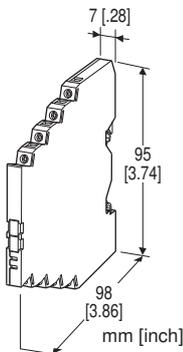


## Lightning Surge Protectors for Electronics Equipment M-RESTER

### LIGHTNING SURGE PROTECTOR FOR SELF-SYNCH (ultra-slim)

#### Functions & Features

- High discharge current capacity 20 kA (8 / 20  $\mu$ s), 1 kA (10 / 350  $\mu$ s)
- Ultra-thin 7-mm-wide module can be mounted in high density
- Excellent protection employing multi-stage SPD circuits
- DIN rail mounting and grounding
- Shield terminal provided
- Protects self-synch transmitters and converters



## MODEL: MD7JS[1]

### ORDERING INFORMATION

- Code number: MD7JS[1]  
Specify a code from below for [1].  
(e.g. MD7JS/Q)
- Specify the specification for option code /Q  
(e.g. /C01)

### [1] OPTIONS

blank: none

/Q: With options (specify the specification)

### SPECIFICATIONS OF OPTION: Q

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

/C01: Silicone coating

/C02: Polyurethane coating

### 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 mm<sup>2</sup>, stripped length 8 mm

**Grounding:** DIN Rail

**Housing material:** Flame-resistant resin (black)

### INSTALLATION

**Operating temperature:** -25 to +55°C (-13 to +131°F)  
(-5 to +40°C or 23 to 104°F, 30 to 80 % RH non-condensing, for EU conformity.)

**Operating humidity:** 30 to 90 % RH (non-condensing)  
(-5 to +40°C or 23 to 104°F, 30 to 80 % RH non-condensing, for EU conformity.)

**Mounting:** DIN Rail (TH35-7.5, 1-mm-thick)

Oxide film on the surface of an aluminium DIN rail may lower the electric conductivity between this module and the ground. Use a steel or copper rail.

**Weight:** 70 g (2.5 oz)

### PERFORMANCE

**Max. continuous operating voltage (Uc):**

Line to line:  $\pm$ 130 V

Line to earth:  $\pm$ 160 V

**Voltage protection level (Up) @ 6 kV (1.2 / 50  $\mu$ s)**

Line to line:  $\pm$ 450 V

Line to earth:  $\pm$ 800 V

**Response time:**

Line to line:  $\leq$  4 nsec.

Line to earth:  $\leq$  20 nsec.

**Leakage current @ Uc:**

Line to line:  $\leq$  20  $\mu$ A

Line to earth:  $\leq$  5  $\mu$ A

**Max. discharge current (Imax):** 20 kA (8 / 20  $\mu$ s); 1.0 kA (10 / 350  $\mu$ s)

**Nominal current (In):** 500 mA

**Internal series resistance:** 2  $\Omega$   $\pm$ 10 % per line

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

EN 61643-21 Categories C1, C2, D1

### STANDARDS & APPROVALS

**EU conformity:**

EMC Directive

EMI EN 61000-6-4

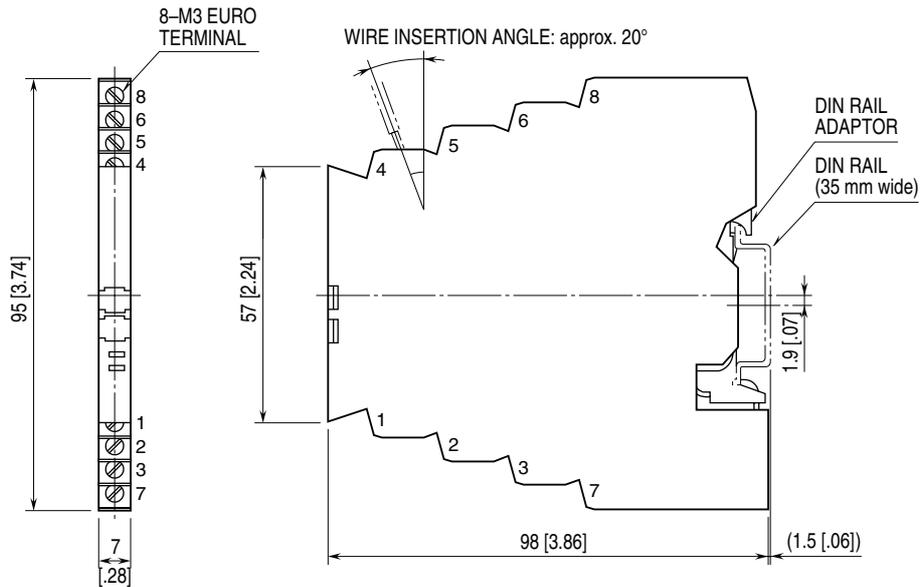
EMS EN 61000-6-2

Low Voltage Directive

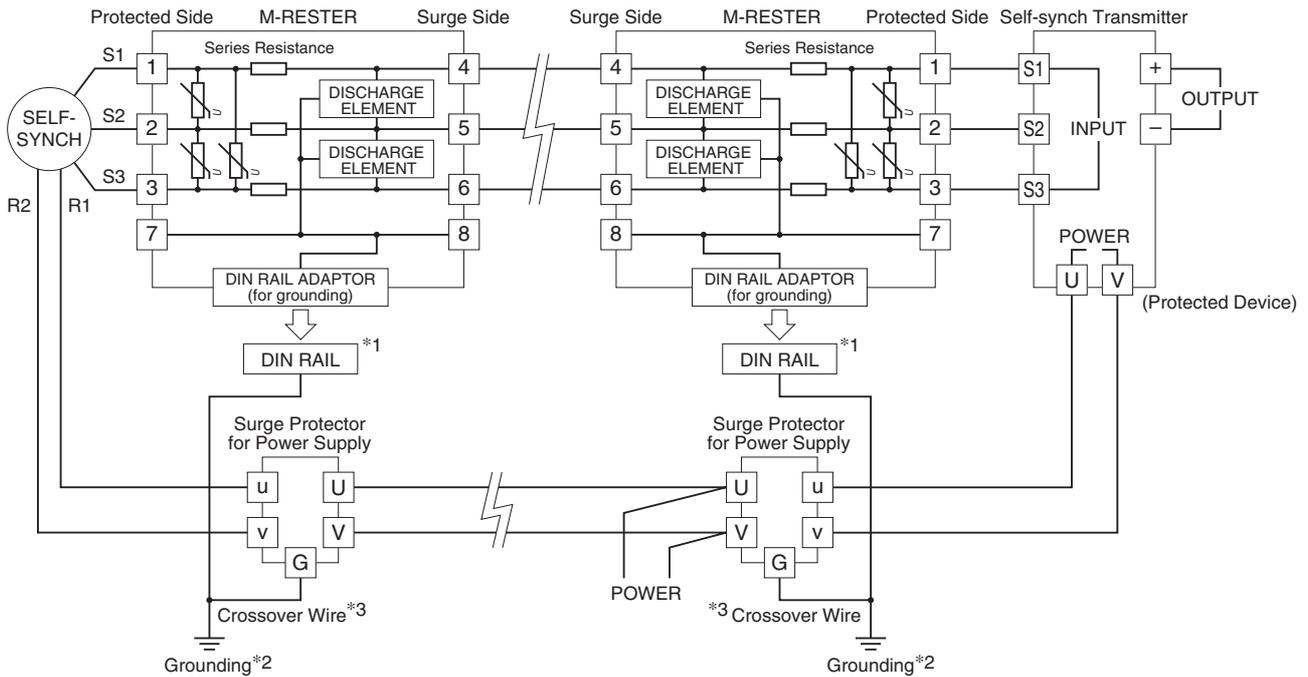
EN 61643-21

RoHS Directive

## EXTERNAL DIMENSIONS & TERMINAL ASSIGNMENTS unit: mm [inch]



## SCHEMATIC CIRCUITRY & CONNECTION DIAGRAM



- \*1. Oxide coating 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  $\leq 100 \Omega$
- \*3. Cross-wire between the DIN rail 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.