

Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR TWO-WIRE SIGNAL LOOP

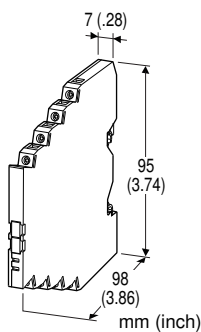
(ultra-slim; 2 channels)

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
- CE marking

Typical Applications

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



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
- 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 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]

ORDERING INFORMATION

- Code number: MD72WD-[1][2]
Specify a code from below for each [1] and [2].
(e.g. MD72WD-320)
- For the safety approval code 2, specify the product's destination country using Ordering Information Sheet (No. ESU-8057).

[1] NOMINAL VOLTAGE

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

[2] SAFETY APPROVAL

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

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			

STANDARDS & APPROVALS

CE conformity:

ATEX Directive (94/9/EC)
 Ex ia EN 60079-11: 2007
 Category 1G EN 60079-26: 2007
 EMC Directive (2004/108/EC)
 EMI EN 61000-6-4: 2007
 EMS EN 61000-6-2: 2005

Safety approval:

GENELEC: Intrinsic safety (ATEX)
 Ⓢ II 1G, Ex ia IIC; T4 and T5
 EN 60079-0: 2006
 EN 60079-11: 2007
 EN 60079-26: 2007

Surge protection: IEC 61643-21: 2000

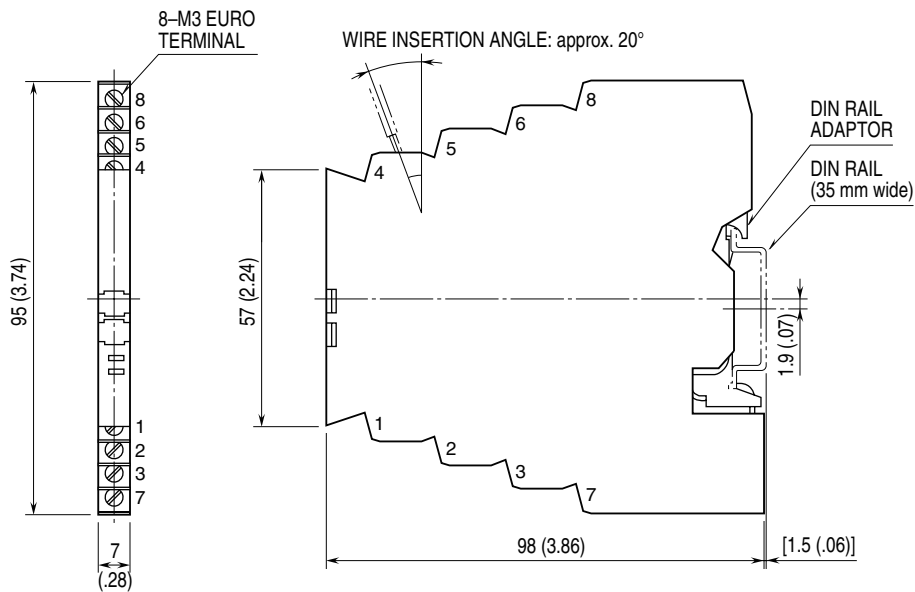
(Categories C1, C2, D1)

SAFETY PARAMETERS

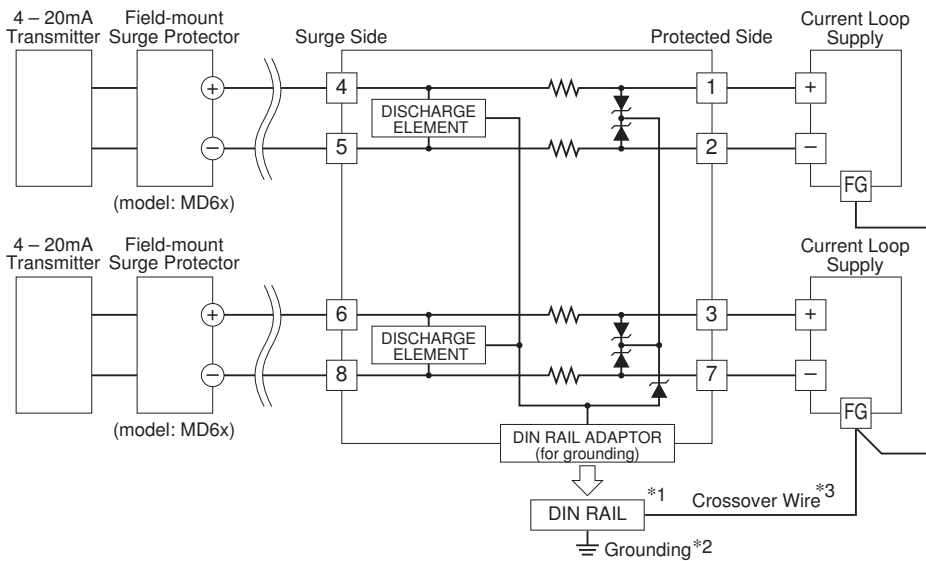
■ CENELEC / ATEX IS DATA

	MD72WD-07	MD72WD-16	MD72WD-32
Ui (Vmax)	7V	16V	32V
Ii (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.