



an EnerSys® company

SPD AD

Surge Protection Device



- 140 to 200kA per mode
- UL 1449 listed
- Industrial grade MOV
- Low voltage protection ratings
- 20kA I-nominal ratings
- 200kA SCCRs
- Advanced TOV/surge counter with time and date stamping
- Realtime voltage/current power quality monitoring
- 10 year standard warranty

General Specifications

Maximum Surge Current Rating Range:	140 to 200kA per mode
UL Type Designation:	Type 2
UL 1449 I-Nominal Rating:	20kA
UL 1449 Short Circuit Current Rating:	200kA
Repetitive Impulse:	10,000 hits per mode
Response Time:	<1 ns
Humidity Range:	0 to 95% non-condensing
Operating Frequency:	47 to 63Hz
Operating Temperature:	-35 to 85°C
Typical Connection:	#2 AWG, 30 to 100A breaker
Additional General Specifications:	<ul style="list-style-type: none">• Strikesorb® industrial grade SPD• Industrial grade 40mm & 80mm MOVs• In-line or T-connected• All modes of protection (L-N, L-G, N-G, L-L)

Diagnostic Monitoring Specifications

- Audible alarm
- Surge/TOV counter with time and date stamp
- Form C dry contact, 240V, 5A
- Full color LCD touch screen display
- Real time voltage/current power quality monitor
- Event log with time and date stamp
- Embedded web page or SNMP connectivity
- User configurable alarm thresholds
- Selectable SNMP or Webpage
- RJ45 Interface

UL 1449 Performance Data

System Voltage:	L-N	L-G	N-G	L-L	SCCR	MCOV
240/120V Split Ø:	600	700	600	900	200kA	175
480/240V Split Ø:	1200	1200	1200	-	200kA	320
208Y/120V:	600	600	600	1000	200kA	150
480Y/277V:	1200	1200	1200	2000	200kA	320
600Y/347V:	1500	1500	1500	2500	200kA	440
240V Hi-Leg Delta:	700	900	600	1500	200kA	180/275
480V Hi-Leg Delta:	1200	1800	1000	2500	200kA	350/550
240V 3Ø Delta:	-	1000	-	1000	200kA	275
480V 3Ø Delta:	-	1800	-	1800	200kA	550
120V Single 1Ø:	600	600	600	-	200kA	150
240V Single 1Ø:	1200	1200	1200	-	200kA	275
277V Single 1Ø:	1200	1200	1200	-	200kA	320
347V Single 1Ø:	1500	1500	1500	-	200kA	420
480V Single 1Ø:	1800	1800	1800	-	200kA	550

Standards Compliance and Certifications

- UL 1449 4th Edition, cUL, UL 96A Compliant
- ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002
- NEC Article 285
- ISO 9001:2014 Quality Management System
- ISO 17025:2007 Laboratory Certification (UL DAP Program)
- 100% Quality Tested prior to shipping
- Assembled in the USA

Strikesorb® is a registered trademark of Raycap Corporation

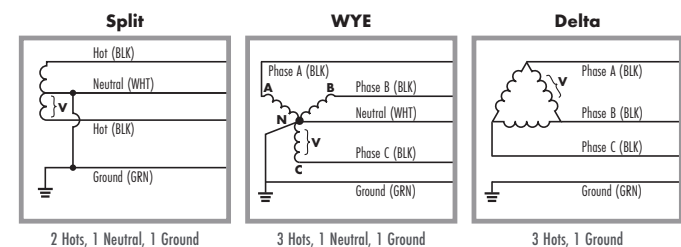
Alpha® SPD AD Specifications

Model Number Configuration

120-3Y-M1-4-04-A-AS

System Voltage	Electrical Configuration	Strikesorb®	Conductors	Diagnostics	MOV Voltage	Enclosure
120 = 120V	2S = Split phase	M1 = 80	2 = 2 wire	04 = Advanced diagnostics	A = 120V	S = Stainless
277 = 277V	3Y = 3-phase WYE	M3 = 40	3 = 3 wire		C = 277V	A = Powdercoat
480 = 480V	3D = 3-phase delta		4 = 4 wire		D = 480V	

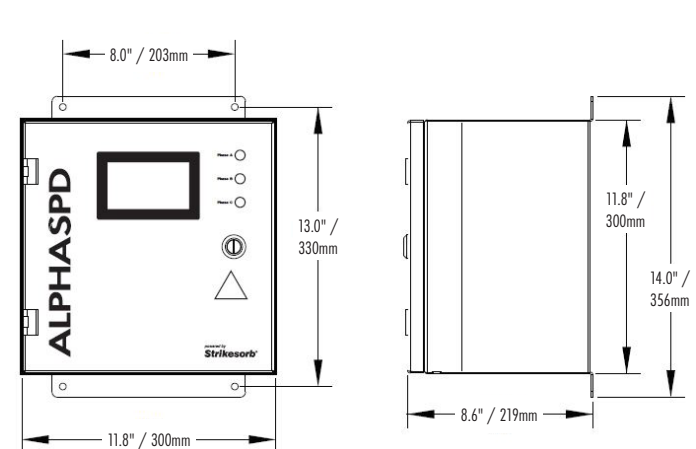
Wiring Diagram



Mechanical Specifications

Dimensions W x H x D (in/mm):	11.8" x 14" x 8.6" / 300 x 356 x 219
Weight (lb/kg):	35 / 15.9
Enclosure Type:	NEMA 4 (powder coat) or NEMA 4X (stainless steel)
Typical Connection:	#2 AWG, 30 to 100A breaker
Installation Type:	Indoor / outdoor
Mounting Method:	Flange

Product Diagram



Current Transformers For AD Units (1000A CT's Available Upon Request)

Customer Ref.	Model Number	Description
	FCL400/5-4	Split-Core Current Transformer, 400:5A, 4" ID, 12" Leadwire, For 100A Systems or less
	FCL500/5-4	Split-Core Current Transformer, 500:5A, 4" ID, 12" Leadwire, For 100A Systems or less
	FCL2500/5-6	Split-Core Current Transformer, 2500:5A, 6" ID, 12" Leadwire, For 100-500 amp Systems
	FCL5000/5-8	Split-Core Current Transformer, 5000:5A, 8" ID, 12" Leadwire, For 500-1000A Systems
	1706SC	6 Pole Shorting Terminal Block, 600V, 75A, w/Cover

Alpha® SPD Utilizing Strikesorb® 40 Module Series - Includes Advanced Diagnostics (Remote Access)

Customer Ref.	Model Number	Description
	120-2S-M3-3-04-A-A	Alpha® SPD 120/240V Split-phase (3-wire plus ground) w/Surge Counter, 120-2S-M3-3-04-A-A, Strikesorb-40 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	120-3Y-M3-4-04-A-A	Alpha® SPD 120/208V Three-phase WYE (4-wire plus ground) w/Surge Counter, 120-3Y-M3-4-04-A-A, Strikesorb-40 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	240-3H-M3-4-04-B-A	Alpha® SPD 120/240V Three-phase High Leg (4-wire plus ground) w/Surge Counter, 240-3H-M3-4-04-B-A, Strikesorb-40 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	277-3Y-M3-4-04-C-A	Alpha® SPD 277/480V Three-phase WYE (4-wire plus ground) w/Surge Counter, 277-3Y-M3-4-04-C-A, Strikesorb-40 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	480-3D-M3-3-04-D-A	Alpha® SPD 480V Three-phase DELTA (3-wire plus ground) w/Surge Counter, 480-3D-M3-3-04-D-A, Strikesorb-40 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)

Alpha® SPD Utilizing Strikesorb® 80 Module Series - Includes Advanced Diagnostics (Remote Access)

Customer Ref.	Model Number	Description
	120-2S-M1-3-04-A-A	Alpha® SPD 120/240V Split-phase (3-wire plus ground) w/Advanced Diagnostics, 120-2S-M1-3-04-A-A, Strikesorb-80 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	120-3Y-M1-4-04-A-A	Alpha® SPD 120/208V Three-phase WYE (4-wire plus ground) w/Advanced Diagnostics, 120-3Y-M1-4-04-A-A, Strikesorb-80 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	277-3Y-M1-4-04-C-A	Alpha® SPD 277/480V Three-phase WYE (4-wire plus ground) w/Advanced Diagnostics, 277-3Y-M1-4-04-C-A, Strikesorb-80 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)
	480-3D-M1-3-04-D-A	Alpha® SPD 480V Three-phase DELTA (3-wire plus ground) w/Advanced Diagnostics, 480-3D-M1-3-04-D-A, Strikesorb-80 Protection Modules, 12" x 12" x 8" (305mm x 305mm x 204mm) Includes LED's and Dry Contacts for Remote Alarming (Includes Remote Diagnostics)



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