

## 1-Pole IEC Class I coordinated lightning current arresters for 400 and 690V TN-C, TN-S and IT wind power systems



Remote contact signaling available

easyID™ local visual status indication

### Catalog symbol:

- BSPS1\_WE
- BSPS1\_WER

### Description:

Eaton's Bussmann™ series one-pole IEC Class I 400 and 690 volt lightning current arresters feature local, *easyID*™ visual indication and optional remote contact signaling.

With 440V and 760V maximum continuous operating voltage ratings, these arresters help protect installations against surges and direct lightning strikes.

### System and application

- TN-C 400V/690V: 3x BSPS1400WE(R)
- TN-S 400/690V: 4x BSPS1400WE(R)
- IT 690V: 3x BSPS1690WER

### Optional remote contact signaling

The three-pole terminal remote contact signaling option has a floating changeover contact for use as a break or make contact, according to circuit concept.

### Specifications:

#### System volts

- 400Vac
- 690Vac

#### System types

- TN-C
- TN-S
- IT

#### Agency information

- CE
- RoHS compliant

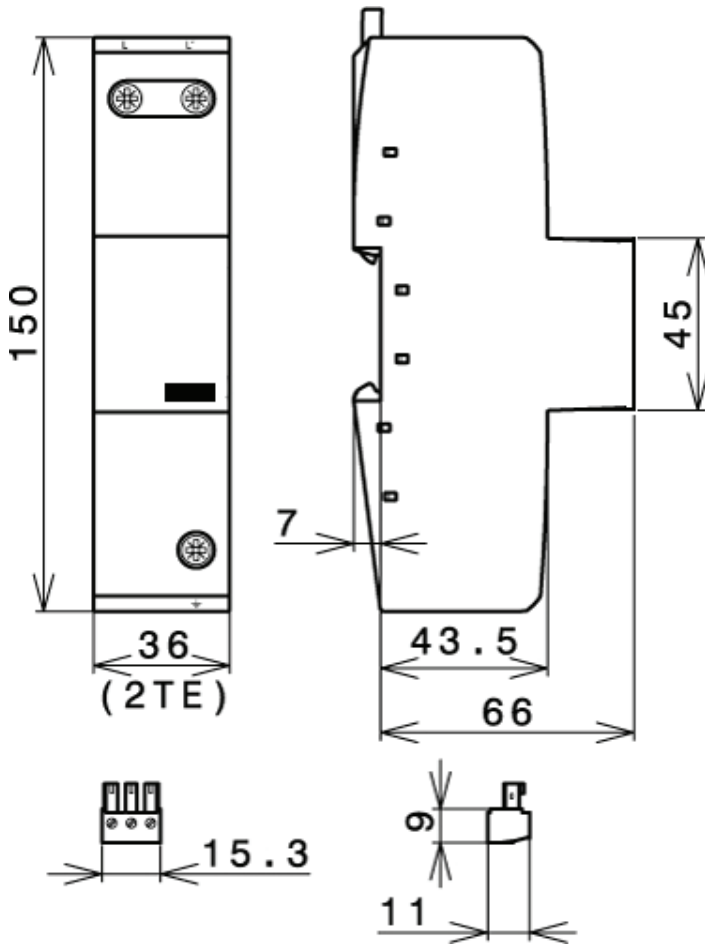
#### Mounting

- 35mm DIN-Rail

#### Warranty

- Five years



**Dimensions - mm:**

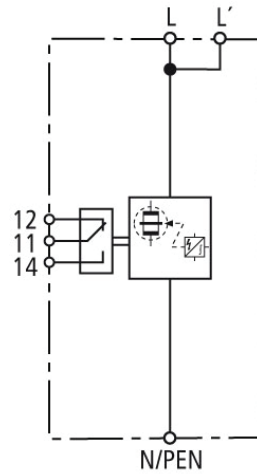


Shown with optional remote contact signaling.

**Module circuit diagram:**

Shown with optional remote contact signaling.

-  Creepage discharge spark gap
-  Spark gap trigger





BSPS1400WE(R)  
BSPS1690WER

**Recommended Bussmann series NH DIN back up fuses**

Size	NH fuse catalog number
00	100NHG00B-690 (max L) up to $I_k > 25kA_{rms}$
00	125NHG00B-690 (max L-L')
1	160NHG1B-690 (max L) for $I_k > 50kA_{rms}$
2	250NHG2B-690 (max L) up to $I_k = 25kA_{rms}$ ( $t_a \leq 5$ s)
2	250NHG2B-690 (max L) up to $I_k = 50kA_{rms}$ ( $t_a \leq 5$ s)
3	500NHG3B-690 (max L) up to $I_k = 50kA_{rms}$ ( $t_a \leq 0.2$ s)

**Ordering information:**

<b>System voltage (50-60Hz) / Poles</b>		<b>400V / 1</b>	<b>690V / 1</b>
Max. Continuous Operating Voltage (MCOV) [U <sub>c</sub> ] AC (50-60Hz)		440V	760V
Catalog numbers	W/O remote signaling	BSPS1400WE	—
	W/ remote signaling	BSPS1400WER	BSPS1690WER
<b>Specifications</b>			
Line system type		TN-C, TN-S, IT	TN-C, TN-S, IT
Lightning impulse current (10/350µs) [I <sub>imp</sub> ]		35kA	25kA
Specific energy [W/R]		306.25kJ / ohms	156.25kJ / ohms
Nominal discharge current (8/20µs) [I <sub>n</sub> ]		35kA	25kA
Voltage protection level [U <sub>p</sub> ]		≤ 2.5kV	≤ 4kV
Follow current extinguishing capability AC [I <sub>e</sub> ]		50kA <sub>rms</sub>	25kA <sub>rms</sub>
Follow current limitation / selectivity (no tripping of 32A gG fuse)		Up to 50 kA <sub>rms</sub> (prosp.)	Up to 25 kA <sub>rms</sub> (prosp.)
Response Time [t <sub>A</sub> ]		≤ 100 ns	≤ 100 ns
Max. backup fuse	(L) up to I <sub>k</sub> = 25kA <sub>rms</sub> (t <sub>a</sub> ≤ 5 s)	—	250A gG
	(L) up to I <sub>k</sub> > 25kA <sub>rms</sub>	—	100A gG
	(L) up to I <sub>k</sub> = 50kA <sub>rms</sub> (t <sub>a</sub> ≤ 0.2 s)	500A gG	—
	(L) up to I <sub>k</sub> = 50kA <sub>rms</sub> (t <sub>a</sub> ≤ 5 s)	250A gG	—
	(L) for I <sub>k</sub> > 50kA <sub>rms</sub>	160A gG	—
	(L-L')	125A gG	125A gG
Short-circuit withstand capability for max. mains-side overcurrent protection (I <sub>scCB</sub> )		50kA <sub>rms</sub>	25kA <sub>rms</sub>
Temporary Overvoltage (TOV) [U <sub>T</sub> ]	Withstand	690V / 5 sec.	1000V / 5 sec.
	Safe failure	—	—
Cross-sectional area	(L, L',  ) [min.]	—	10mm <sup>2</sup> solid / flexible
	(L, L', N/PEN) [min.]	10mm <sup>2</sup> solid / flexible	—
	(L, N/PEN) [max.]	50mm <sup>2</sup> /1AWG stranded / 35mm <sup>2</sup> /2AWG flexible	—
	(L, L',  ) [min.]	—	50mm <sup>2</sup> / 1AWG stranded / 35 mm <sup>2</sup> / 2AWG flexible
	(L') [max.]	35mm <sup>2</sup> / 2AWG stranded / 25mm <sup>2</sup> / 4AWG flexible	35mm <sup>2</sup> / 2AWG stranded / 25mm <sup>2</sup> / 4AWG flexible
SPD according to		EN 61643-11 Type 1, IEC 61643-11 Class I	
Operating environment	Parallel connection [T <sub>UP</sub> ]	-40°C to +80°C, 5% to 95% RH	
	Series connection [T <sub>US</sub> ]	-40°C to +60°C, 5% to 95% RH	
Operating state/fault indication		Green (good) / Red (replace)	
Number of ports		1	
For mounting on		35mm DIN-Rail per EN 60715	
Enclosure material		Thermoplastic, UL 94V0	
Location category		Indoor	
Degree of protection		IP20 (built-in)	
Capacity (DIN 43880)		2 Mods.	
Product warranty		Five years*	
<b>Remote contact signaling</b>			
Remote contact signaling type		Changeover contact	
AC Switching capacity (volts/amps)	AC	250V / 0.5A	
	DC	250V / 0.1A; 125V / 0.2A; 75V / 0.5A	
Conductor ratings and cross-sectional area		60/75°C max. 1.5mm <sup>2</sup> / 14AWG solid / flexible	
Ordering information		Order from catalog numbers above	

\* See Eaton Bussmann series SPD limited warranty statement (3A1502) for details at [www.cooperbussmann.com/surge](http://www.cooperbussmann.com/surge).

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