

Features

- IEC/EN 61643-11 compliant Class I + Class II / T1+T2 SPD
- High reliability protected MOV with Thermal Disconnect
- Large surge energy capability up to 80 kA per mode
- Pluggable module for easy replacement
- High short-circuit current rating up to 50 kA_{rms}
- Impulse current capacity up to 12.5 kA 10/350 μs

1270 Series IEC Class I AC Surge Protective Device

General Information

The Bourns® Model 1270 Series is an IEC Class I + Class II AC Surge Protective Device (SPD) designed for power system, lightning, current and surge protection, especially in locations of high risk exposure to damage from direct or close lightning strikes, up to rated limits.

This SPD is intended to be installed at the front end of the installation, in the main switchboard, close to sensitive terminals or in installations with LPS (lightning rods).

Additional Information

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Electrical Characteristics

Characteristic		Model No.						
		1270-xS-120	1270-xS-127	1270-xS-230	1270-xS-277	1270-xS-400	1270-xS-480	1270-xS-690
AC Network		120 / 240 V 120 / 208 V	120 / 208 V 127 / 220 V	220 / 380 V 230 / 400 V	240 / 415 V 277 / 480 V	277 / 480 V 347 / 600 V	347 / 600 V 480 V (Delta)	690 V (Delta)
Compliance		IEC/EN 61643-11						
Category IEC/EN		Class I + Class II / T1 + T2						
Product Technologies		High energy MOV Technology Thermal Disconnect						
Connection Mode		1-Pole, L-N or L-G or N-PE						
AC System		IT, TT, TN, Single, Split Phase, Delta, Wye						
Max. Operating Voltage (U _c)		150 V	180 V	275 V	350 V	440 V	600 V	750 V
Leakage Current at U _c		< 0.1 mA						
Follow Current		None						
IEC/EN 61643-11	Nominal Discharge Current 8/20 μs (I _n)	25 kA						
	Max. Discharge Current (I _{max}) 1 Impulse 8/20 μs	80 kA				65 kA		
	Impulse Discharge Current (I _{imp}) 10/350 μs	12.5 kA				8 kA	6 kA	4 kA
	Protection Level (U _p)	≤ 0.8 kV	≤ 1.0 kV	≤ 1.2 kV	≤ 1.5 kV	≤ 2.0 kV	≤ 2.5 kV	≤ 2.8 kV
	Short-Circuit Current Rating (I _{sc})	50 kA _{rms}						

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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Applications

- Electrical service entrance
- Branch panels
- All power circuits
- Heavy industrial
- EV charging stations

1270 Series IEC Class I AC Surge Protective Device

Electrical Characteristics (N-PE Protected with GDT)*

Characteristic			Model No.			
			1270-xNS-120		1270-xNS-127	1270-xNS-230
AC Network			120 / 240 V 120 / 208 V	120 / 208 V 127 / 220 V	220 / 380 V 230 / 400 V	240 / 415 V 277 / 480 V
Compliance			IEC/EN 61643-11			
Category IEC/EN			Class I + Class II / T1 + T2			
Product Technologies			High energy MOV Technology N-PE Protected with GDT Thermal Disconnecter			
Connection Mode			2-Pole or 4-Pole, L-N, N-PE			
AC System			TT, TN			
Max. Operating Voltage (U _c)		L-N	150 V	180 V	275 V	350 V
		N-PE	150 V	150 V	255 V	255 V
Leakage Current at U _c			< 0.1 mA			
Follow Current		L-N	None			
		N-PE	100 A			
IEC/EN 61643-11	Nominal Discharge Current 8/20 μs (I _n)	L-N	25 kA			
		N-PE	50 kA			
	Max. Discharge Current (I _{max}) 1 Impulse 8/20 μs	L-N	80 kA			
		N-PE	100 kA			
	Impulse Discharge Current (I _{imp}) 10/350 μs	L-N	12.5 kA			
		N-PE	50 kA			
	Protection Level (U _p)	L-N	≤ 0.8 kV	≤ 1.0 kV	≤ 1.2 kV	≤ 1.5 kV
		N-PE	≤ 1.5 kV			
Short-Circuit Current Rating (I _{SC})			50 kA _{rms}			

*N-PE Protected with GDT is only available with two and four protected poles in which MCOV is less than or equal to 350 VAC.

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1270 Series IEC Class I AC Surge Protective Device

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General Characteristics

Characteristic	Model No.						
	1270-xS-120	1270-xS-127	1270-xS-230	1270-xS-277	1270-xS-400	1270-xS-480	1270-xS-690
Thermal Disconnect	UL 60691						
Overcurrent Protection	Time Delay - 250 A Max.						
Connection	By Screw Terminal: Single-strand #2 AWG or 35 mm ² ; multi-strand #4 AWG or 25 mm ²						
Dimensions	See Product Dimensions						
Mounting	Din-Rail, 35 mm Symmetrical						
Remote Signal Indicator	250 VAC Max., 0.5 A						
Enclosure Material	Thermoplastic UL 94V0						


Environmental Characteristics

Characteristic	Model No.						
	1270-xS-120	1270-xS-127	1270-xS-230	1270-xS-277	1270-xS-400	1270-xS-480	1270-xS-690
Operating Temperature	-40 °C to +85 °C						
Operating Altitude	≤ 4000 m						
Relative Humidity	5 to 95 % Non-condensing						
Environmental Rating	IP 20						

Standards Compliance

IEC/EN 61643-11.....Class I + Class II, T1 + T2
RoHS.....RoHS Directive 2015/863, Mar 31, 2015 and Annex

Agency Recognition

Agency	Category	Agency File No.
	IEC/EN 61643-11	B118437

How to Order

1270 - x (N) S - xxx

Model Designator _____
1270 = IEC Class I AC SPD

Configuration (number of poles) _____
1 = One Protected Pole
2 = Two Protected Poles
3 = Three Protected Poles
4 = Four Protected Poles

Neutral or Ground Option _____
N = N-PE Protected with GDT

Remote Signaling Code _____
S = Remote Signaling

Operating Voltage _____
120 = 120/240 V, 120/208 V
127 = 120/208 V, 127/220 V
230 = 220/380 V, 230/400 V
277 = 240/415 V, 277/480 V
400 = 277/480 V, 347/600 V
480 = 347/600 V, 480 V (Delta)
690 = 690 V (Delta)

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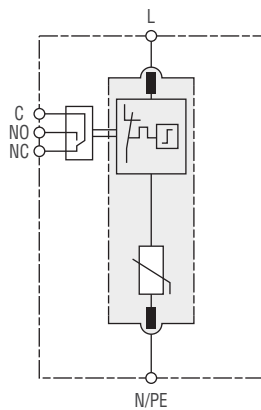
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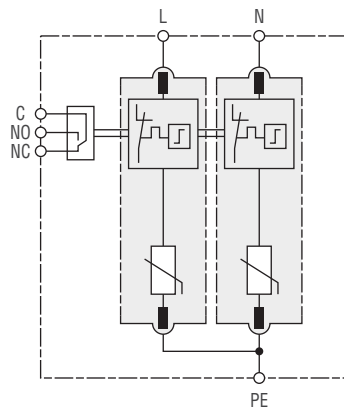
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Product Schematics

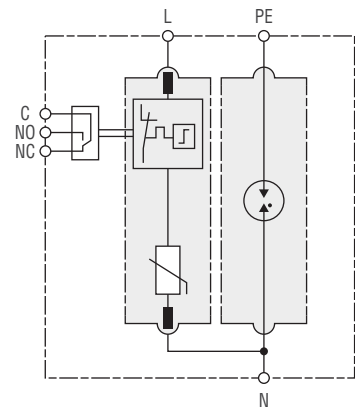
1P



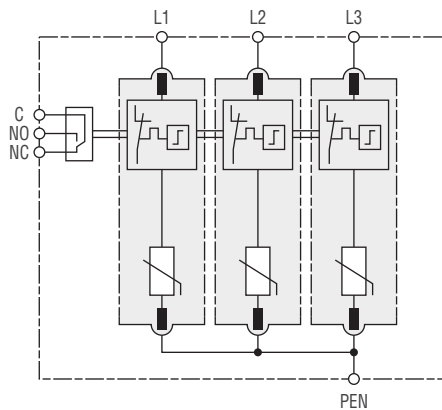
2P (2+0)



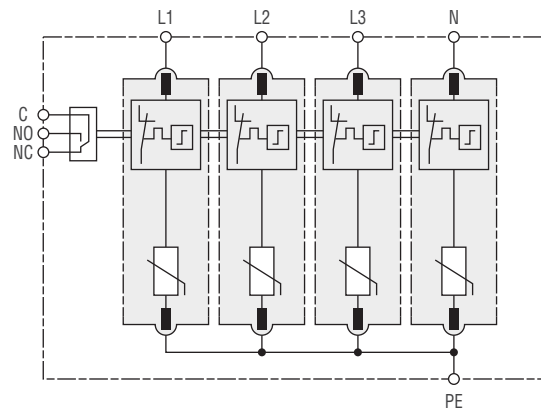
2P (1+1)



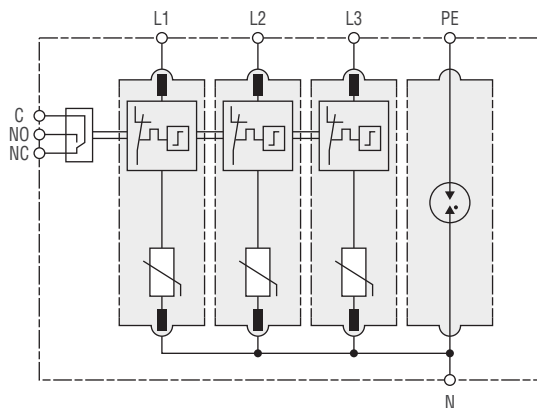
3P



4P (4+0)



4P (3+1)



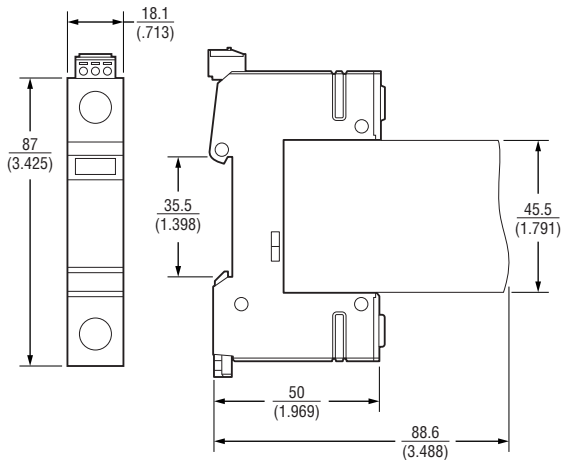
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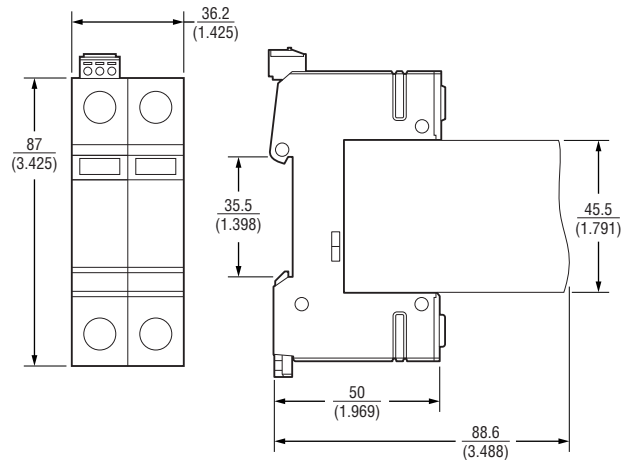
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Product Dimensions

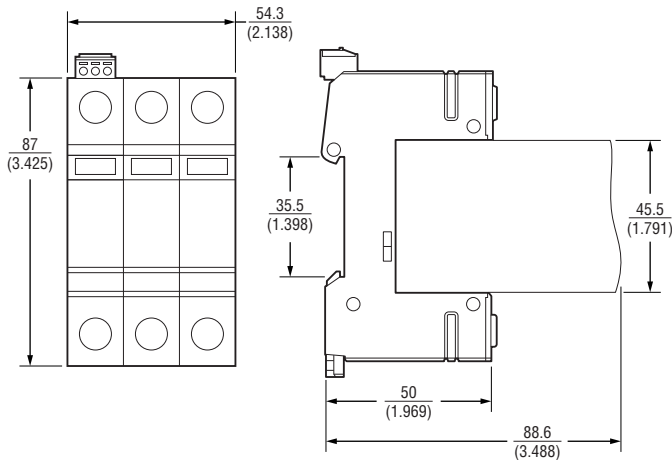
1P



2P

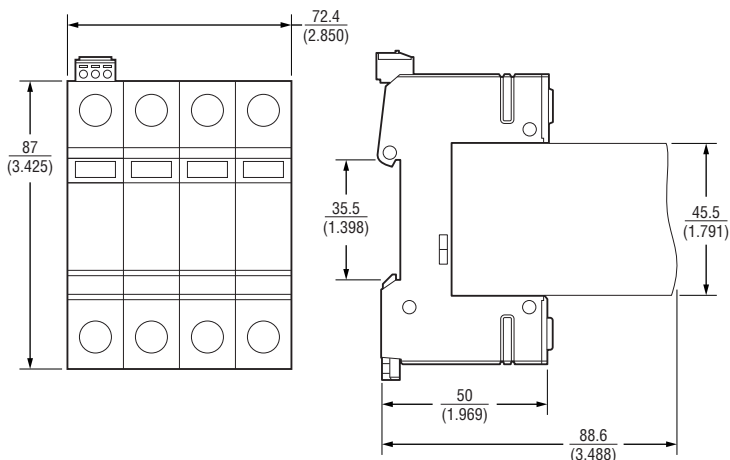


3P



DIMENSIONS: $\frac{\text{MM}}{(\text{INCHES})}$

4P



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