

# DEFENDER SERIES

## Surge + Diagnostic

### Protect and diagnose rack gear intelligently



Built with state-of-the-art microprocessor protection technology and diagnostic software, the SurgeX Defender Series Diagnostic Rack Mount offers an industrial-grade Power Conditioning System that enables technicians to troubleshoot and diagnose power anomalies in and out of the field.

Perfect for service teams that need to protect equipment and also analyze power quality disruptions, our diagnostic rack solution gives technicians access to customize power protection settings, download time-stamped reports, and diagnose power related service calls proactively via our innovative diagnostic software.



Our Multi-Stage technology is superior to single-stage MOV circuitry found in conventional surge protectors and is instrumental in reducing downtime. It insures the highest level of protection from damaging surges, spikes, over voltage, EMI/RFI noise, and wiring faults—80% of which occur from within a building every day. It is completely non-sacrificial and never requires reset, even after repeated power disturbances.

#### Features:

- Enables service teams to diagnose power related service calls
- Includes diagnostic software to analyze power quality data and customize power settings
- Shields rack equipment from catastrophic electrical surges, noise, and other power anomalies that can cause downtime, disruption, and equipment shutdown
- Improves the reliability of connected equipment
- Includes fail-safe technology that is superior to typical surge suppressors

	Model Number	Plug Configuration		Description
		Input	Output	
	SX-HS-15-R	 NEMA 5-15P	 NEMA 5-15R (8x)	Defender Series Diagnostic Rack Mount, 120V/15A, 1U
	SX-HS-20-R	 NEMA 5-20P	 NEMA 5-15R (6x)  NEMA 5-20R (2x)	Defender Series Diagnostic Rack Mount, 120V/20A, 1U
	SX-HS-L630-R	 NEMA L6-30P	 NEMA L6-30R (1x)	Defender Series Diagnostic Rack Mount, 208V/30A, 2U
	SX-HS-L630-RDB	 NEMA L6-30P (2x)	 NEMA L6-30R (2x)	Defender Series Diagnostic Rackmount, 208V/30A, 2U One device with two fully redundant lines of protection with no commonality in circuitry
	XG-PCS-IC-1			Next Gen PCS Interface Cord, 1 Cord

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Technical Specifications	<b>SX-HS-15-R/ SX-HS-20-R</b>	<b>SX-HS-L630-R</b>	<b>SX-HS-L630-RDB</b>
<b>Voltage Rating</b>	120 Volts	120/230 Volts Split Phase	120/230 Volts Split Phase x 2 Circuits
<b>Load Rating</b>	15/20 Amps at 120 Volts	30 Amps at 208 Volts	30 Amps at 208 Volts x 2 Circuits
<b>Voltage Protection Rating</b>	330V All Modes	800V Line - Line 500V Line - Ground	Pending
<b>Input Connector</b>	NEMA 5-15P/NEMA 5-20P	NEMA L6-30P	L6-30P x 2 Circuits
<b>Output Connector</b>	(8) NEMA 5-15R	NEMA L6-30R	L6-30R x 2 Circuits
<b>Attenuation</b>	Normal Mode: >30dB 80kHz -50MHz Common Mode: >30dB 70kHz -50MHz	Normal Mode: >30dB 80kHz -50MHz Common Mode: >30dB 200kHz -50MHz	Normal Mode: >30dB 80kHz -50MHz Common Mode: >30dB 200kHz -50MHz
<b>Power Requirement (no load)</b>	4 Watts	6 Watts	6 Watts x 2 Circuits
<b>Under-Voltage Shutdown</b>	Adjustable from 80 Volts to 95 Volts, or Disabled. Restores at 105 Volts	Adjustable from 140 Volts to 170 Volts, or Disabled. Restores at 190 Volts	Adjustable from 140 Volts to 170 Volts, or Disabled. Restores at 190 Volts
<b>Over-Voltage Shutdown</b>	Adjustable from 135 Volts to 160 Volts. Restores at 130 Volts	Adjustable from 260 Volts to 300 Volts. Restores at 250 Volts	Adjustable from 260 Volts to 300 Volts. Restores at 250 Volts
<b>Response Time</b>	100msec Over-Voltage 150msec Under-Voltage	100msec Over-Voltage 150msec Under-Voltage	100msec Over-Voltage 150msec Under-Voltage
<b>Under-Voltage Record Event Definition</b>	AC voltage has dropped below 100V	AC voltage has dropped below 180V	AC voltage has dropped below 180V
<b>Over-Voltage Record Event Definition</b>	AC voltage has risen above 135V	AC voltage has risen above 260V	AC voltage has risen above 260V
<b>Power Outage Event Definition</b>	AC voltage has dropped below 20V	AC voltage has dropped below 20V	AC voltage has dropped below 20V
<b>Voltmeter Accuracy</b>	Peak reading type. Typical product accuracy is ±2% between 40V and 180V	Peak reading type. Typical product accuracy is ±2% between 100V and 300V	Peak reading type. Typical product accuracy is ±2% between 100V and 300V x 2 Circuits
<b>Internal Memory Capacity</b>	60 Events with timestamp 999 counts of each event type	60 Events with timestamp. 999 counts of each event type	60 Events with timestamp x 2 Circuits 999 counts of each event type x 2 Circuits
<b>Timestamp accuracy</b>	±2.5%	±2.5%	±2.5%
<b>Data Interface</b>	XG-PCS-IK Custom USB –RJ25	XG-PCS-IK Custom USB –RJ25	XG-PCS-IK Custom USB –RJ25 x 2
<b>Computer Requirements</b>	For use with Diagnostic Software. Minimum 133MHz Pentium processor (or equivalent), minimum 64MB of RAM, minimum 10MB free hard drive space, VGA or higher resolution monitor, keyboard, mouse, CD or DVD drive, minimum screen resolution of 1024x768, Microsoft Windows 2000/XP/Vista/7	For use with Diagnostic Software. Minimum 133MHz Pentium processor (or equivalent), minimum 64MB of RAM, minimum 10MB free hard drive space, VGA or higher resolution monitor, keyboard, mouse, CD or DVD drive, minimum screen resolution of 1024x768, Microsoft Windows 2000/XP/Vista/7	For use with Diagnostic Software. Minimum 133MHz Pentium processor (or equivalent), minimum 64MB of RAM, minimum 10MB free hard drive space, VGA or higher resolution monitor, keyboard, mouse, CD or DVD drive, minimum screen resolution of 1024x768, Microsoft Windows 2000/XP/Vista/7
<b>Dimensions</b>	17.44" W x 10.50" D x 1.71" H (1 RU)	17.000" W x 10.670" D x 3.350" H (2 RU)	17.000" W x 17.000" D x 3.350" H (2 RU)
<b>Weight</b>	12 lbs.	15 lbs.	25 lbs.
<b>BTU/h</b>	80 BTU/h Maximum at full rated load / 100 BTU/h Maximum at full rated load	100 BTU/h Maximum at full rated load	200 BTU/h Maximum at full rated load
<b>Temperature Range</b>	5°C to 40°C	5°C to 40°C	5°C to 40°C
<b>Humidity Range</b>	5% to 95% R.H. Non-condensing	5% to 95% R.H. Non-condensing	5% to 95% R.H. Non-condensing
<b>Agency Listings</b>	ETL Certified to TIA/EIA-568-B.2 Cat 5e ETL Certified to UL 1449 ETL Certified to UL 1283 ETL Certified to CSA 22.2 No. 8-M1986 (R2008)	ETL Certified to UL 1449 ETL Certified to CSA C22.2 No. 8-M1986 (R2008)	ETL Certified to UL 1449

\* Specifications subject to change without notice

\*\* All listed specifications obtained at an ambient temperature of 25°C