Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR STANDARD SIGNAL LINE & PULSE USE

Functions & Features

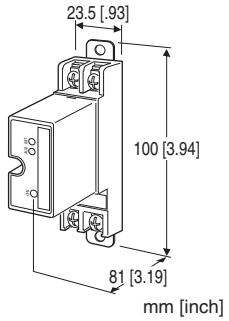
• Designed specifically for 4 – 20 mA DC and pulse signal line including both 4-wire and 2- wire transmitters

• Life monitor function helps you to decide when you should replace the surge protector; reduces maintenance and prevents downtime

• Pressing CHK (Check) button confirms the degradation and life span of the surge protection circuits with LEDs

• Absorbs surges only without affecting instrumentation signal

• No interruption of signal by unplugging surge protector element



MODEL: MDPA-65[1]

ORDERING INFORMATION

• Code number: MDPA-65[1]

Specify a code from below for [1].
(e.g. MDPA-65/BN/Q)

• Specify the specification for option code /Q
(e.g. /C01)

[1] OPTIONS (multiple selections)

Configuration

blank: With Base (model: SK-2E) included

/BN : Element only for replacement
(Not selectable with DIN rail mounting adapter)

DIN Rail Mounting Adapter

blank: Without

/A33: With adapter (model A-33)

Other Options

blank: none

/Q: Option other than the above (specify the specification)

SPECIFICATIONS OF OPTION: Q

COATING (For the detail, refer to our web site.)

/C01: Silicone coating

/C02: Polyurethane coating

/C03: Rubber coating

RELATED PRODUCTS

• Base (model: SK-2E)

GENERAL SPECIFICATIONS

Construction: Plug-in

Connection: M4 screw terminals (torque 0.8 N·m)

Screw terminal: Nickel-plated steel

Housing material: Flame-resistant resin (black)

Indicators: Activated by CHK (Check) button, see the status table shown below.

BAT: Green LED

ALM: Red LED

Degradation judged: When the leakage current at the voltage limiter exceed approx. 7.5 μA.

Life time judged: When the number of discharges of the discharge element reaches the expected life span.

CHK button: Push button; momentary

Battery: Lithium; No recharge or replacement available.

Battery life: 10 years (when used ≤ 2 minutes/month)

BAT	ALM	Battery	Discharge Element	Voltage Limiter	Replacement
☼	●	Normal			No Need
☼	☼	Normal	Near End	Normal	Near
●	☼	Normal	End of Life	Degraded*1	Immediately Required
●	●	Discharged	Unable to Judge		

☼ : ON ● : OFF

*1 : With pulsating line signal or that containing ripples, the LED may flicker or blink when the voltage limiter is degraded.

INSTALLATION

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

Operating humidity: 30 to 85 %RH (non-condensing)

Mounting: Surface or DIN rail

Weight: 150 g (0.33 lb), standard
175 g (0.39 lb), with DIN rail mounting adapter

Capacitance (reference value) @ 1 MHz:
Line to line: 2000 pF
Line to earth: 100 pF

PERFORMANCE

Max. continuous operating voltage (Uc):
Line to line: 70 V
Line to earth: ±160 V

Voltage protection level (Up):

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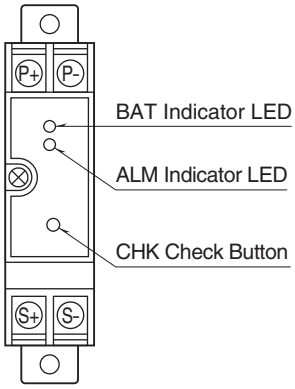
• @ 2 kV (1 kA)
Line to line: 100 V
Line to earth: ±650 V

Response time:
Line to line: ≤ 4 nsec.
Line to earth: ≤ 20 nsec.

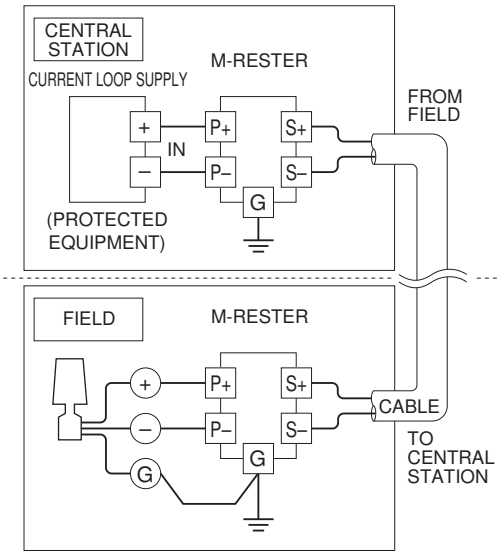
Leakage current:
Line to line: ≤ 5 µA @ 70 V DC
Line to earth: ≤ 5 µA @ ±140 V DC

Max. discharge current (Imax): 5000 A (8 / 20 µs)
Nominal current (I_N): 100 mA
Internal series resistance: 20 Ω ±10 % (including return)
Surge protection: IEC 61643-21 Categories C1, C2, D1

EXTERNAL VIEW



CONNECTION EXAMPLES



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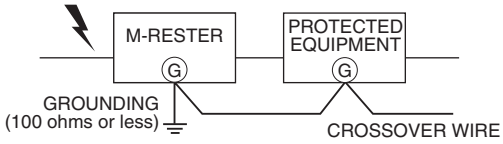
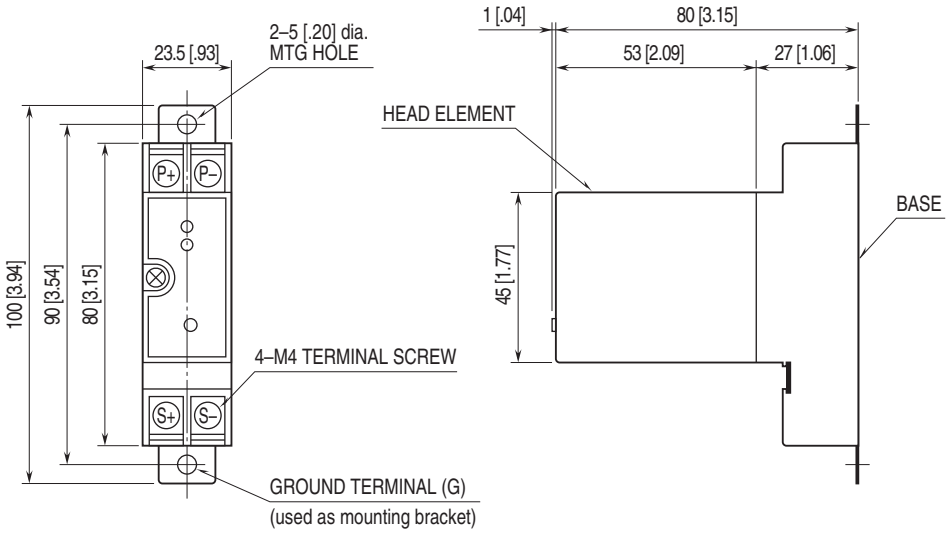
GROUNDING



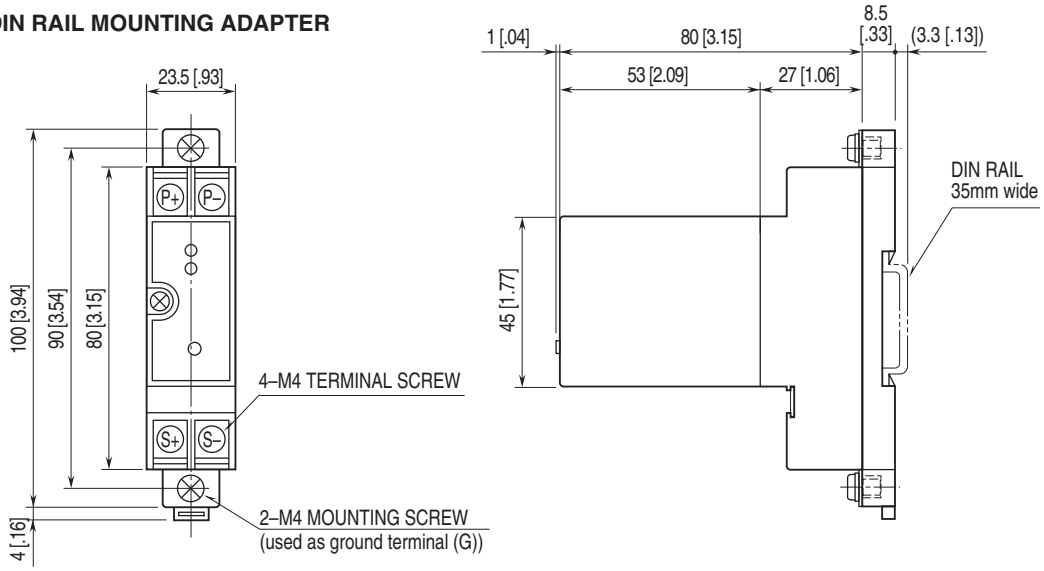
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection.
If the protected equipment has no ground terminal, ground the M-RESTER only.
When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting screw of the M-RESTER.

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

■ **STADARD**



■ **WITH DIN RAIL MOUNTING ADAPTER**



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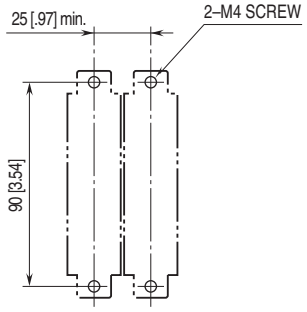
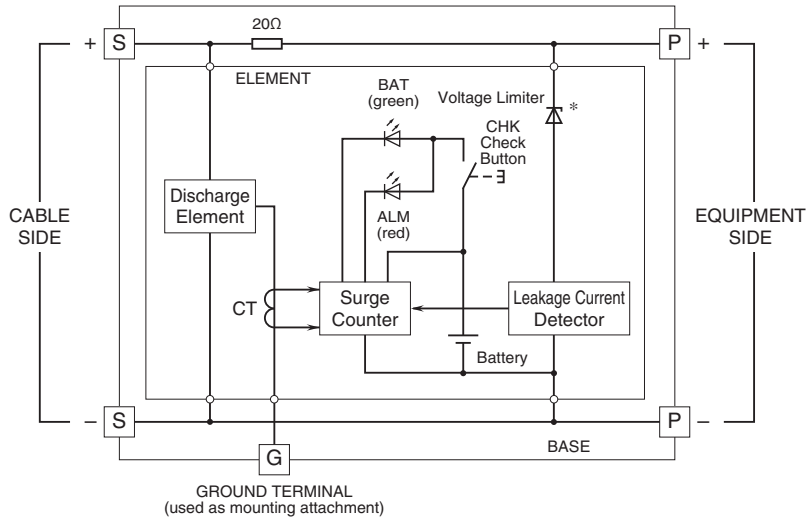
MOUNTING REQUIREMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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

⚠ Specifications are subject to change without notice.

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