

SURGE PROTECTION MADE SIMPLE™ FOR COMMERCIAL & INDUSTRIAL APPLICATIONS

SURGEPOD™ HEAVY DUTY SPD FOR UL 1449 3rd Edition Listed Loadside and Lineside Protection



Description

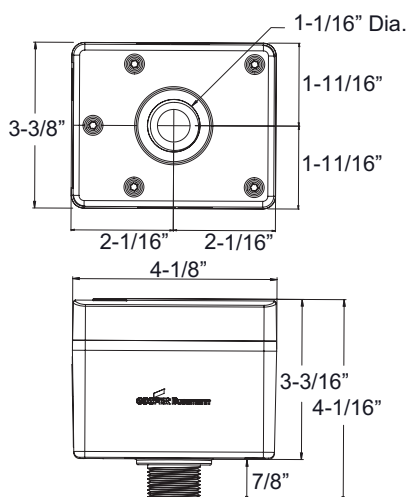
The Cooper Bussmann SurgePOD™ HEAVY DUTY is a Type 1 UL Listed 1449 3rd Edition surge protective device suitable for installation on both the loadside or lineside of the service entrance overcurrent protective device.

Available in voltage and system specific versions to match electrical system and equipment requirements. The SurgePOD HEAVY DUTY delivers optimum surge protection using advanced patent pending SurgePOD™ module featuring thermal disconnect technology that eliminates the need for additional overcurrent protection.

Parallel connection to the electrical system permits the SurgePOD HEAVY DUTY SPD to be installed on **any** ampacity panel.

- Type 1 UL 1449 3rd Edition Listed SPDs are easily selected and installed on the loadside or lineside of the service entrance overcurrent protective device
- Patented Cooper Bussmann SurgePOD module technology eliminates the need for additional fusing
- Voltage specific models precisely match and protect electrical systems and equipment up to 600Vac
- Compact UV resistant NEMA 4X for indoor or outdoor applications
- easyID™ LED status indicator provides surge protection status at a glance

Dimensions - in



SPH50SP1120SN	SPH50SP2480PN	SPH50SP3208WYG
SPH50SP1240SN	SPH50SP3240PNG	SPH50SP3480WYG
SPH50SP1347SN	SPH50SP3480PNG	SPH50SP3600WYG
SPH50SP2120SNG	SPH50SP3240DLG	SPH50SP4208WYNG
SPH50SP2240SNG	SPH50SP3480DLG	SPH50SP4480WYNG
SPH50SP2347SNG	SPH50SP4240HLG	SPH50SP4600WYNG
SPH50SP2240PN	SPH50SP4480HLG	

NEMA 4X Rated Heavy Duty Type 1 UL Listed SPD

Type 1 SPD Part Number System

	SPH	50S	PX	XXX	XXX
SPH = Product Series	Surge Protection Heavy Duty				
Surge Rating		50S = 50kA max discharge current			
No of Wires/Poles			P1 = 1 P2 = 2 P3 = 3 P4 = 4		
Rated System Voltage			120, 208, 240, 347, 480, 600Vac		
System					
	SN = Single-Phase 2 Wire, 2 Connection Points SNG = Single-Phase 2 Wire + G, 3 Connection Points PN = Split-Phase 3 Wire, 3 Connection Points PNG = Split-Phase 3 Wire + G, 4 Connection Points DLG = Three-Phase Delta 3 Wire + G, 4 Connection Points HLG = Three-Phase Highleg Delta 4 Wire + G, 5 Connection Points WYG = Three-Phase Wye 3 Wire, 4 Connection Points WYNG = Three-Phase Wye 3 Wire + G, 5 Connection Points				

SurgePOD™ HEAVY DUTY Technical Information

Catalog Number	Nominal System Voltage	Max. Continuous Operating AC Voltage (MCOV) (V _C)	System Type	Connection Points
SPH50SP1120SN	120V	150V	Single-Phase 2 Wire	2
SPH50SP1240SN	240V	320V	Single-Phase 2 Wire	2
SPH50SP1347SN	347V	420V	Single-Phase 2 Wire	2
SPH50SP2120SNG	120V	150V	Single-Phase 2 Wire + G	3
SPH50SP2240SNG	240V	320V	Single-Phase 2 Wire + G	3
SPH50SP2347SNG	347V	420V	Single-Phase 2 Wire + G	3
SPH50SP2240PN	120/240V	150V	Split-Phase 3 Wire	3
SPH50SP2480PN	240/480V	320V	Split-Phase 3 Wire	3
SPH50SP3240PNG	120/240V	150V	Split-Phase 3 Wire + G	4
SPH50SP3480PNG	240/480V	320V	Split-Phase 3 Wire + G	4
SPH50SP3240DLG	240V	320V	Three-Phase Delta 3 Wire + G	4
SPH50SP3480DLG	480V	550V	Three-Phase Delta 3 Wire + G	4
SPH50SP4240HLG	120/240V	150/320V	Three-Phase Highleg Delta 4 Wire + G	5
SPH50SP4480HLG	240/480V	320/550V	Three-Phase Highleg Delta 4 Wire + G	5
SPH50SP3208WYG	208V	150V	Three-Phase Wye 3 Wire + G	4
SPH50SP3480WYG	480V	320V	Three-Phase Wye 3 Wire + G	4
SPH50SP3600WYG†	600V	420V	Three-Phase Wye 3 Wire + G	4
SPH50SP4208WYNG	208Y/120V	150V	Three-Phase Wye 4 Wire + G	5
SPH50SP4480WYNG	480Y/277V	320V	Three-Phase Wye 4 Wire + G	5
SPH50SP4600WYNG†	600Y/347V	420V	Three-Phase Wye 4 Wire + G	5

† 600V Wye versions are not CSA Certified.

SurgePOD™ HEAVY DUTY Technical Information

Specifications (for all SurgePOD HD units)	Values
Short Circuit Current Rating (SCCR)	200kA
Nominal Discharge Current (8x20μs) I _N	20kA
Max. Discharge Current (8x20μs) I _{max}	50kA
Response Time t _A	<25ns
Frequency	50/60Hz
Operating State/Fault Indication	Bi-Color LED - Green (good) / Red (replace)
Conductor Length / Gauge	18 inches, 10 AWG Stranded Tinned Copper
Mounting	Chase Nipple / Bracket*
Enclosure / Flammability Ratings	NEMA 4X - UL 94-5VA
Degree of Protection (Installed State)	IP20 (finger-safe)
SPD Install Location	Indoor/Outdoor
Circuit Location	Lineside or Loadside of service entrance overcurrent protective device
Standard	UL 1449 3 rd Edition Type 1 Listed SPD
Agency Information	cULus, CSA**, RoHS Compliant
Product Warranty	5 Years***
Operating Temperature	-40°C to +85°C
Maximum Operating Altitude	16,000FT

* Customer-supplied bracket.

** 600V Wye versions not CSA Certified.

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

Voltage Protection Ratings (VPRs)

Catalog Number	Rated System Voltage (V _o)	MCOV (V _c)	Voltage Protection Ratings (VPRs)			
			L-N	L-L	L-G	N-G
SPH50SP1120SN	120V	150V	700	—	—	—
SPH50SP1240SN	240V	320V	1200	—	—	—
SPH50SP1347SN	347V	420V	1500	—	—	—
SPH50SP2120SNG	120V	150V	700	—	1200	700
SPH50SP2240SNG	240V	320V	1200	—	2500	1200
SPH50SP2347SNG	347V	420V	1500	—	2500	1500
SPH50SP2240PN	120V/240V	150V	700	1200	—	—
SPH50SP2480PN	240V/480V	320V	1200	2500	—	—
SPH50SP3240PNG	120V/240V	150V	700	1200	1200	700
SPH50SP3480PNG	240V/480V	320V	1200	2500	2500	1200
SPH50SP3240DLG	240V	320V	—	2500	1200	—
SPH50SP3480DLG	480V	550V	—	3000	1800	—
SPH50SP4240HLG	120/240V	150V/320V	700/1200	1200/2500	1200/2500	700/1200
SPH50SP4480HLG	240/480V	320V/550V	1200/1800	2500/3000	2500/3000	1200/1800
SPH50SP3208WYG	208V	150V	—	1200	700	—
SPH50SP3480WYG	480V	320V	—	2500	1200	—
SPH50SP3600WYG†	600V	420V	—	2500	1500	—
SPH50SP4208WYNG	208Y/120V	150V	700	1200	1200	700
SPH50SP4480WYNG	480Y/277V	320V	1200	2500	2500	1200
SPH50SP4600WYNG†	600Y/347V	420V	1500	2500	2500	1500

† 600V Wye versions are not CSA Certified.

easyID™ LED Status Indicator

The easyID™ LED status indicator will illuminate when the unit is properly installed and the system or equipment being protected is energized. The following LED color/status indicates:



GREEN LED = Good

The circuit is energized and *protected*.



RED LED = Replace

The circuit is *energized and unprotected*.

The unit **needs** replacing.



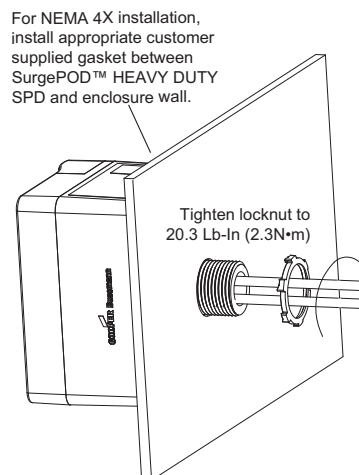
LED is Out / Unlit:

- The circuit is most likely deenergized
- The unit's leads are disconnected
- The unit is damaged

Authorized personnel should follow all prescribed lockout/tagout and safety procedures in troubleshooting the cause for the above conditions. Opening SurgePOD HEAVY DUTY enclosure will void UL listing and warranty.

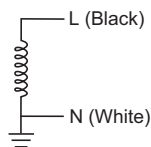
Mounting

SurgePOD HEAVY DUTY is a panel mount device. It may also be mounted using a customer supplied bracket or directly onto a female threaded conduit fitting.



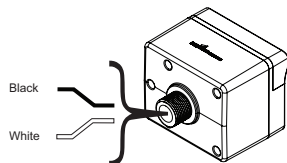
Wiring Connections

Single-Phase



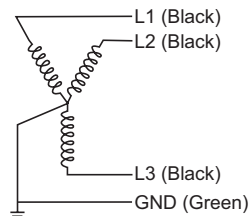
120, 240, 347V (L-N)
2 Wire

Must be installed within 10 feet (3m) of a bonded neutral-ground connection per IEEE C62.41-1991

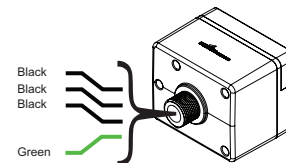


**SPH50SP1120SN,
SPH50SP1240SN,
SPH50SP1347SN**

Wye + Ground

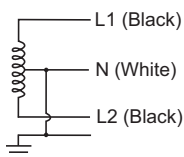


208, 480, 600V (L-L)
3 Wire Wye + Ground



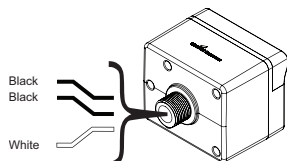
**SPH50SP3208WYG,
SPH50SP3480WYG,
SPH50SP3600WYG**

Two-Pole with Neutral



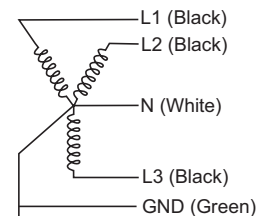
120V (L-N) / 240V (L1-L2),
240V (L-N) / 480V (L1-L2)
Single Phase (Split) Center Tap

For installations at or less than 10 feet (3m) from the transformer.

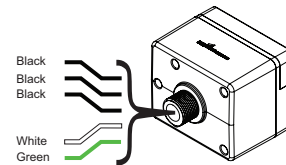


**SPH50SP2240PN,
SPH50SP2480PN**

Wye with Neutral + Ground

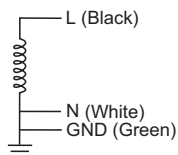


120V (L-N) / 208V (L-L),
127V (L-N) / 220V (L-L),
277V (L-N) / 480V (L-L),
347V (L-N) / 600V (L-L)
4 Wire Wye + Ground



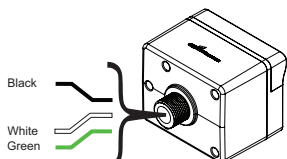
**SPH50SP4208WYNG,
SPH50SP4480WYNG,
SPH50SP4600WYNG**

Single-Phase + Ground



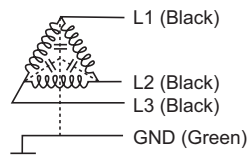
120, 240, 347V (L-N)
2 Wire + Ground

For installation when located greater than 10 feet (3m) of a bonded neutral-ground connection.

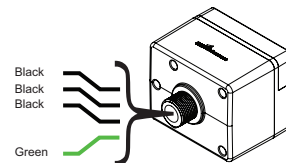


**SPH50SP2120SNG,
SPH50SP2240SNG,
SPH50SP2347SNG**

Delta + Ground

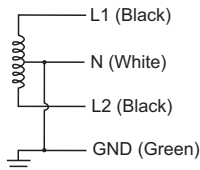


240, 480V (L-L)
3 Wire Delta + Ground



**SPH50SP3240DLG,
SPH50SP3480DLG**

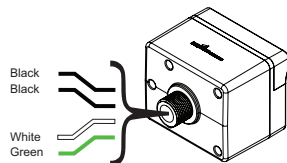
Two-Pole with Neutral + Ground



120V (L-N) / 240V (L1-L2),
240V (L-N) / 480V (L1-L2)

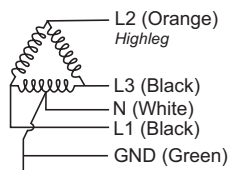
Single Phase (Split) Center Tap + Ground

For installation when located greater than 10 feet (3m) of a bonded neutral-ground connection.

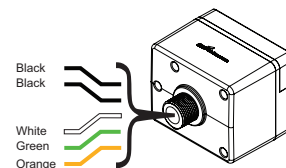


**SPH50SP3240PNG,
SPH50SP3480PNG**

Highleg Delta



120V (L1 / L3-N) / 240V (L-L),
240V (L1 / L3-N) / 480V (L-L)
4 Wire Highleg Delta + Ground



**SPH50SP4240HLG,
SPH50SP4480HLG**

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