

Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR THREE-WIRE SIGNAL LOOP

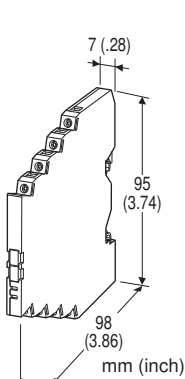
(ultra-slim)

Functions & Features

- High discharge current capacity 20 kA (8 / 20 μ s), 1 kA (10 / 350 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

Typical Applications

- Protecting a 3-wire transmitter loop
- Protecting an electronic device I/O



MODEL: MD73W-32[1][2]

ORDERING INFORMATION

- Code number: MD73W-32[1][2]
Specify a code from below for each [1] and [2].
(e.g. MD73W-320/Q)
- For the safety approval code 2, specify the product's destination country using Ordering Information Sheet (No. ESU-8057).
- Specify the specification for option code /Q
(e.g. /C01)

NOMINAL VOLTAGE

32: 32 V DC

[1] SAFETY APPROVAL

- 0: None
2: CENELEC intrinsic safety (ATEX)

[2] OPTIONS

- blank: none
/Q: With options (specify the specification)
(CENELEC intrinsic safety (ATEX) not available)

SPECIFICATIONS OF OPTION: Q

- COATING (For the detail, refer to M-System's web site.)**
/C01: Silicone coating
/C02: Polyurethane coating

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, stripped length 8 mm
Grounding: DIN Rail
Housing material: Flame-resistant resin (black)

INSTALLATION

- Operating temperature:** -25 to +85°C (-13 to +185°F)
(See Safety Parameters for use in a hazardous location.)
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 DIN 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

- Max. continuous operating voltage (Uc):**
Line to line: ± 32 V
Line to earth: ± 32 V
Voltage protection level (Up) @ 6 kV (1.2 / 50 μ s):
Line to line: ± 60 V
Line to earth: ± 60 V
Response time:
Line to line: ≤ 4 nsec.
Line to earth: ≤ 20 nsec.
Leakage current @Uc:
Line to line: ≤ 5 μ A
Line to earth: ≤ 5 μ A
Max. discharge current (Imax): 20 kA (8 / 20 μ s); 1.0 kA (10 / 350 μ s)
Nominal current (In): 400 mA
Internal series resistance: $\leq 2.2 \Omega \pm 20\%$ per line
Surge protection: IEC 61643-21 Categories C1, C2, D1

STANDARDS & APPROVALS

EU conformity:

ATEX Directive

Ex ia EN 60079-11

EMC Directive

EMI EN 61000-6-4

EMS EN 61000-6-2

RoHS Directive

EN 50581

Safety approval:

CENELEC: Intrinsic safety (ATEX)

⊕ II 1G, Ex ia IIC; T4 and T5

EN 60079-0

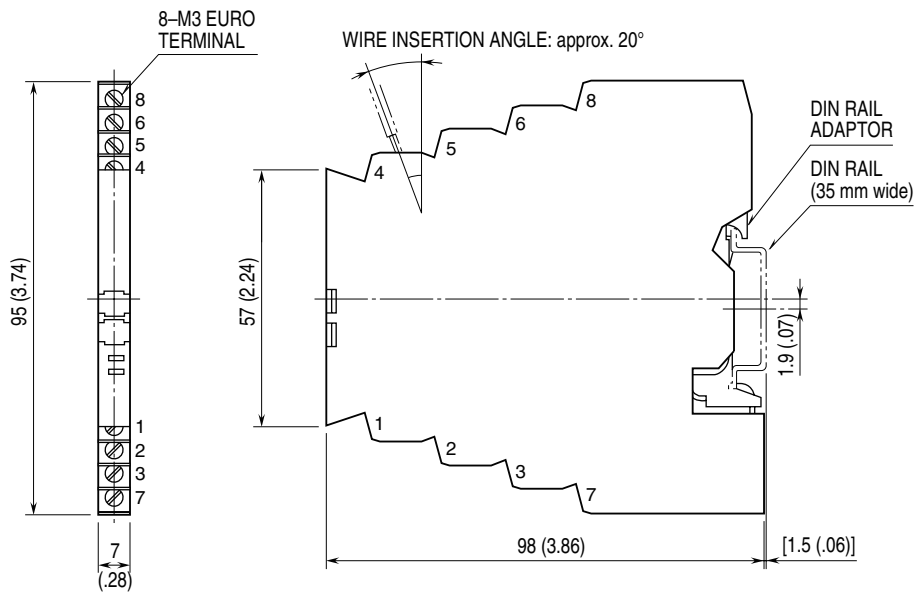
EN 60079-11

SAFETY PARAMETERS

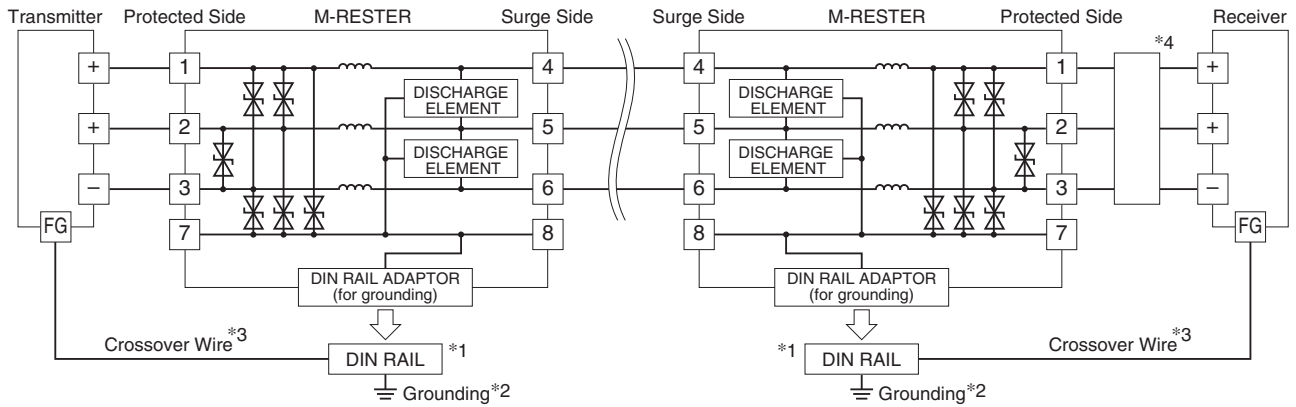
■ CENELEC / ATEX IS DATA

Ui (Vmax)	32V		
Ii (Imax)	150mA		
Ci	10 nF		
Li	150 μH		
Pi	Temp. Class	Range	Parameter
	T4	-25 to +40°C	1.3W
		-25 to +60°C	1.2W
		-25 to +80°C	1.0W
	T5	-25 to +40°C	1.0W

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. Install a circuit protector if the excitation supply rating is greater than the maximum load current of the surge protector.



Specifications are subject to change without notice.