

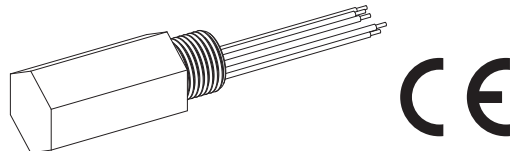
Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR STANDARD SIGNAL LINE & PULSE USE

(conduit mount, weather-proof; 65 V DC line voltage)

Functions & Features

- Designed specifically for 4 - 20 mA DC and pulse signal line including both 4-wire and 2-wire transmitters
- Direct mount in a wiring conduit of outdoor enclosures
- Absorbs surges only without affecting instrumentation signal
- CE marking (conforms to ATEX and EMC)



MODEL: MD6P-65-[1][2][3]

■ SELECTABLE WIRING CONDUITS SPECIFIC TO EACH APPROVAL
 'N' marked combinations are not selectable.

WIRING CONDUIT	APPROVAL		
	0	3	4
0	Y	N	N
1	Y	Y	Y
2	Y	N	Y

ORDERING INFORMATION

• Code number: MD6P-65-[1][2][3]
 Specify a code from below for [1] through [3] (e.g. MD6P-65-00B)
 For the safety approval code 4, specify the product's destination country using Ordering Information Sheet (No. ESU-8284).

[1] SAFETY APPROVAL

0: None
 3: FM explosion-proof
 4: CENELEC flameproof (ATEX)
 Confirm selectable combinations of approval and wiring conduit types in the table.

[2] WIRING CONDUIT

0: G 1/2
 1: 1/2 NPT
 2: M20 × 1.5
 Confirm selectable combinations of approval and wiring conduit types in the table.

[3] BODY MATERIAL

B: Brass
 S: Stainless steel

GENERAL SPECIFICATIONS

Degree of protection: IP65
 Wiring conduit: See 'Ordering information.'
 Electrical connection: Leadwires
 Leadwire diameters
 Cable side & grounding: AWG20
 Protected equipment side: AWG22
 Body material: Nickel-plated brass or stainless steel 316

INSTALLATION

Operating temperature: -40 to +85°C (-40 to +185°F)
 (See Safety Parameters for use in a hazardous location.)
 Mounting: Screwed into an electrical conduit of outdoor enclosures
 Weight: 300 g (0.66 lbs)

PERFORMANCE

Discharge voltage (peak voltage)
 Line to line: 70 V min.
 Line to ground: ±160 V min.
Max. surge voltage
 Line to line: 100 V max.
 Line to ground: ±650 V max.
 (The maximum voltage that could pass through the surge protector. Protected equipment must be able to withstand this voltage for a very short time period.)
Response time:
 Line to line: ≤ 4 nsec.
 Line to ground: ≤ 20 nsec.
Leakage current:
 Line to line: ≤ 5 µA @ 70 V DC
 Line to ground: ≤ 5 µA @ ±160 V DC
Discharge current capacity: 10000 A (8/ 20 µsec.)
Max. load current: 100 mA
Internal series resistance: Approx. 22 Ω including return
Max. line voltage
 Without safety approval: 70 V DC
 With safety approval: 66 V DC



Capacitance @ 1 kHz:

Line to line: ≤ 2500 pF

Line to ground: ≤ 100 pF

STANDARDS & APPROVALS

CE conformity:

ATEX Directive (94/9/EC)

Ex d EN 60079-1: 2004

EMC Directive (2004/108/EC)

EMI EN 61000-6-4: 2007

EMS EN 61000-6-2: 2005

Safety approval:

FM: Explosion-proof and Dust-ignition proof

Class I, Div. 1, Groups A, B, C and D

Class II, Div. 1, Groups E, F and G

Class III, Div. 1

T6

(Class 3615: 2006)

CENELEC: Flameproof (ATEX)

⊕ II 2G, Ex d IIC; T5 and T6

(EN 60079-1: 2004)

SAFETY PARAMETERS

Operating temperature:

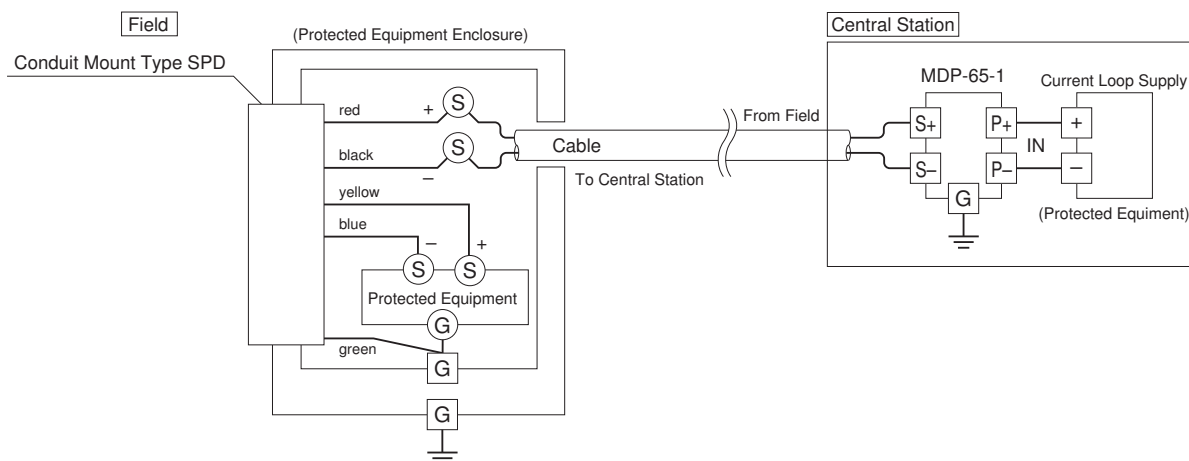
T5 -40 to +80°C

T6 -40 to +70°C

-40 to +75°C for CENELEC (ATEX) flameproof

-40 to +80°C for FM explosion-proof

CONNECTION EXAMPLES

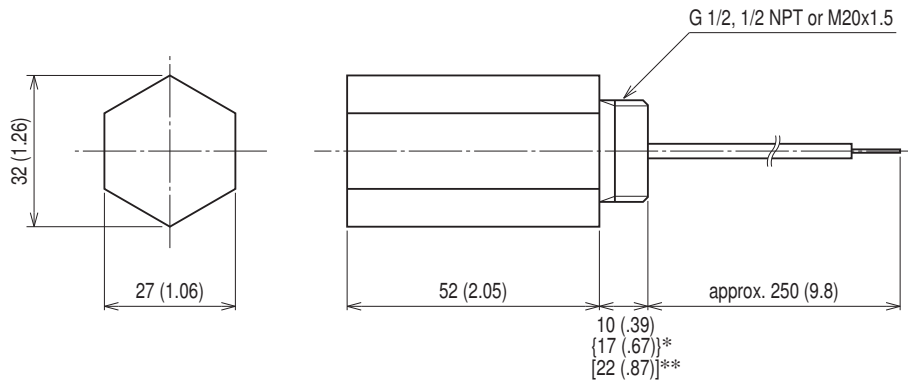


Connect the MD6P's green leadwire to the ground terminal inside the protected equipment enclosure to ground through the enclosure's outside ground terminal.

If the enclosure does not have an inside ground terminal, connect the green leadwire directly to the outside ground wire pulled inside the enclosure. Keep the ground wire as short as possible.

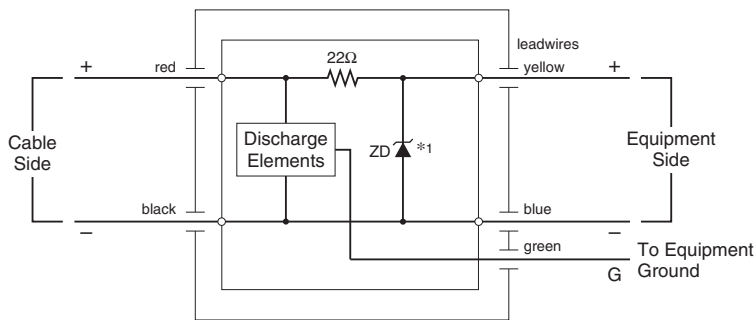


DIMENSIONS unit: mm (inch)



* { } for M20x1.5 with GENELEC (ATEX) flameproof approval
 ** [] for 1/2 NPT

SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



*1. The zenor diode has polarity. Zero-cross signal cannot be connected.



Specifications are subject to change without notice.

