

FF1W Series - NEMA1 WVR Single Phase

Models	FF1-20W-120	FF1-20W-240U
Mfg Part #	002-00072	002-00073
Voltage/Hz	120V ac nominal 50-60 Hz	2-120V ac legs with neutral line 50-60 Hz
Max. Amperage	20 amps	20 amps
Box Connectors	Supplied by customer, to fit standard knockouts *	
Ground Connect	Ground screw on each chassis, attach using spade or ring terminals	
Wire Connector & recommended attachment	Screw terminal block use #8 spade or fork crimp terminal	Screw terminal block use #8 spade or fork crimp terminal
Over-current Protection	Must be installed on a branch circuit with 20A over-current protection	
Enclosure	NEMA1 screw cover box w/ knockouts 10”H x 8”W x 4”D	NEMA1 screw cover box w/ knockouts 12”H x 12”W x 4”D
Weight	8.25 lbs	15.5 lbs
Boxed Dim./Wt.	11.5” x 9” x 5.5” / 9 lbs	Bulk Pack

*** WARNING:** Must be installed by a licensed electrician following NEC and local codes.

FF1-20W-120 (top view, not to scale)

FF1-20W-240U (top view, not to scale)



X10 Carrier Current
Compatible

Specifications		
Voltage Ratings	US 120 Volt, single phase (one hot leg & a neutral leg tied to earth ground at service entrance). Will operate over a voltage range of 85 - 175 volts with Spectrum WVR technology (MCOV=175Vac). Full load regulation 1%.	US 240 volt single phase or 208 volt 3 phase Y systems with two hot legs and a common neutral connected to earth ground at service entrance. Will operate over a wide voltage range of 85 - 265 volts with Spectrum WVR technology (MCOV=265Vac).
	Check line wiring for hot/neutral reversal prior to connecting this filter. Hot/neutral reversal is a critical safety issue and will prevent this product from functioning effectively.	
Operating Temperature Range	0-40 deg. C	
Technology	Spectrum WVR® Wide Voltage Range filter technology	
Mode	Mode 1 applications, L-N (ground wire protection)	
Safety Certifications	Filter Assemblies certified to CSA 22.2 No. 8-M1986, UL 1283 5th edition.	
Limiters	Series mode inductor current limiter; auto-tracking dual polarity dynamic sensing; dual dynamic filtering. Parameters optimized for switch-mode power supply protection.	
Dynamic filtering Onset	172 volts nominal, 2 volts above peak line voltage (auto-tracking- WVR).	
Max Surge Voltage Let-through*	130 Volts above peak line voltage @ 6,000 Volts, 3,000 Amps for ANSI C62.41 Category B3/C1 Combination Wave.	
Max. Applied Pulse Voltage	6,000 volts (1.2 x 50 μs – ANSI C62.41 Combination Wave)	
Max. Applied Pulse Current	>100,000 amperes applied (unlimited due to internal current limiting) (8 x 20 μs).	
Joule Rating	Not applicable to this technology. No MOV's to wear out.	
Endurance Rating	1,000 worst case pulses: ANSI C62.41, Category B3/C1 pulses (6,000 Volts, 3,000 Amperes); >10,000 pulses at 4,000 Volts; >100,000 pulses at 2,000 Volts.	
Filter Slew Rate	5,000 volts/μs disturbance reduced to 28 v/μs within AC power wave envelope; less than 10 v/us outside the power wave envelope.	
EMI-RFI Filter Response	Bi-directional, wave tracking: With 50 ohm Rgen., load: 3 dB @5 kHz; 26 dB @100 kHz; 38 dB @300 kHz.	

* Note: Surge voltage let-through is the peak voltage that exceeds the powerline peak voltage.

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

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