

# Product Specification

## DC Surge Protection

21102334-C Rev A

### Type 2 SPD For 48 Vdc YD30K085EH

Part# 21102334



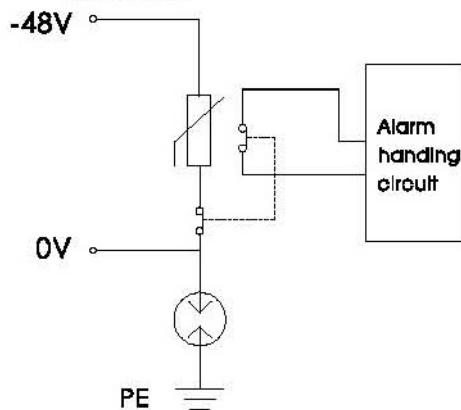
DIN rail mounted DC surge protection device designed with MOV technology to meet Class II requirements. Equipped with suppression status visual indication and electrically isolated 'Form C' dry contacts to allow remote monitoring.

### Main Technical Data

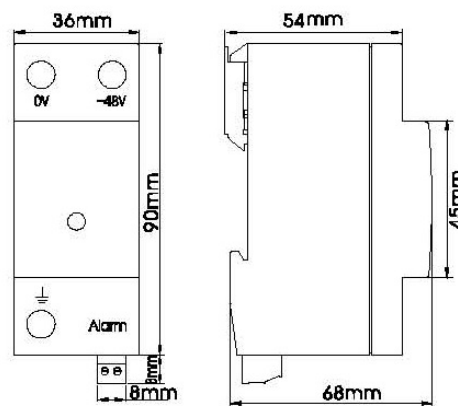
Electrical Performance		
Tested to		IEC 61643-1
Arrester Class		Class II, Type 2
Number Of Ports		Single port device
Technology		MOV
Nominal Operating Voltage $U_n$		48 Vdc
Maximum Continuous Operating Voltage $U_c$		85 Vdc
Nominal Discharge Current $I_n$ (8x20 $\mu$ s)		15 kA
Maximum Discharge Current $I_{max}$ (8x20 $\mu$ s)		30 kA
Voltage Protection Level $U_p$ (5 kA, 8x20 $\mu$ s)	V+ to V-	$\leq 300$ V
	V- to PE	$\leq 150$ V
Residual Voltage $U_{res}$ (@3 kA, 8x20 $\mu$ s)		$\leq 100$ V
Leakage Current To PE At $U_n$		10 $\mu$ A
Recommended Over-Current Protection		32 A circuit breaker with C tripping characteristic (per IEC 60364-4-43)
Response Time		< 25 ns
Status Indication		Visual indication LED; Green = normal, Red = replace 2 pin contact switch; closed circuit = normal, open = replace
Maximum Contact Switch Rating		250 V / 1 A, connect to SELV circuit only
Isolation Between Separate Circuits		Dielectric withstand 3000 Vrms (EN 60950-1/A11:2009)
Mechanical		
Location Category		Indoor only
Method of Mounting		Fixed 35mm DIN rail
Dimension (H x W x D)		90 mm x 36 mm x 68 mm (3.6" x 1.4" x 2.7")
Weight (Max)		0.33 kg (0.74 lb)
Connection Type		Screw cage clamp
Maximum Wire Size		25 mm <sup>2</sup> (#4 AWG)
Stripping Length Terminals		10 mm (0.375")
Torque Terminals		4.5 Nm (3.3 ft-lb)
Maximum Wire Size Contacts		1.5 mm <sup>2</sup> (#16 AWG)
Stripping Length Contacts		7 mm (0.25")
Torque Contacts		1 Nm (0.75 ft-lb)
Environmental		
Operating Temperature		-40°C to +70°C
Relative Humidity		$\leq 95\%$ non condensing
Enclosure Protection Level		IP20
Housing Flammability Rating		PA66, UL94 V-0
Certifications		RoHS compliant

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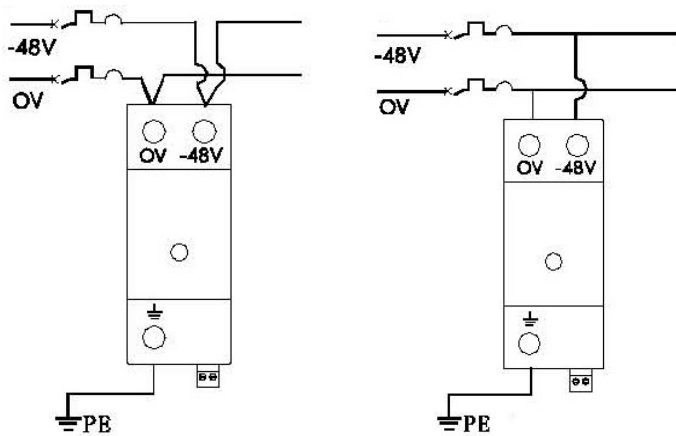
## Schematic



## Structure



## Wiring Diagram



Kelvin Connection

Parallel Connection

## Installation and Wiring

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. Before installation, shut off power to prevent accidental electrical shock or injury.
5. Kelvin or 'V' connections are recommended, keeping all wires as short as possible (less than 0.5 m) and free of sharp bends.
6. Over-current protection device should be used on the power supply side of SPD. Reference IEC 60364-4-43.
7. The ground conductor should be insulated stranded copper greater than 25 mm<sup>2</sup> (#4 AWG) diameter. The power conductors should be insulated stranded copper greater than 16 mm<sup>2</sup> (#6 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 SPD is operational and all wire connections are tight.
2. To replace damaged SPD, contact 1.800.882.9110 or +86.755.26889911, or online at [www.protectiongroup.com](http://www.protectiongroup.com).