

Surge Protection Made Simple™ for IEC Applications

IEC Class I Combined Lightning, Current and Surge Arresters for 230/400 Volt, 4-Pole TNS & TT Systems



Description

The Cooper Bussmann® IEC Class I 230 volt, four-pole, modular combined lightning, current and surge arresters feature local, easyID™ visual indication and optional remote contact signaling. The unique module locking system fixes the protection module to the base part. Modules can be easily replaced without tools by simply depressing the release buttons. Integrated mechanical coding between the base and protection module ensures against installing an incorrect replacement module.

230 Volt models are offered with MCOV ratings of 255 volts.

TNS System Arresters

The features of these four-pole devices are for use in TNS 230/400 volt systems ("4-0" circuit) against surges.

TT System Arrester

Provides a current arresting means between neutral conductor and protective conductor in TT 230/400 volt systems ("3+1" circuit) against surges.

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.





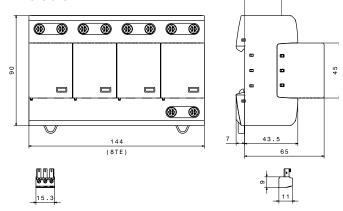






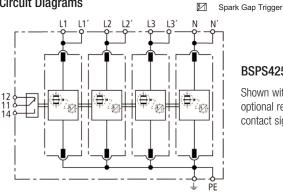


Dimensions - mm



Shown with optional remote contact signaling

Circuit Diagrams



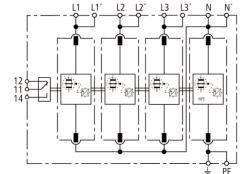
Creepage Discharge Spark Gap

Shown with optional remote contact signaling

BSPS4255TNS(R)

BSPS4255TT(R)

Shown with optional remote contact signaling



www.cooperbussmann.com/Surge

COOPER Bussmann

Outoring Information					
Ordering Information					
System Voltage/Poles	230/400V/4	230/400V/4			
Max. Continuous operating AC voltage (MCOV) [UC]	255V	255V			
Catalog Numbers: Without Remote Signaling	BSPS4255TNS	BSPS4255TT			
With Remote Signaling	BSPS4255TNSR	BSPS4255TTR			
Replacement Modules (Spark Gap technology):	BPS255IEC	BPS255IEC			
		BPS100NPEIEC*			
Specifications					
SPD according to EN 61643-11/ IEC 61643-1	Type 1/Class I				
Energy-coordinated protection effect with regard to the terminal equipment	Type 1 + Type 2				
Energy-coordinated protection effect with regard to the terminal equipment (≤ 5m)	Type 1 + Type 2 + Type 3				
Nominal AC voltage [U _N]	230/400V				
Lightning impulse current (10/350 μs) [L1+L2+L3+N-PE] [I _{total}]	100kA				
Specific energy [L1+L2+L3+N-PE] [W/R]	2.50MJ/ohms				
Lightning impulse current (10/350 μs) [L, N-PE] [l _{imp}]	25kA				
TNS system specific energy [L,N-PE] [W/R]	156.25kJ/ohms				
TT system specific energy [L-N]/[N-PE] [W/R]	156.25kJ/ohms/2.50kJ/ohms				
Nominal discharge current (8/20 µs) [l _n]	25/100kA				
Voltage protection level [L-PE]/[N-PE] [U _P]	≤ 1.5kV/≤ 1.5kV				
TNS system follow current extinguishing capability AC [I _{fi}]	50kA rms				
TT system follow current extinguishing capability AC $[I_{fi}]$	50kA rms/100A rms				
Follow current limitation/Selectivity	No tripping of a 20A gL/gG fuse up to 50kA rms (prosp.)				
Response time [t _A]	≤ 100 ns				
Max. Backup fuse (L) up to $I_K \le 50 kA \text{ rms}$	315A gL/gG				
Max. Backup fuse (L) for $I_{K} > 50$ kA rms	200A gL/gG				
Max. Backup fuse (L-L')	125A gL/gG				
Temporary overvoltage (TOV) [L-N] [U _T]	440V/5 sec.				
Temporary overvoltage (TOV) [N-PE] [U _T]	1200V/200mS				
TOV characteristics	Withstand				
Operating temperature range [parallel]/[continuity] [T _U]	-40°C to +80°C/-40°C to +60°C				
Operating state/fault indication	green (good)/red (replace)				
Number of ports	1				
Cross-sectional area (L1, L1', L2, L2', L3, L3', N, N', PE, $\frac{1}{2}$) [min.]	10mm ² solid/flexible				
Cross-sectional area (L1, L2, L3, N, PE) [max.]	50mm²/1AWG stranded-35mm²/2AWG flexible				
Cross-sectional area (L1', L2', L3', N', \(\preceq \) [max.]	35mm²/2/\\/C etra	odad-25mm²/4AWG flavible			
Mounting	35mm²/2AWG stranded-25mm²/4AWG flexible 35mm DIN Rail per EN 60715				
Enclosure material	Thermoplastic, UL 94V0				
Location category	Indoor				
Degree of protection	IP20				
Capacity	8 mods., DIN 43880				
Agency Information	KEMA				
Product Warranty	Five Years**				
Remote Contact Signaling					
Remote Contact Signaling Type	<u>~</u>	ver Contact			
AC Switching Capacity (Volts/Amps)	Changeover Contact 250V/0.1A				
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. 1.5mm²/14AWG Solid/Flexible				
Ordering Information	Order from Catalog Numbers Above				
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^{*} N-PE Surge arrester for location between neutral conductor and protective conductor in TT systems.

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

Recommended Cooper Bussmann NH DIN Size Back Up Fuses			
Size	NH Fuse Part Number	Size	NH Fuse Part Number
00	125NHG00B (max L-L)	02	125NHG02B (max L-L)
0	125NHG0B (max L-L)	02	200NHG02B (max L lk >50kA)
01	125NHG01B (max L-L)	2	315NHG2B (max L ≤50kA)
1	200NHG1B (max L lk >50kA)	03	315NHG03B (max L ≤50kA)

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