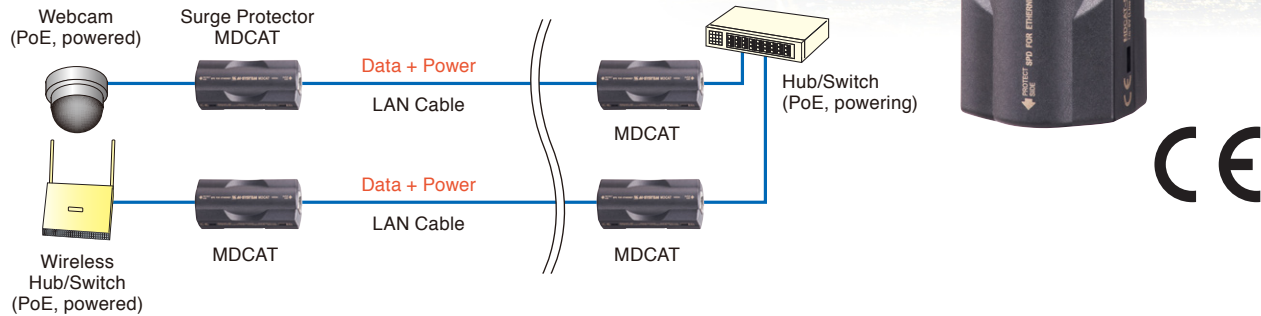


Model MDCAT Gigabit Ethernet Surge Protector Protects PoE Devices from Lightning Induced Surges

- Power-over-Ethernet compatible
- 1000BASE-T / 100BASE-TX / 10BASE-T
- Ideal to protect network devices powered from Ethernet such as webcams
- Conforms to IEC 61643-21, Categories C1, C2



M-System's model MDCAT is specifically designed to protect communication devices connected via Ethernet LAN from lightning surge entering through network cables.

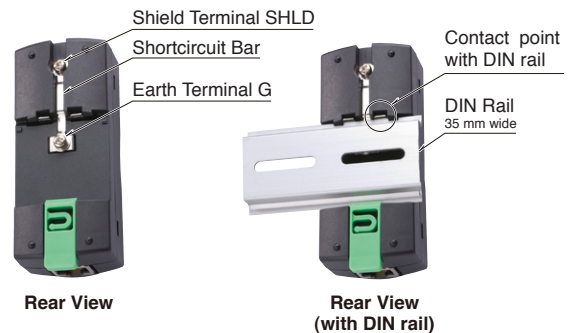
Multi-stage protection is provided for all four pairs of conductors in Cat. 5e performance (1000BASE-T, 100BASE-TX and 10BASE-T) with minimal interference, tested for up to the maximum 100 meter segment length as defined in the standard. An equal level of protection is ensured for the core-to-core voltage used for PoE. Both Alternative A and Alternative B configurations are usable to supply power to the protected network device.

Compact module can be placed close to PCs, wireless hubs/switches and webcams in rolled-up LAN cables. It can also be snapped on a DIN rail for high-density mounting in a 19-inch rack together with Ethernet switches or inside a control panel with PLCs. Individual earth wiring is not necessary when you ground the DIN rail.



Shield terminal, frame grounding, signal grounding may be provided or not depending on the protected devices. The MDCAT is provided as 'grounding' mode with a shortcircuit bar connecting the shield and the ground terminals. Removing the bar turns the module to 'floating' mode, so that a ground loop problem can be easily fixed. By separating the shield and the ground, the former terminal can be used for individual signal grounding.

DIN RAIL GROUNDING & SHORTCIRCUIT BAR



When the MDCAT is snapped on a steel or copper DIN rail, the surge protector is connected to the single grounding point on the rail, thus saving individual cross wiring to the earth. Earth terminal is also available to ground separately using hardwires.

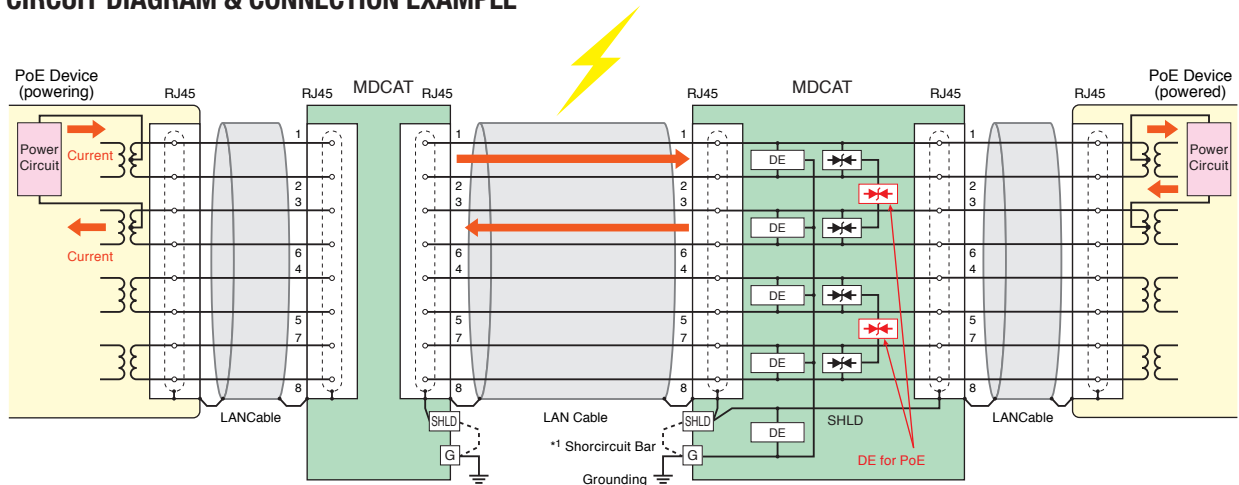
Every year lightning destroys millions of dollars of sensitive electronic equipment. Millions more are lost through extended down time and loss of production or mission-critical information.

That's why companies around the world depend on on-line M-Rester Lightning Surge Protectors. The M-Rester absorbs only the lightning surges with no interruption of instrumentation signal.

For M-System product information and downloadable data sheets, visit On-Line Signal Conditioners Data Library at: <http://www.m-system.co.jp/mssenglish/index.htm>.

Model MDCAT Gigabit Ethernet Surge Protector

CIRCUIT DIAGRAM & CONNECTION EXAMPLE



Remove the shortcircuit bar (*1) to reconfigure the shield for LAN cable to 'floating' mode.

DE : Discharge Elements
 PoE current flow

The above diagram shows the PoE Alternative A configuration example.
 The terminals 4 – 5 and 7 – 8 are used to supply power with Alternative B configuration.

SPECIFICATIONS

MECHANICAL

Network connection: RJ45 connector
Grounding: M3 screw terminal
Housing material:
 Flame-resistant resin (black)

INSTALLATION

Operating temperature:
 -25 to +85°C (-13 to +185°F)
Operating humidity:
 30 to 90% RH (non-condensing)
Mounting: DIN rail (35 mm wide)
Dimensions:
 W38 x H93.5 x D35 mm
 W1.50" x H3.68" x D1.38"
Weight: 150 g (5.3 oz)

APPLICABLE NETWORK

10BASE-T: IEEE 802.3i
100BASE-TX: IEEE 802.3u
1000BASE-T: IEEE 802.3ab
PoE: IEEE 802.3af

STANDARDS & APPROVALS

CE conformity:

EMC Directive (2004/108/EC)
 EN 61000-6-4 (EMI)
 EN 61000-6-2 (EMS)

Surge protection:

IEC 61643-21, Categories C1, C2

Transmission performance:

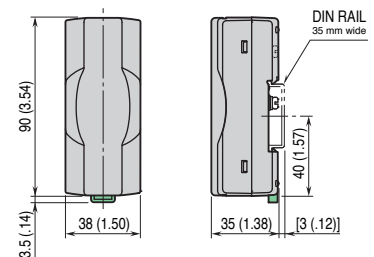
TIA/EIA-568-B.1, Category 5e

PERFORMANCE

	LINE-LINE per signal pair	LINE-LINE PoE	LINE-EARTH
Max. continuous operating voltage U_c	± 6 V	± 58 V	± 150 V
Voltage protection level U_p	± 15 V max. @2 kV	± 100 V max. @2 kV	± 600 V max. @4 kV
Leakage current @ U_c	25 μ A	25 μ A	5 μ A
Response time	≤ 4 nsec.	≤ 4 nsec.	≤ 20 nsec.
Max. discharge current I_{max}	100 A	100 A	10 kA
Nominal current I_n	1 A		
Series resistance	Approx. 0 Ω		



EXTERNAL DIMENSIONS mm (inch)



Your local representative: