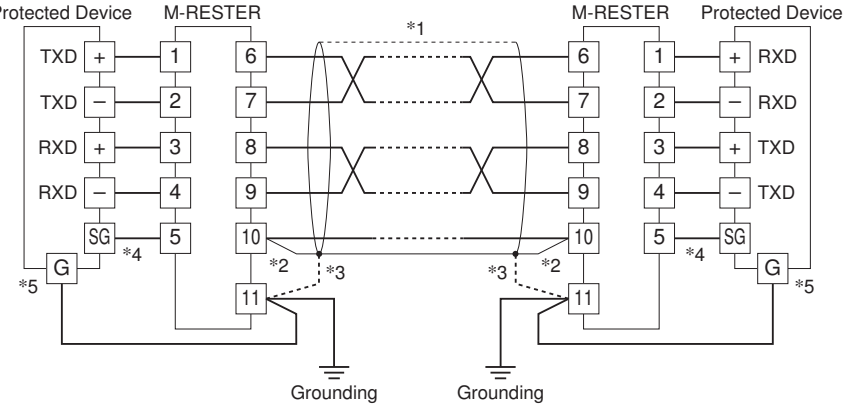
Weight: 130 g (0.29 lbs)

PERFORMANCE

	BETWEEN LINES	LINE TO SG	LINE TO GROUND
Discharge voltage	±5V min. 6-7, 8-9	5V min. 6/7/8/9-10	±140V min. each line-G
Max. surge voltage*	±25V max. 1-2, 3-4	25V max. 1/2/3/4-5	±600V max. each line-G
Leakage current	≤0.2mA @±5V 6-7, 8-9	≤0.2mA @5V 6/7/8/9-10	≤10μA @±140V each line-G
Response time	≤4 nsec.	≤4 nsec.	≤20 nsec.
Capacitance (approx.)	500 pF @100 kHz	500 pF @100 kHz	100 pF @100 kHz
Discharge current	10kA (8 / 20 μsec.)		
Max. load current	100mA		
Internal series resist.	approx. 4.0Ω including return		
Max. line voltage	±5V		
Input attenuation	-0.5 dB max. @DC...2.0 MHz, Z_0 = 110Ω		
Transmission speed	≤1.5 Mbps recommended		

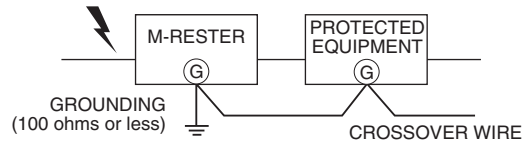
*The maximum voltage that could pass through M-RESTER. Protected equipment must be able to withstand this voltage for a very short time period.

CONNECTION EXAMPLES



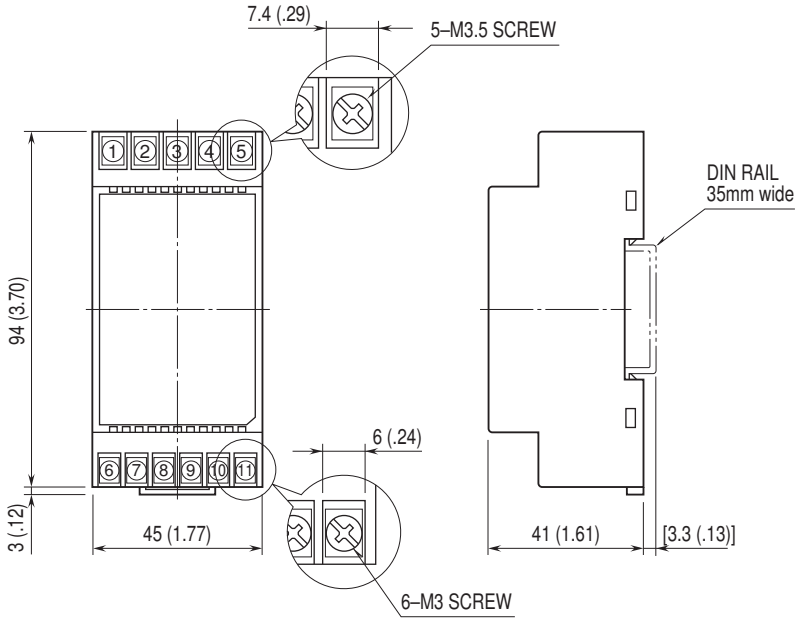
*1. Connect Terminals 6 – 7 and 8 – 9 when using a 4-core cable.
*2. This wiring is Not needed for a cable without shield.
*3. Cross wire to Terminal 11 when grounding the shield wire (if necessary).
*4. Leave Terminal 5 when the protected device has no SG (Signal Ground) terminal.
*5. Cross wire to the protected device's G terminal with Terminal 11 of the surge protector. Ground only the surge protector if the protected device has no G terminal.

GROUNDING



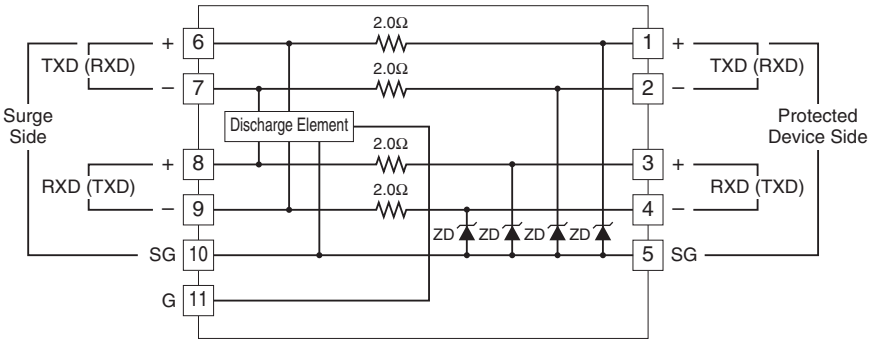
A crossover wire between M-RESTER ground and ground or metallic housing of equipment is required for protection.
If the protected equipment has no ground terminal, ground the M-RESTER only.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm (inch)



• When mounting, no extra space is needed between units.

SCHEMATIC CIRCUITRY



⚠ Specifications are subject to change without notice.