



Model SDX *Series Design TVSS Systems*

Model SDX is a high performance series design transient voltage surge suppressor (TVSS) for critical applications. The SDX has been designed for service entrance applications as well as distribution systems that provide power to critical equipment. The SDX has continuous current ratings of up to 4000 Amps, voltage ratings up to 600 VAC, 1,280,000 surge amps per phase (640,000 per mode), and superior noise filtering performance.

SDX incorporates model-specific inductive elements placed between modular hybrid TVSS circuits. The inductive elements reduce the impact of a fast rising transient. This minimizes damaging peak currents, lengthens component life, and lowers clamping voltage. The inductive elements also add to the noise attenuation provided by our hybrid circuit, further reducing electrical noise.

A disconnect switch allows for ease of maintenance without having to remove the protected load. SDX uses through-bus technology and internal disconnects to isolate the load bus and eliminate down time for system maintenance. Isolating the load bus in this way eliminates the concerns previously associated with "series" type TVSS systems.

SDX is designed for the most demanding applications: service entrance and power distribution to critical loads. The key to the incremental performance of SDX is its inductive elements. These inductors store transient energy and release it through hybrid TVSS clamping circuits. The controlled release of transient energy prolongs the life of the clamping elements, lowers the clamping voltage, and reduces electrical noise. The result is better performance under the most extreme conditions.

With less lead length, the SDX reduces clamping voltages and increases transient diversion. It also has field replaceable Clear Choice modules.

Features

Benefits

- Protects Loads from High Energy Transients
- Clamps Voltage Close to Nominal Waveform
- Safely Diverts Excess Surge Current
- Local and Remote Monitoring
- Superior Noise Filtering
- 5-Year Warranty

Electrical

- Bus Rating from 150 Amps to 4000 Amps
- Voltage Ratings to 600 VAC
- 1,280,000 Surge Amps Per Phase (640,000 Per Mode)
- Single and Three Phase Systems
- L-L, L-N, L-G, N-G Modes of Protection Available
- Integral Fused Disconnect Switches
- All Copper Power Pathways

Standards

- UL 1449 Second Edition Listed
- UL 1283 Listed
- IEEE C62.41
- IEEE C62.45



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Model SDX Part Numbering System

Example:

SDX3-S3-4000-320K-31-12

Family Number of Stages

SDX2 Series Design Xtra
2 Protection Modes
L-G & L-L
SDX3 Series Design Xtra
3 Protection Modes
L-N, L-G & N-G

Monitoring

L0 Level 0 (3R Only)
S3 Standard Level 3
F3 Focus Level 3

Surge Current Rating

320 kA 160 kA Input (Line)
160 kA Output (Load)
640 kA 320 kA Input (Line)
320 kA Output (Load)

NEMA Type

12 Type 12
03 Type 3R

Bus Ampacity

0400 150-400 Amperes
1200 600-1200 Amperes
2000 1600-2000 Amperes
3000 2500-3000 Amperes
4000 3500-4000 Amperes

Voltage Code

31 120/208 VAC Three Phase Wye
34 277/480 VAC Three Phase Wye
41 208 VAC Three Phase Delta
43 480VAC Three Phase Delta

Model SDX: Series Design TVSS Technical Specifications

FEATURES—GENERAL	Model SDX2*	Model SDX3*						
UL/CUL 1449 Second Edition	Yes	Yes						
Field Replaceable Modules	Yes	Yes						
Response Time	<1 Nanosecond	<1 Nanosecond						
60 A, 300 kAIC Fused Disconnects	Yes	Yes						
Form C Dry Contact	Yes	Yes						
Clamping Voltage Ratings	480 VAC Delta				208/120 VAC Wye			
	L-N	L-G	N-G	L-L	L-N	L-G	N-G	L-L
UL 1449 Second Edition Clamping Voltages	N/A	1200	N/A	1200	330	330	330	600

Bus Ampacity Range	Inductor Ampacity Rating	Bus Bar Size (Thickness x Width)	Surge Current Rating		
			Per Mode (Input)	Per Mode (Output)	Per Phase (Input/Output)
150 Amperes	400 Amperes	.25" x 2.5"	160 kA	160 kA	320 kA
225 Amperes	400 Amperes	.25" x 2.5"	160 kA	160 kA	320 kA
400 Amperes	400 Amperes	.25" x 2.5"	160 kA	160 kA	320 kA
600 Amperes	1200 Amperes	Consult Factory	160 kA	160 kA	320 kA**
800 Amperes	1200 Amperes	Consult Factory	160 kA	160 kA	320 kA**
1000 Amperes	1200 Amperes	Consult Factory	160 kA	160 kA	320 kA**
1200 Amperes	1200 Amperes	Consult Factory	160 kA	160 kA	320 kA**
1600 Amperes	2000 Amperes	Consult Factory	160 kA	160 kA	320 kA**
2000 Amperes	2000 Amperes	Consult Factory	160 kA	160 kA	320 kA**
2500 Amperes	3000 Amperes	Consult Factory	160 kA	160 kA	320 kA**
3000 Amperes	3000 Amperes	Consult Factory	160 kA	160 kA	320 kA**
3500 Amperes	4000 Amperes	Consult Factory	160 kA	160 kA	320 kA**
4000 Amperes	4000 Amperes	Consult Factory	160 kA	160 kA	320 kA**

*Factory authorized start-up is required in all Series design TVSS systems.

**Consult factory for higher surge current ratings.



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