

Features

- IEC/EN 61643-11 compliant Class I + Class II / T1+T2 SPD
- High reliability protected MOV with Advanced Thermal Disconnector (TD+)
- Large surge energy capability up to 50 kA per mode
- Pluggable module for easy replacement
- High short-circuit current rating up to 25 kA_{rms}
- Impulse current capacity up to 7.5 kA 10/350 µs

1280 Series IEC Class II AC Surge Protective Device

General Information

The Bourns® Model 1280 Series IEC Class I + Class II AC Surge Protective Device (SPD) is 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 without LPS (lightning rods).

Additional Information

Click these links for more information:

PRODUCT | TECHNICAL LIBRARY | INVENTORY | SAMPLES | CONTACT

Electrical Characteristics

Characteristic		Model No.						
		1280-xS-120	1280-xS-127	1280-xS-230	1280-xS-277	1280-xS-400	1280-xS-480	1280-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 Advanced Thermal Disconnector (TD+)						
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)	20 kA						
	Max. Discharge Current (I_{max}) 1 Impulse 8/20 µs	50 kA						
	Impulse Discharge Current (I_{imp}) 10/350 µs	7.5 kA				6 kA	4.5 kA	3.5 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})	25 kA_{rms}						

*RoHS Directive 2015/863, Mar 31, 2015 and Annex.
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Users should verify actual device performance in their specific applications.
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Applications

- Branch panels
- All power circuits
- EV charging stations

1280 Series IEC Class II AC Surge Protective Device

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Electrical Characteristics (N-PE Protected with GDT)*

Characteristic			Model No.			
			1280-xNS-120	1280-xNS-127	1280-xNS-230	1280-xNS-277
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 Advanced Thermal Disconnector (TD+)			
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	20 kA			
		N-PE	20 kA			
	Max. Discharge Current (I_{max}) 1 Impulse 8/20 µs	L-N	50 kA			
		N-PE	50 kA			
	Impulse Discharge Current (I_{imp}) 10/350 µs	L-N	7.5 kA			
		N-PE	12.5 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})		25 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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1280 Series IEC Class II AC Surge Protective Device

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General Characteristics

Characteristic	Model No.						
	1280-xS-120	1280-xS-127	1280-xS-230	1280-xS-277	1280-xS-400	1280-xS-480	1280-xS-690
Thermal Disconnector	UL 60691						
Overcurrent Protection	Time Delay - 125 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.						
	1280-xS-120	1280-xS-127	1280-xS-230	1280-xS-277	1280-xS-400	1280-xS-480	1280-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.
TÜV SÜD	IEC/EN 61643-11	B118437

How to Order

1280 - x (N) S - xxx

Model Designator
- 1280 = IEC Class II 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

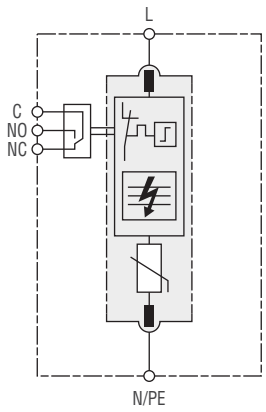
Operating Voltage
- 120 = 120/240 V, 120/208 V
- 127 = 120/208 V, 127/220 V
- 230 = 220/380 V, 230/400 V
- 277 = 240/415 V, 277/480 V
- 400 = 277/480 V, 347/600 V
- 480 = 347/600 V, 480 V (Delta)
- 690 = 690 V (Delta)

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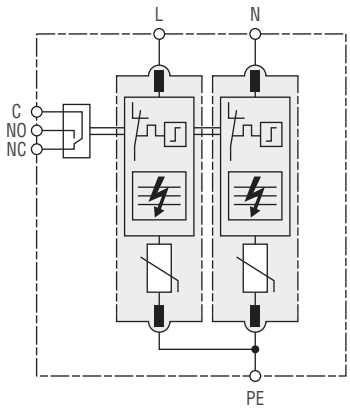
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Product Schematics

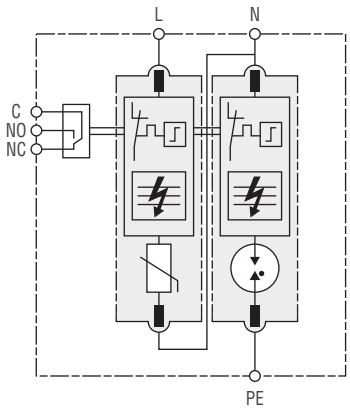
1P



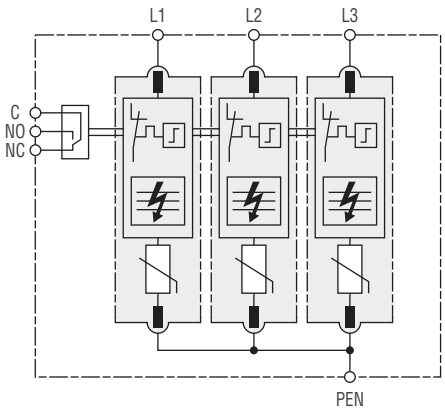
2P (2+0)



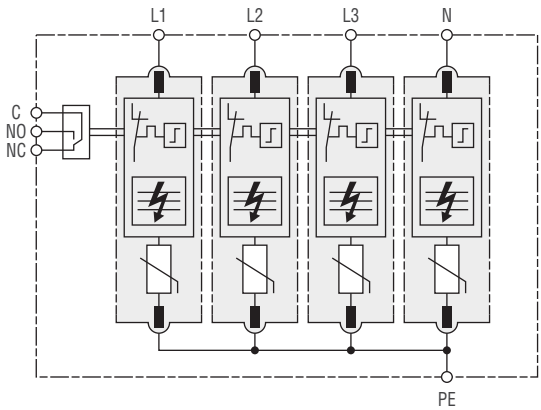
2P (1+1)



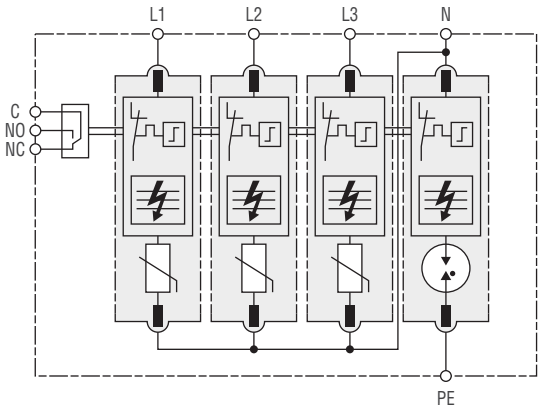
3P



4P (4+0)



4P (3+1)

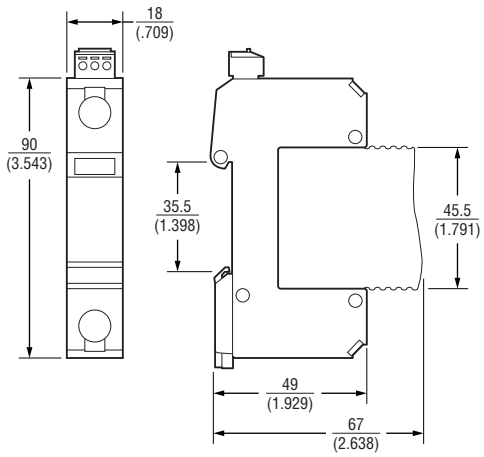


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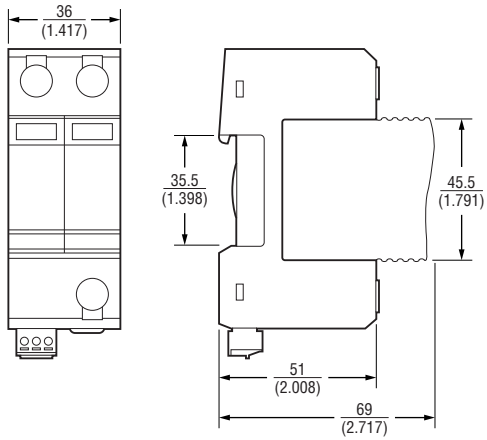
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Product Dimensions

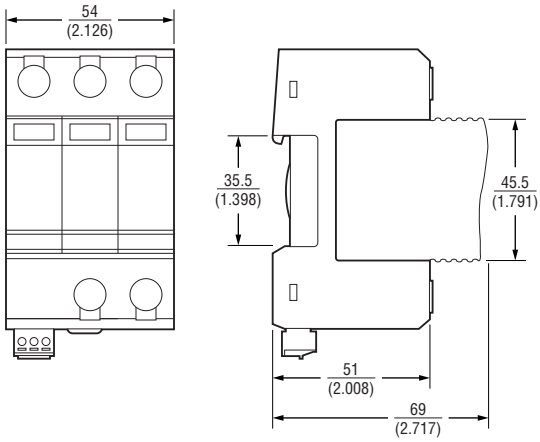
1P



2P

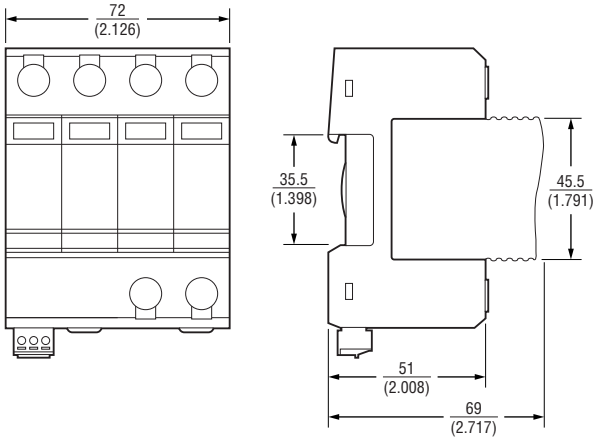


3P



DIMENSIONS: MM (INCHES)

4P



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