

Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR TWO-WIRE SIGNAL LOOP

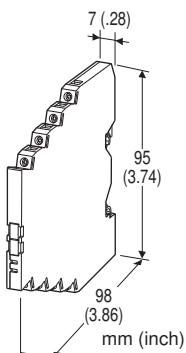
(ultra-slim; 2 channels)

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
- 2 channels packed in one housing
- Excellent protection employing multi-stage SPD circuits
- DIN rail mounting and grounding

Typical Applications

- Protecting a 2-wire transmitter loop
- Protecting an electronic device I/O



[2] SAFETY APPROVAL

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

[3] 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)

MODEL: MD72WD-[1][2][3]

ORDERING INFORMATION

- Code number: MD72WD-[1][2][3]
- Specify a code from below for each [1] through [3].
(e.g. MD72WD-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)

[1] NOMINAL VOLTAGE

- 07: 7 V DC
- 16: 16 V DC
- 32: 32 V DC

PERFORMANCE

MODEL NO.		MD72WD-07	MD72WD-16	MD72WD-32
Max. continuous operating voltage (Uc)	Line to Line	±7V	±16V	±32V
	Line to Earth	±7V	±16V	±32V
Voltage protection level (Up) @6kV (1.2 / 50 μs)	Line to Line	30V	45V	70V
	Line to Earth	35V	50V	75V
Leakage current @Uc	Line to Line	≤ 10μA	≤ 5μA	
	Other sections	≤ 10μA	≤ 5μA	
Response time	Line to Line	≤ 4 nsec.		
	Other sections	≤ 4 nsec.		
Max. discharge current (Imax)		20kA (8 / 20 μs), 1.0kA (10 / 350 μs)		
Nominal current (In)		250mA		
Internal series resistance		4.7Ω ±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

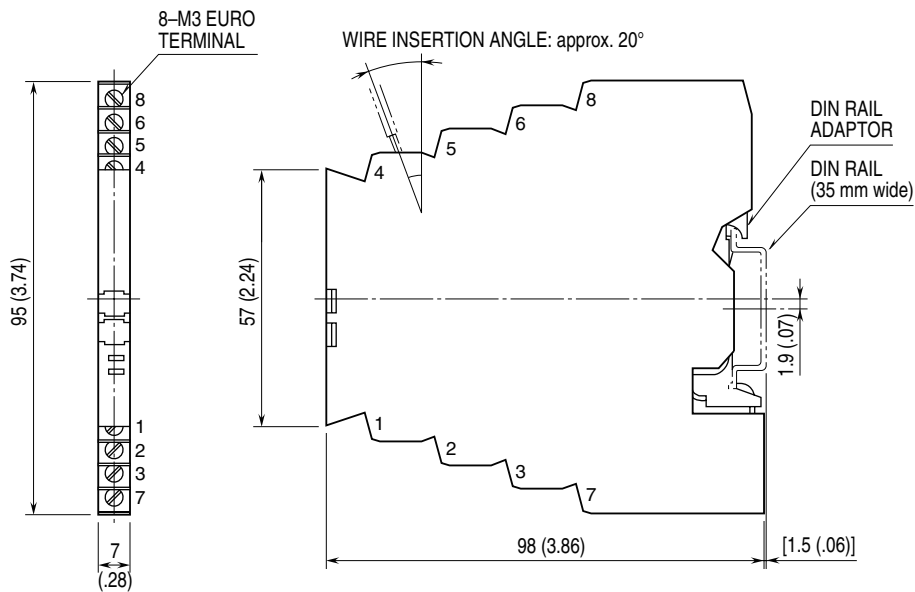
EN 60079-11

SAFETY PARAMETERS

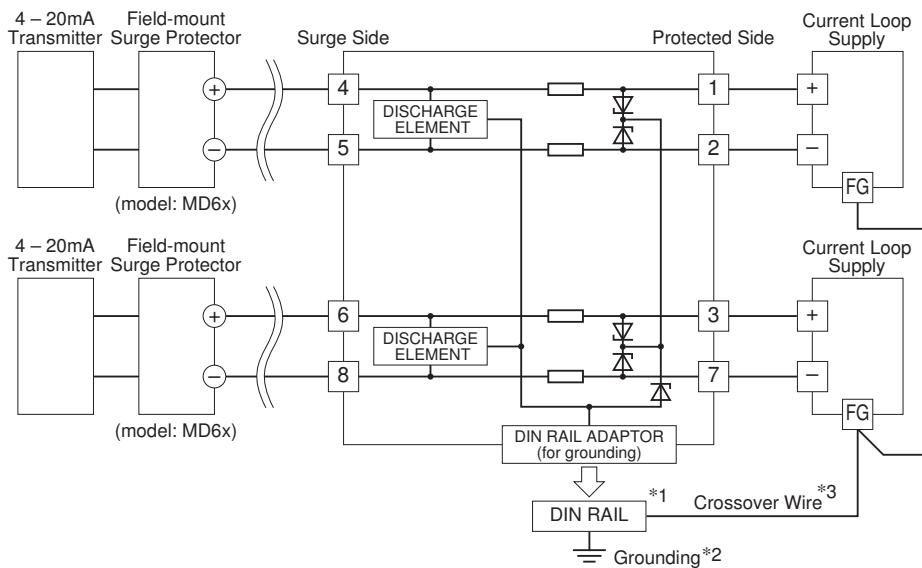
■ CENELEC / ATEX IS DATA

	MD72WD-07	MD72WD-16	MD72WD-32
Ui (Vmax)	7V	16V	32V
li (Imax)	any	any	any
Ci	50 nF	35 nF	15 nF
Li	0 μH	0 μH	0 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 ≤ 100
- *3. Cross-wire between the DIN rail or the terminal 7 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.