

Surge Protection Made Simple™ for Wind Power Applications

IEC Class I Coordinated Lightning Current Arresters with High Follow Current for 400-690 Volt, TNC, TNS & IT Systems



Description

The Cooper Bussmann® IEC Class I 400 and 690 Volt, one-pole lightning current arresters feature local, *easyID*™ visual indication and optional remote contact signaling.

440V and 760V maximum continuous operating voltage arresters protect installations against surges and direct lightning strikes.

System & Application

TNC 400V/690V: 3x BSPS1400WE(R)

TNS 400/690V: 4x BSPS1400WE(R)

IT 690V: 3x BSPS1690WER

Remote Signaling Contact

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



BSPS1400WE(R)
BSPS1690WER

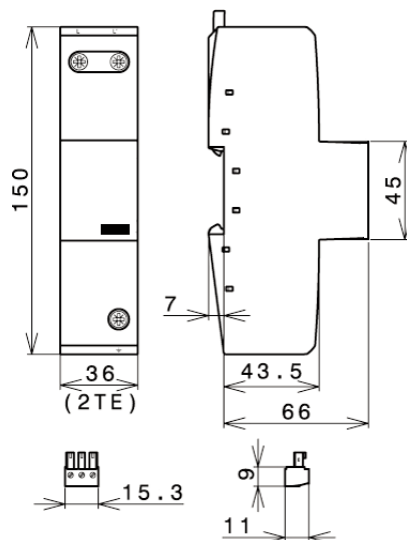
easyID™
Visual Status Indication



Remote Signal
Contact Available

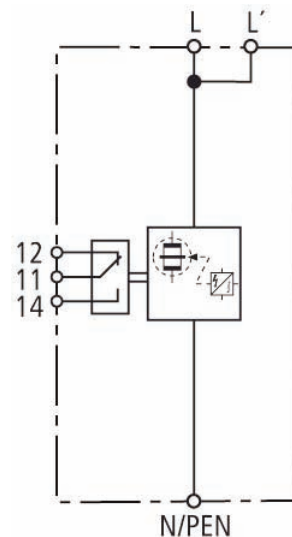


Dimensions - mm



Shown with optional remote contact signaling

Circuit Diagrams - Shown with optional remote contact signaling



- Creepage Discharge Spark Gap
- Spark Gap Trigger

BSPS1400WE(R)
BSPS1690WER

Ordering Information			
System Voltage/Poles		400V/1	690V/1
Max Continuous Operating AC Voltage (MCOV) [U _C]		440V	760V
Catalogue Numbers	Without Remote Signaling	BSPS1400WE	- -
	With Remote Signaling	BSPS1400WER	BSPS1690WER
Specifications			
Line System Type		TNC, TNS, IT	TNC, TNS, IT
Lightning Impulse Current (10/350µs) [I _{imp}]		35kA	25kA
Specific Energy [W/R]		306.25kJ/ohms	156.25kJ/ohms
Nominal Discharge Current (8/20µs) [I _n]		35kA	25kA
Voltage Protection Level [U _p]		≤2.5kV	≤4kV
Follow Current Extinguishing Capability AC [I _{fl}]		50kA _{rms}	25kA _{rms}
Follow Current Limitation/Selectivity		no tripping of 32A gL/gG fuse up to 50kA _{rms} (prosp.)	no tripping of 32A gL/gG fuse up to 25kA _{rms} (prosp.)
Response Time [t _A]		≤100ns	≤100ns
Max. backup fuse (L) up to I _K = 25kA _{rms} (t _a ≤ 5s)		--	250A gL/gG
Max. Backup Fuse (L) up to I _K > 25kA _{rms}		--	100A gL/gG
Max. Backup Fuse (L) up to I _K = 50kA _{rms} (t _a ≤ 0.2 s)		500A gL/gG	--
Max. Backup Fuse (L) up to I _K = 50kA _{rms} (t _a ≤ 5 s)		250A gL/gG	--
Max. Backup Fuse (L) for I _K > 50kA _{rms}		160A gL/gG	--
Max. Backup Fuse (L-L')		125A gL/gG	125A gL/gG
Short-Circuit Withstand Capability for Max. Mains-Side Overcurrent Protection		50kA _{rms}	25kA _{rms}
Temporary Overvoltage (TOV) [U _T]		690V / 5sec	1000V / 5 sec
Cross-Sectional Area (L, L', $\frac{L-L'}{2}$) [min.]		--	100mm ² solid/flexible
Cross-Sectional Area (L, L', N/PEN) [min.]		100mm ² solid/flexible	--
Cross-Sectional Area (L, N/PEN) [max.]		50mm ² /1AWG stranded/35mm ² /2AWG flexible	--
Cross-Sectional Area (L, $\frac{L-L'}{2}$) [max.]		--	50mm ² /1AWG stranded/35mm ² /2AWG flexible
Cross-Sectional Area (L') [max.]		50mm ² /1AWG stranded/35mm ² /4AWG flexible	50mm ² /1AWG stranded/35mm ² /4AWG flexible
SPD According to EN 61643-11		Type 1	
SPD According to IEC 61643-1		Class I	
TOV Characteristics		Withstand	
Operating Temperature Range (parallel connection) [T _{Up}]		-40°C to +80°C	
Operating Temperature Range (series connection) [T _{US}]		-40°C to +60°C	
Operating State/Fault Indication		Green (good) / Red (replace)	
Number of Ports		1	
Mounting		35mm DIN rail per EN 60715	
Enclosure Material		Thermoplastic, UL94V0	
Place of Installation		Indoor	
Degree of Protection		IP20	
Capacity		2 Mods., DIN 43880	
Product Warranty		Five Years*	
Remote Contact Signaling			
Remote Contact Signaling Type		Changeover Contact	
AC Switching Capacity (Volts/Amps)		250V/0.5A	
DC Switching Capacity (Volts/Amps)		250V/0.1A; 125V/0.2A; 75V/0.5A	
Conductor Ratings and Cross-Sectional Area for Remote Contact Signal Terminals		60/75°C Max. 1.5mm ² /14AWG Solid/Flexible	
Ordering Information		Order from Catalogue Number Above	

Recommended Cooper Bussmann NH DIN Size Back Up Fuse Links	
Size	NH Fuse Part Number
000	100NHG000B-690 (max L) up to I _K > 25kA _{rms}
00	125NHG00B-690 (max L-L')
01	160NHG01B-690 (max L) for I _K > 50kA _{rms}
02	250NHG02B-690 (max L) up to I _K = 25kA _{rms} (t _a ≤ 5 s)
02	250NHG02B-690 (max L) up to I _K = 50kA _{rms} (t _a ≤ 5 s)
3	500NHG3B-690 (max (L) up to I _K = 50kA _{rms} (t _a ≤ 0.2 s)

* See Cooper Bussmann SPD Limited Warranty Statement (3A1502) for details at www.cooperbussmann.com/surge