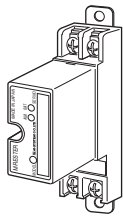


Lightning Surge Protectors for Electronics Equipment M-RESTER

LIGHTNING SURGE PROTECTOR FOR STANDARD SIGNAL LINE & PULSE USE

Functions & Features

- Designed specifically for 4 - 20mA 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 M-System's 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 μ A.

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 \leq 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: \pm 160 V

Voltage protection level (Up):

- @ 1 kV (100 A)
Line to line: 85 V
Line to earth: ± 650 V

- @ 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: $\leq 5 \mu\text{A}$ @ 70 V DC
- Line to earth: $\leq 5 \mu\text{A}$ @ ± 140 V DC

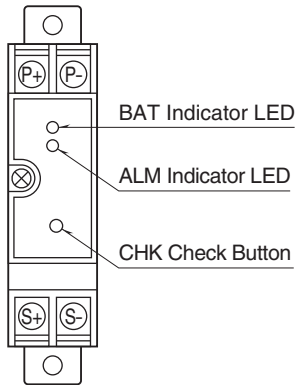
Max. discharge current (I_{max}): 5000 A (8 / 20 μs)

Nominal current (I_{n}): 100 mA

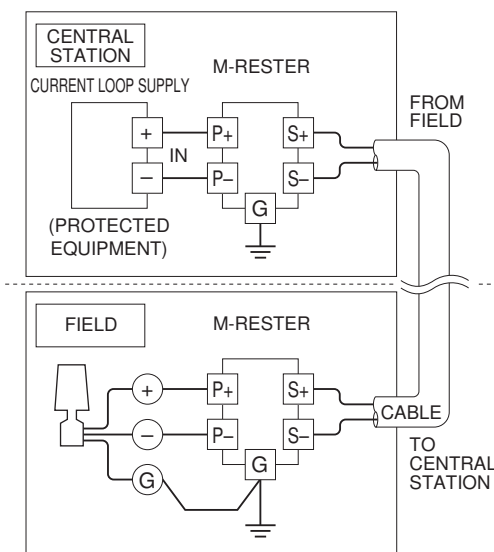
Internal series resistance: $20 \Omega \pm 10\%$ (including return)

Surge protection: IEC 61643-21 Categories C1, C2, D1

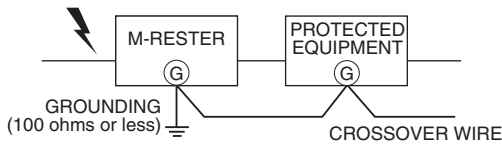
EXTERNAL VIEW



CONNECTION EXAMPLES



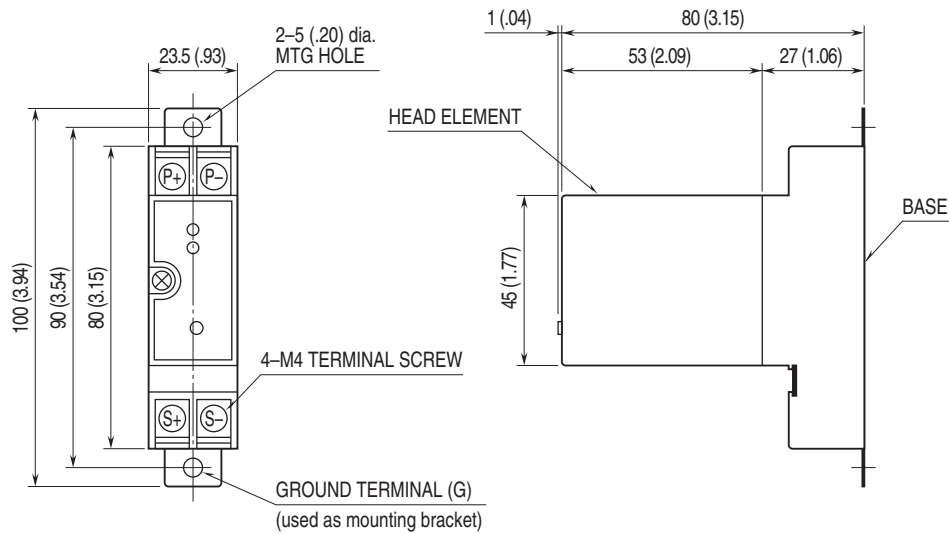
GROUNDING



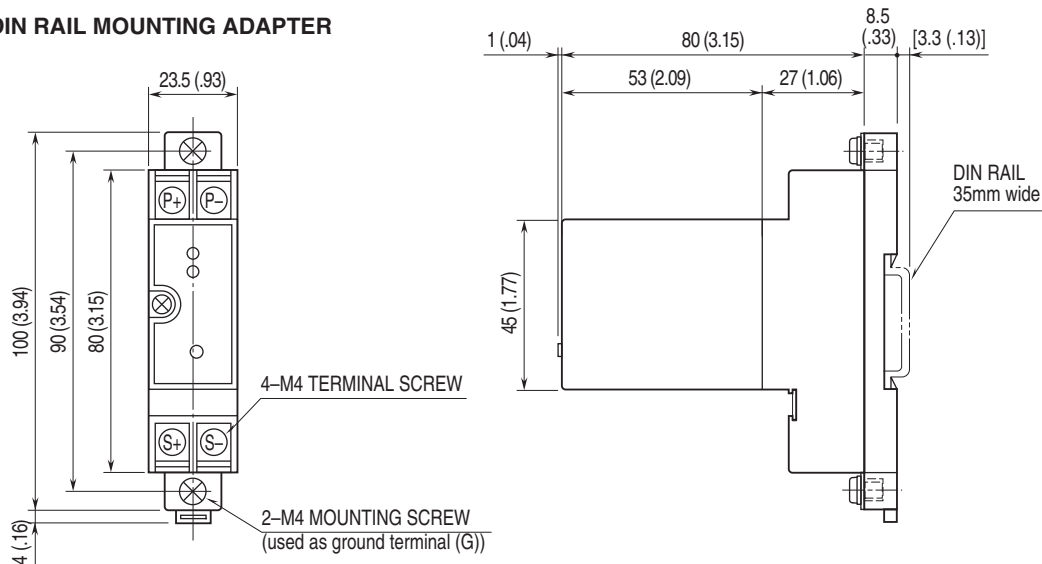
A crossover wire between M-RESTER ground and the ground or metallic housing of the equipment is required for protection. If the protected equipment has no ground terminal, ground the M-RESTER only. When the M-RESTER is mounted with DIN Rail Mounting Adapter, connect the grounding wire to the mounting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

EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]

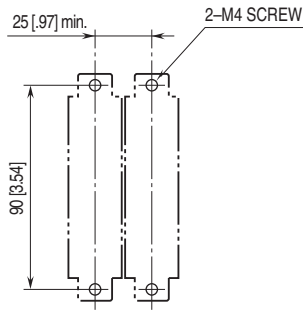
■ STADARD



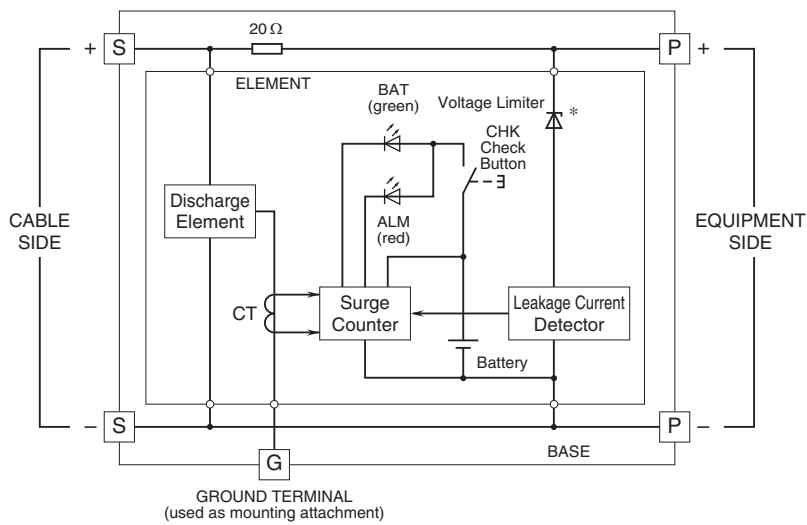
■ WITH DIN RAIL MOUNTING ADAPTER



MOUNTING REQUIREMENTS unit: mm [inch]



SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



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



Specifications are subject to change without notice.