

### Open Chassis Modules



Installed in Machinery

### 100% Surge Protection, 0% Failure

While there are many components that can be used to attenuate transients, none alone offers the robust, high reliability solution of Zero Surge’s design. Diodes of all varieties degrade in the presence of excess voltages such as transients. Fuses often blow far too late after a surge has caused damage. Circuit breakers only protect against exceeding maximum current. The utility of crowbar and clamping devices depreciates through proper use. Filters are the most reliable and robust technology for attenuating unwanted frequencies when rated properly. Zero Surge’s series mode filter is activated by a high frequency signal, not necessarily voltage rise, providing high reliability and performance.

Zero Surge's core technology has been certified for performance and endurance, in addition to safety. It was subjected to 1,000 worst case surges of 6,000 Volts/3,000 Amps in 30 second intervals without any resulting degradation or failure. This equates to 10 years of worst case surges, but Zero Surge's in-service history proves that the products will serve far beyond a 10 year life. There have been no reports of surge failures, no fires, and no recalls since Zero Surge began manufacturing in 1989.

All Zero Surge OEM Modules contain Spectrum WVR® Wide Voltage Range Technology - Non-MOV filter technology, operates over a wide voltage range of 85V-175V (120VAC) or 150V-265V (240VAC-European), filters dangerous surge energy with low let-through voltage.

- Features:**
- Open frame modules
  - Increases reliability of the end product
  - Operates over a wide voltage range
  - Certified to UL standards, simplifying final certification process
  - Repeatedly suppresses worst case surges
  - No metal oxide varistors (non-MOV technology)
  - Non-sacrificial—does not wear out or degrade
  - Made in USA
  - 10 year warranty

Model	Item #	Max Amperage Voltage (AC) / Hz	Over-current Protection	Wire Connector
OEM6-20W-120	#003-00326	20A / 120V / 50-60 Hz	Must be installed on a branch circuit with 20A over-current protection.	Screw Terminal Block. Use #8 spade or fork crimp terminal.
OEM6-20W-240E	#003-00318	20A / 240V European / 50-60 Hz		

Technical Specifications	OEM6-20W-120 #003-00326	OEM6-20W-240E #003-00318
<b>Voltage Rating</b>	20A / 120V	20A / 240V European
	US 120V, single phase (one hot leg and a neutral tied to earth ground at service entrance). Operates over a voltage range of 85-175V.* European 240V, single phase (one hot leg and a neutral tied to earth ground at service entrance). Operates over a voltage range of 150-265V. Not compatible with US 240V (with two hot legs).*	
<b>Over-current Protection</b>	Must be installed on a branch circuit with over-current protection matching the filter's maximum load.	
<b>Operating Temperature Range</b>	0-40° C / 32-104° F ->FF1-20W-120 rating change as of 4/2020: -25-60°C / -13-140°F	
<b>Technology/Mode</b>	Series Mode with Wide Voltage Range (WVR) Technology, Mode 1 applications, L-N (filter operates independent of ground line)	
<b>Agency Certifications</b>	ETL & cETL certified to UL 1283 7th Edition, CSA 22.2 No. 8 (Control #3162119)	
<b>Limiters</b>	Series surge reactor current limiter; cascaded, auto-tracking dual polarity dynamic surge and noise sensing; bi-modal dynamic filtering. Parameters optimized for switch-mode power supply protection.	
<b>Dynamic Filtering Onset</b>	120V Modules—172V nominal, 2V above peak line voltage (auto-tracking, WVR) 240V Modules—350V nominal, 2V above peak line voltage (auto-tracking, WVR)	
<b>Max Surge Voltage Let-through</b>	120V Modules—130V above peak line voltage @ 6,000V/3,000A for ANSI C62.41 Category B3/C1. (240V Modules—150V above peak line voltage.)	
<b>Max. Applied Pulse Voltage</b>	6,000V (1.2 x 50 µs—ANSI C62.41 Combination Wave)	
<b>Max. Applied Pulse Current</b>	Does not apply to this technology.	
<b>Joule Rating</b>	No metal oxide varistors to wear out; therefore, not applicable to this technology.	
<b>Endurance Rating</b>	1,000 worst case pulses: ANSI C62.41, Category B3/C1 pulses (6,000V/3,000A); >10,000 pulses @ 4,000V; >100,000 pulses @ 2,000V	
<b>Filter Slew Rate</b>	5,000V/µs disturbance reduced to 35V/µs within AC power wave envelope; 10V/µs outside the power wave envelope	
<b>EMI/RFI Filter Response (50 ohm Rgen., load)</b>	Bi-directional, wave tracking — 3 dB @ 7 kHz; 25 dB @ 100 kHz; 38 dB @ 300 kHz	
<b>Enclosure</b>	No enclosure, open chassis modules.	
<b>Weight</b>	3.25 lbs	
<b>Dimensions</b>	2.25" H x 6.7" W x 5.7" D	

\*These models require an appropriate enclosure and must receive a final UL inspection prior to installation.

Suggested applications: Medical equipment, testing simulators, sensor control equipment, PLC protection, equipment operating 24/7, kiosks, tactical automated security systems, and scales.



**100% Surge Protection, 0% Failure • Are you Zero Surge protected?**

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