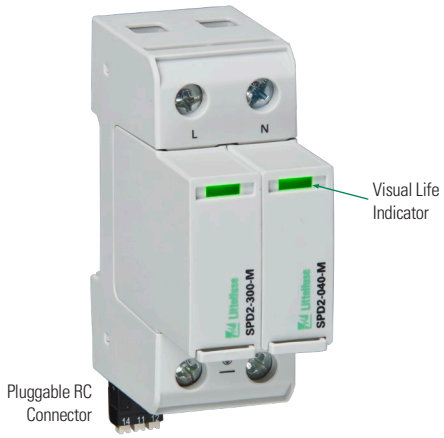
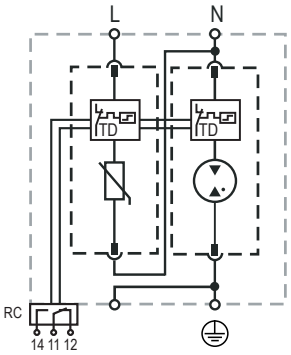
Surge Protection Devices
SPD2 1P+1 SERIES

Class II/Type 2/Type 1 CA Pluggable Multi-Pole



Internal Configuration



Legend

L *Line*
N *Neutral*
⏚ *Protective Earth*
RC *Remote Contacts*
TD *Thermal Disconnection*

Description

Surge protection devices (SPDs) provide equipment protection from overvoltage events lasting micro-seconds. By limiting the overvoltage to the equipment during these events, costly equipment damage and downtime can be mitigated.

The surge protection devices for the 1+1 configuration are available for 60 V to 277 V nominal voltage sub-distribution board applications.

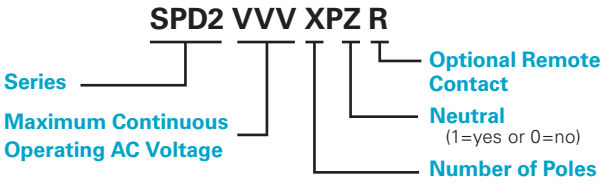
Features & Benefits

FEATURES	BENEFITS
Capability to clamp and withstand high-energy transients	Ensures low-residual voltage during high-energy surge events and higher nominal discharge current to prevent disruption, downtime, and degradation or damage to equipment
UL Recognized and VDE-IEC compliant in single part number	One component can be utilized globally, reducing inventory needs and simplifying allocation of parts
Interlocking tab mechanism	Secures module to withstand vibration
No additional overcurrent protection devices required in UL applications	Reduces the number of components and costs required for protection
Compact footprint	Increases panel design flexibility
Visual life indicator	Quick visual determines module replacement status to avoid loss of protection
Pluggable modules	Fast and simple to replace, minimizing maintenance and downtime. No tools required
Thermal protection	Eliminates catastrophic failure
IP20 protection rating	Finger-safe design increases worker protection

Module & Base Ordering Information

Ordering Number	IEC Electrical										UL Electrical				Single Unit Weight
	Nominal AC Voltage (50/60Hz) (U_c/U_n)	Maximum Continuous Operating AC Voltage (L-N / N-PE U_c)	Nominal Discharge Current (8/20 µs) (L-N / N-PE I_n)	Maximum Discharge Current (8/20 µs) (L-N / N-PE I_{max})	Voltage Protection Level (L-N / N-PE U_p)	Follow Current Interrupt Rating (N-PE I_{fi})	Short-Circuit AC Current Rating (L-N I_{SCCR})	TOV Withstand 5 s (L-N U_T)	TOV 120 min (L-N U_T) / Mode	TOV Withstand 200 ms (N-PE U_T)	Maximum Continuous AC Operating Voltage (L-N / N-PE MCOV)	Voltage Protection Rating (L-N / N-PE VPR)	Nominal Discharge Current (8/20 µs) (L-N / N-PE I_n)	Short-Circuit Current Rating (L-N SCCR)	
SPD2-075-1P1-R	60 V	75 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	800 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	114 V	114 V / Withstand	1200 V	75 V / 305 V	330 V / 1000 V	20 kA / 20 kA	100 kA	124 g (0.274 lb)
SPD2-150-1P1-R	120 V	150 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1250 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	229 V	229 V / Withstand	1200 V	150 V / 305 V	600 V / 1000 V	20 kA / 20 kA	200 kA	128 g (0.283 lb)
SPD2-300-1P1-R	240 V	300 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1500 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	337 V	442 V / Safe Fail	1200 V	300 V / 305 V	900 V / 1000 V	20 kA / 20 kA	150 kA	135 g (0.298 lb)
SPD2-350-1P1-R	277 V	350 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1750 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	403 V	529 V / Safe Fail	1200 V	350 V / 305 V	1000 V / 1000 V	20 kA / 20 kA	200 kA	140 g (0.309 lb)

Module & Base Part Numbering System



Module Only Part Numbering System

Replacement Module Ordering Information

Ordering Number	IEC Electrical										UL Electrical				Single Unit Weight
	Nominal AC Voltage (50/60Hz) (U_o/U_n)	Maximum Continuous Operating AC Voltage (L-N / N-PE U_c)	Nominal Discharge Current (8/20 µs) (L-N / N-PE I_n)	Maximum Discharge Current (8/20 µs) (L-N / N-PE I_{max})	Voltage Protection Level (L-N / N-PE U_p)	Follow Current Interrupt Rating (N-PE I_{fi})	Short-Circuit AC Current Rating (L-N I_{SCCR})	TOV Withstand 5 s (L-N U_T)	TOV 120 min (L-N U_T) / Mode	TOV Withstand 200 ms (N-PE U_T)	Maximum Continuous AC Operating Voltage (L-N / N-PE MCOV)	Voltage Protection Rating (L-N / N-PE VPR)	Nominal Discharge Current (8/20 µs) (L-N / N-PE I_n)	Short-Circuit Current Rating (L-N SCCR)	
SPD2-040-M	0 V	40 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1500 V (N-PE)	100 A_{RMS}	25 kA / 50 kA	N/A	N/A	1200 V	305 V (N-PE)	1000 V (N-PE)	20 kA / 20 kA	N/A	42 g (0.093 lb)
SPD2-075-M	60 V	75 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	800 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	114 V	114 V / Withstand	1200 V	75 V / 305 V	330 V / 1000 V	20 kA / 20 kA	100 kA	50 g (0.111 lb)
SPD2-150-M	120 V	150 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1250 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	229 V	229 V / Withstand	1200 V	150 V / 305 V	600 V / 1000 V	20 kA / 20 kA	200 kA	54 g (0.120 lb)
SPD2-300-M	240 V	300 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1500 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	337 V	442 V / Safe Fail	1200 V	300 V / 305 V	900 V / 1000 V	20 kA / 20 kA	150 kA	61 g (0.135 lb)
SPD2-350-M	277 V	350 V / 305 V	20 kA / 40 kA	50 kA / 65 kA	1750 V / 1500 V	100 A_{RMS}	25 kA / 50 kA	403 V	529 V / Safe Fail	1200 V	350 V / 305 V	1000 V / 1000 V	20 kA / 20 kA	200 kA	68 g (0.146 lb)

Specifications

Network Systems IT, TT, TN-S
Mode of Protection L-N, N-PE
Nominal Discharge Current (8/20 µs) (L-N / N-PE I_n) 20 kA/40 kA
Maximum Discharge Current (8/20 µs) (L-N / N-PE I_{max}) 50 kA/65 kA
Protective Elements High Energy MOV and GDT
Response Time (L-N / N-PE t_A) < 25 ns
Back-Up Fuse (max) 315 A / 250 A Gg
Number of Ports 1

Mechanical & Environmental

Operating Temperature Range (T_a) -40 °C to +80 °C (-40 °F to +185 °F)
Permissible Operating Humidity (RH) 5% to 95%
Altitude (max) 4,000 m (13,123 ft)
Terminal Screw Torque) (M_{max}) 4.5 Nm (39.9 lbf-in)
Conductor Cross Section (max) 35 mm² (2 AWG) (Solid, Stranded)/ 25 mm² (4 AWG) (Flexible)
Mounting 35 mm DIN Rail, EN60715
Degree of Protection IP20 (built-in)
Housing Material Thermoplastic: Extinguishing Degree UL 94 V-0
Thermal Protection Yes
Operating State/Fault Indication Green Flag/No Green Flag
Remote Contact Switching Capacity AC: 250 V/1 A, 125 V/1 A; DC: 48 V/0.5 A, 24 V/0.5 A, 12 V/0.5 A
Remote Contact Conductor Cross Section (max) 1.5 mm² (16 AWG) (Solid)
Standards Passed IEC 61643-11:2011
EN 61643-11:2012
UL 1449, 4th edition; E320116

Product Dimensions

2TE Module and Base **H** 90.0 mm (3.54"); **W** 36.0 mm (1.42"); **D** 70.0 mm (2.76")
1TE Replacement Module **H** 45.0 mm (1.77"); **W** 18.0 mm (0.71"); **D** 57.2mm (2.25")

Package Dimensions

2TE Module and Base **H** 102.0 mm (4.01"); **W** 46.0 mm (1.81"); **D** 110.0 mm (4.33")
1TE Replacement Module **H** 102.0 mm (4.01"); **W** 28.0 mm (1.10"); **D** 110.0 mm (4.33")