ADVANCED PROTECTION
TECHNOLOGIES INC.

SPDEE
spee-dee

SURGE PROTECTIVE DEVICE

Features:

- **UL 1449 Third Edition Listed**
- **50kA 8 x 20µs**
- **Type 1 SPD - 20kA I_n & 10kA (cUL Type 2 optional)**
  - 20kA I_n — Meets UL 96A Lightning Protection Master Label
  - Can be installed upstream or downstream of main disconnect
- **200kA SCCR (most models)**
- **All UL-required OCP & Safety Coordination Included Inside**
- **Voltage Specific Design: Performs better than 'one-size fits all'**
- **Tri-Mount Installation for more mounting flexibility:**
  - Same unit mounts on Pipe Nipple, Bracket or DIN-Rail
- **Visual Diagnostics: Easy to See; Easy to Understand**

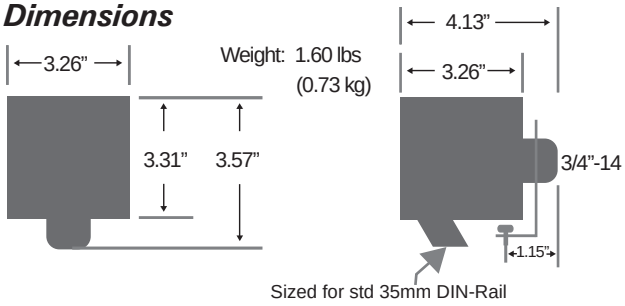
Performance Specifications

- 50kA 8 x 20µs Per Mode
- UL 1449 tested Inominal: 20kA (highest available) + 10kA
- UL 1449 tested SCCR: 200kA (most models)
- Large-Block, 34mm square, 50kA MOVs
- Individually Fused & Thermally Protected MOVs
- UL 1449 Voltage Protection Ratings (VPRs):
  - 600V for 120V, 120/240, 208Y/120
  - 1000V for 277V, 480Y/277V
- Repetitive Impulse: 5000 - 3kA - 8 x 20µs; 1000 - 10kA - 8 x 20µs
- Data table on backpage

Physical Specifications

- Relative Humidity Range: 0 - 95% non-condensing
- Operating Frequency: 47 - 63Hz
- Peak Operating Temperature: +85°C (185°F)
- Typical Operating Temperature: -40°C (-40°F) to +60°C (140°F)
- Response Time: < 1nanosecond
- Solid State Bi-directional Operation
- NEMA 4X Polycarbonate Enclosure—UL746C(f1), UL 94-5VA
- Pre-wired with 3' (1m) of #10 AWG conductor
- Typical Type 2 Connection: #10 AWG to 30A breaker

Dimensions



Green = Go Visual Diagnostic Monitoring

- Green LED = A-OK, Out = replace
- LED Visible from Multiple Sides & Angles - Better Viewing
- Every MOV is Monitored as opposed to 'power is present'

Tri-Mount Installation


Std. 3/4"-14 Nipple


DIN-Rail Mount (rail not incl.)


Bracket Mount for flat surfaces

Options

- N-G protection
- Dry Contact & Audible Alarm
- Dry Contact connection leads exit through nipple via #18 AWG
- Other configurations available for OEM - Call

Quality, Standards & Validation

- 2 year warranty (longer optional)
- UL 1449 Third Edition file: VZCA.E321351 at www.UL.com, cUL
- ANSI/IEEE C62.41.1-2002, C62.41.2-2002, and C62.45-2002
- NEMA LS-1
- IEC 61643, CE
- Burn-In tested prior to shipment
- ISO 9001:2008 Certified Quality Management System
- ISO 17025:2005 Certified Test Lab
- RoHS-compliant

Special *Thank You* to NASA/SATOP for design assistance & validation

RoHS 2002/95/EC

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CE

SPDEE Model Number Configurator & Options

S 50 A *(Default)* ❑❑ ❑❑ ❑❑

Surge Current Rating	Voltage	System	Options
50 = 50kA/Phase	120V 127V 220V 240V 277V 347V 480V 600V	1P = One Pole, Single Phase 2P = Two Pole, Split Phase 3Y = Three Pole Wye 3D = Three Pole Delta 3H = Three Pole Hi-Leg Delta	N = N-G Protection D = Dry Contact & Audible Alarm 2 = Type 2 SPD Bearing cUL Mark 2

EXAMPLES:

S50A120V3Y
50kA, 120V, 3 pole (208Y/120V)

S50A277V3YN
50kA, 277V, 3 pole (480Y/277V) with N-G

No cost accessories:
8483 Supplementary label

SPDEE Performance Data

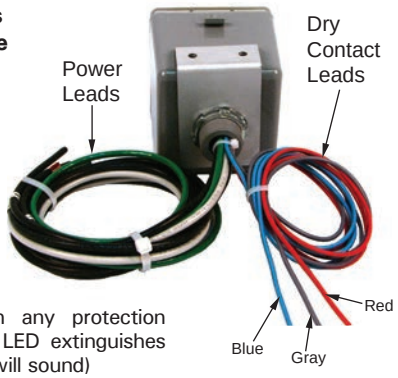
MODEL	System Voltage & Config	UL 1449 THIRD Edition Voltage Protection Rating VPR 3000A				I_n	SCCR	MCOV
		L-N	L-L	N-G*	L-G*			
S50A120V1P	120V	600		600*	1000*	20kA	200kA	150
S50A120V2P	120V/240V	600	1000	600*	1000*	20kA	200kA	150
S50A120V3Y	208Y/120V	600	1000	600*	1000*	20kA	200kA	150
S50A127V1P	127V	700		600*	1200*	20kA	100kA	180
S50A127V2P	127/254V	700	1200	600*	1200*	20kA	100kA	180
S50A127V3Y	220Y/127V	700	1200	600*	1200*	20kA	100kA	180
S50A220V1P	220V-1 pole	1200		1000*	1800*	20kA	200kA	320
S50A220V3Y	380Y/220V	1200	2000	1000*	1800*	20kA	200kA	320
S50A240V3H	120/240V - Hi-Leg Delta	600 /1200	1000 /1500	600*	1000* /1500*	20kA	200kA	150 / 320
S50A240V1P	240V-1 pole	1200		1000	1800	20kA	200kA	320
S50A240V3D	240V Delta - 3 pole		1500		1200	20kA	200kA	320
S50A277V1P	277V	1200		1000*	1800*	20kA	200kA	320
S50A277V2P	240/480V	1200	2000	1000*	1800*	20kA	200kA	320
S50A277V3Y	480Y/277V	1200	2000	1000*	1800*	20kA	200kA	320
S50A347V3Y	600Y/347V	1500	2500	1200*	2500*	20kA	200kA	420
S50A480V1P	480V-1 pole				1800	10kA	200kA	550
S50A480V3D	480V Delta - 3 pole		3000		1800	10kA	200kA	550
S50A480V3H	240/480V - Hi-Leg Delta	1200/ 1800	2500			10kA	200kA	320 / 550
S50A600V3D	600V Delta - 3 pole		2500		2500	20kA	200kA	690
S100A120V2P	120/240V	600	1000		600	20kA	100kA	150
S100A277V2P	240/480V	1000	1800		1000	20kA	100kA	320

* with optional N-G protection

Optional Form C Dry Contact & Audible Alarm

Form C Dry Contact: Three (3) #18 wires exit the pipe nipple Gray is Common, Blue is Normally Open, Red is Normally Closed

- Normally Open: Use Gray & Blue
- Normally Closed: Use Gray & Red

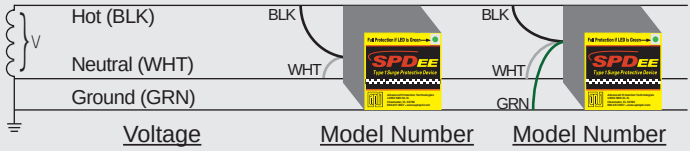


Audible Alarm:
Alarm sounds when any protection is lost (If diagnostic LED extinguishes (i.e. problem), alarm will sound)

SPDEE Application Guide

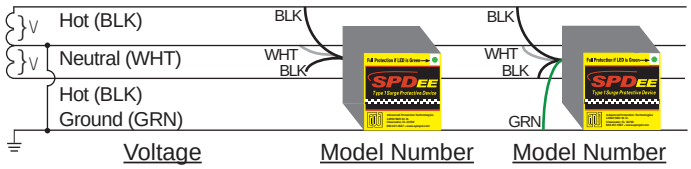
SYSTEM CONFIGURATION	INSTALLED AT OR NEAR SERVICE ENTRANCE OR TRANSFORMER **N-G Bonded** - Does not require N-G protection	INSTALLED >10'(3M) FROM SERVICE ENTRANCE OR TRANSFORMER **Downstream of N-G Bond** - N-G protection suggested

1 POLE / SINGLE



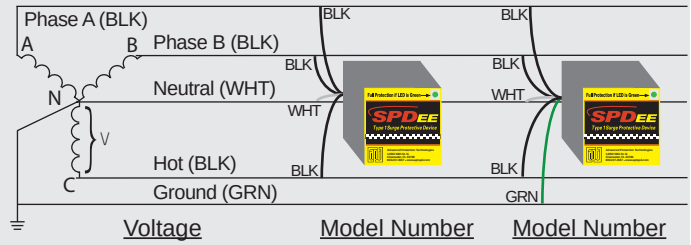
Voltage	Model Number	Model Number
V= 120V	S50A120V1P	S50A120V1PN
V= 127V	S50A127V1P	S50A127V1PN
V= 240V	S50A240V1P	S50A240V1PN
V= 277V	S50A277V1P	S50A277V1PN
V= 480V	S50A480V1P (L-G, not L-N)	N/A

2 POLE / SPLIT



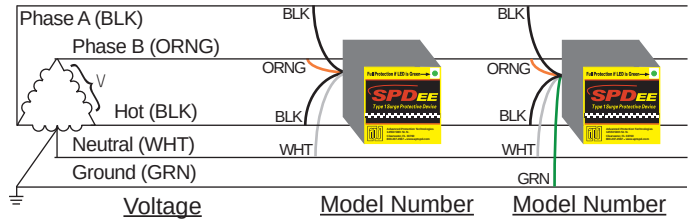
Voltage	Model Number	Model Number
V= 120V (120/240V)	S50A120V2P	S50A120V2PN
V= 127V (127/254V)	S50A127V2P	S50A127V2PN
V= 240V (277/480 or 240/480V)	S50A277V2P	S50A277V2PN

WYE



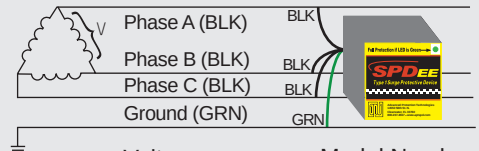
Voltage	Model Number	Model Number
V= 120V (208Y/120V)	S50A120V3Y	S50A120V3YN
V= 127V (220Y/127V)	S50A127V3Y	S50A127V3YN
V= 220V (380Y/220V)	S50A220V3Y	S50A220V3YN
V= 277V (480Y/277V)	S50A277V3Y	S50A277V3YN
V= 347V (600Y/347V)	S50A347V3Y	S50A347V3YN

HI-LEG



Voltage	Model Number	Model Number
V= 120/240V Hi-Leg Delta	S50A240V3H	S50A240V3HN
V= 240/480V Hi-Leg Delta	S50A480V3H	N/A

DELTA



Voltage	Model Number
V= 240V	S50A240V3D
V= 480V	S50A480V3D
V= 600V	S50A600V3D

Corner Grounded Delta?

Use same models & connect one SPD black & green to ground (diagnostics will function correctly)

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