Installation Guide

DC Surge Protection

48V Type 2, Modular DIN Rail SPD
I^2R SA48 3-40

Part# 1104-11-005



A Type 2 SPD with replaceable modules for 48 Vdc systems, offering bidirectional MOV technology. Typically installed to protect 48 Vdc power supplies from over-voltage caused by transients. The replaceable SPD modules feature visual status indication. The normally green indicator turns red if module needs replacement. Electrically isolated Form C dry contacts provide remote monitoring capability. If the lightning protection zone concept is used, this SPD installs at the boundary of LPZ1 and LPZ2.
Protection Modes: V- to V+, V- to PE, V+ to PE

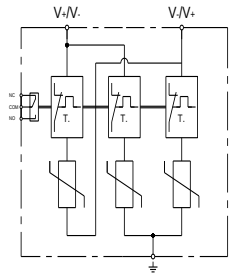
Main Technical Data

Electrical Performance	
Class/Type	Class II, Type 2
Number Of Ports	Single port device
Technology	MOV
Nominal Operating Voltage U_n	48 Vdc
Maximum Continuous Operating Voltage U_c	75 Vdc
Nominal Discharge Surge Current I_n (8/20µs)	20 kA
Maximum Discharge Surge Current I_{max} (8/20µs)	40 kA
Voltage Protection Level U_p (20 kA 8/20µs)	0.7 kV
Leakage Current	< 10 µA
Response Time	< 25 ns
Status Indication	Visual indication : Green = normal, Red = replace
Remote Indication	3 pin contact switch (Common, NO, NC)
Maximum Contact Switch Rating	125 Vac / 1 A, 60 Vdc / 0.2 A
Mechanical	
Location Category	Indoor only
Method Of Mounting	Fixed 35mm DIN rail
Dimension (H x W x D)	90 mm x 54 mm x 67.5 mm (3.54” x 2.12” x 2.66”)
Weight (Max)	0.29 kg (0.74 lb)
Maximum Wire Size	Stranded: 16 mm^2 (#6 AWG); Solid: 25 mm^2 (#4 AWG)
Stripping Length Terminals	10 mm (0.39”)
Torque Terminals	3 N*m (2.21 ft-lb)
Maximum Wire Size Contacts	1.5 mm^2 (#16 AWG)
Stripping Length Contacts	7 mm (0.28”)
Torque Contacts	0.2 N*m (0.15 ft-lb)
Environmental	
Operating Temperature	-40 ° C to +80 ° C
Relative Humidity	≤ 95% non condensing
Enclosure Protection Level	IP20
Housing Inflammability Rating	PA66; UL94 V-0
Certifications	RoHS compliant

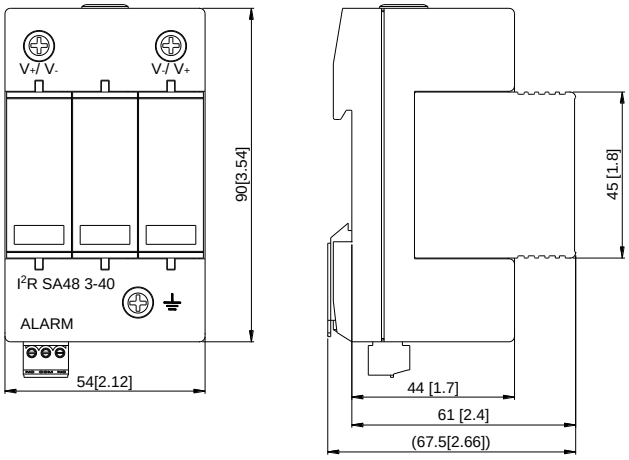
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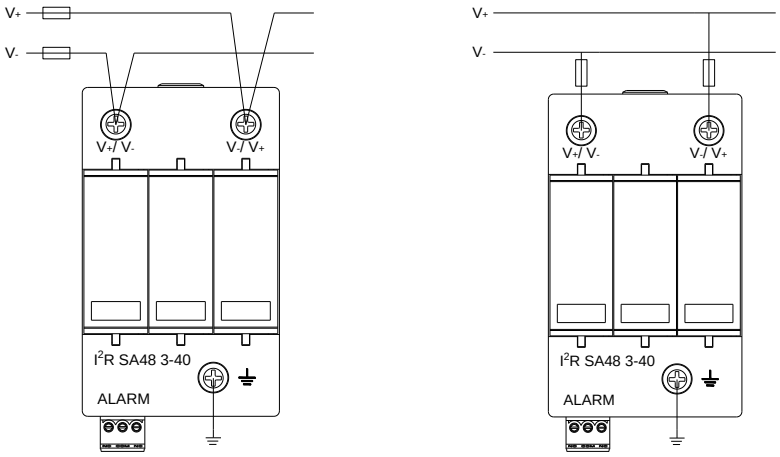
Schematic



Structure



Wiring Diagram



Safety Notes

1. Install only in a restricted access power distribution cabinet that requires a key or tool to open.
2. The SPD should only be installed by a licensed electrician.
3. All local and national electric codes must be observed.
4. Kelvin or 'V' connections are recommended.
5. Keep wires as short as possible (maximum length ≤ 0.5 m) and free of sharp bends.
6. Before installation, shut off power to prevent accidental electrical shock or injury.
7. The ground conductor should be insulated stranded copper greater than 10 mm^2 (#8 AWG) diameter. The power conductors should be insulated stranded copper greater than 6 mm^2 (#10 AWG) diameter. The load capacity of the conductor must be sized according to the load. Reference IEC 60364-5-532.

Usage and Maintenance

1. The SPD should be scheduled for periodic inspection to ensure the SPD is operational, the modules are secure in the base and all wire connections are tight.
2. To replace damaged SPD, contact +1.208.772.8515 or 1.800.882.9110, or online at www.Transtector.com

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