



Model	Output Voltage	Output Current		Regulation	Ripple & Noise* (Vpp)
		Minimum	Maximum		
VF-S150-03CF	3 - 4 V	0.5 A	30 A	+/- 1%	50 mV
VF-S150-05CF	5 - 6 V	0.5 A	30 A	+/- 1%	50 mV
VF-S150-12CF	12 - 16 V	0.5 A	12.5 A	+/- 1%	1%
VF-S150-18CF	17 - 23 V	0.5 A	8.82 A	+/- 1%	1%
VF-S150-24CF	24 - 30 V	0.5 A	6.25 A	+/- 1%	1%
VF-S150-48CF	36 - 56 V	0.5 A	4.28 A	+/- 1%	1%

## Input

Parameter	Conditions/Description	Min	Nom	Max	Units
Input Frequency		47		63	Hz
Input Voltage	90-132/180-264 auto-selectable	90		264	VAC
Input Current	At 115 VAC			4	Amps
	At 230 VAC			2	Amps
Inrush Current	Peak max. measured at 230VAC and full load, cold start			70	Amps
PFC	Active power factor correction meets EN61000-3-2 class A				

## Output

Parameter	Conditions/Description	Min	Nom	Max	Units
Transient Response	Output voltage returns to within 1% in less than 2.5 mS for a 50% load change. Peak transient does not exceed 5%				
Overshoot	Turn-on and turn-off overshoot shall not exceed 5% over nominal voltage.				
Efficiency	At 230 V and full load	80%			
Turn on delay	At 120 VDC			1	second
Hold up time	At 120 VAC and 80% of rated maximum load	20			mS
Adjustability	Output user adjustable	+/- 5%			
Remote sense	Designated as RMSW on the CN1. Total voltage compensation for cable losses with respect to the main output.				
Remote inhibit	Requires a low signal to inhibit output.				
LED display (LED 1)	Green - the power supply is operating normally.				
Power Good	Designated as PG on the CN1. This signal goes high 100-500 mS after the output reaches regulation. It goes low at least 1 mS before loss of regulation.				
Output rating	Measured at output power connector (see chart above)				

\* Provides peak power up to 600 W within 500  $\mu$ s for all models.

\* 1% minimum load is required to maintain ripple and regulation.

\* All models except VF-S150-03CF supply maximum 150 W continuous output with 16 C.F.M. min. forced air.

\* Ripple and noise is measured from 10 KHz to 20 MHz at output terminals with a 0.1  $\mu$ F ceramic cap and a 22  $\mu$ F electrolytic capacitor in parallel.

### Protection Circuits

Parameter	Conditions/Description
Input circuit (primary)	Built-in ac fuse. A blown fuse usually indicates permanent damage to the power supply serviceable by factory only.
Overpower protection	Current limiting starts at 110-140% of the rated output current and recovers automatically.
Short circuit protection	Short circuit can be continuous. Recovers automatically upon removal of short.
Overvoltage protection	Output is protected against overvoltage. Unit shuts down and latches when voltage at output terminals exceeds 130%. AC input needs to be reset to restart the power supply.
Over temp. protection	Power supply shuts down when temperature is in excess of 85 °C. Auto recovery.

### Mechanical

Parameter	Conditions/Description	Min	Nom	Max	Units
Weight				500	grams
Enclosure	5(L) x 3.2(W) x 2(H) enclosed frame				inches
Mounting screws	6-32, 1/4 or shorter				inches

### Mating Connector- Pin Header Version

AC Input (CN3)	Molex Part No. 09-91-0500 or equivalent. L= Line; N= Neutral; G=Chassis Ground Pins: Molex Engineering Series 2478, 2578, 8818
Output (CN2)	Molex part No. 09-91-0600, or equivalent Assignments: pins 1-3: VO+, pins 4-6: VO-

### Mating Connector- Screw Terminal Version

AC Input (CN3)	Fork terminals for 3 position screw terminal block, M3.3, 6.35 mm center spacing. L= Line; N= Neutral; G= Chassis Ground
Output (CN2)	Fork terminals for 4 position screw terminal block, M3.3, 6.35 mm center spacing. Assignments: pins 1-2: VO+, pins 3-4: VO-

### Mating Connector- Logic and Fan

Logic (CN1)	JST XHP-3 or equivalent See outline drawings for pin assignment. Pins: JST SXH-002T-P0.6 for AWG 30 to 26.
Fan	Built-in dc fan

## Environmental

Parameter	Conditions/Description	Min	Nom	Max	Units
Operating temp.	at full output rating	0		50	°C
Storage temp.		-20		85	°C
Operating humid.	Non-condensing	5%		90%	RH
Storage humid.	Non-condensing	5%		95%	RH

## Safety and EMI

Parameter	Conditions/Description	Min	Nom	Max	Units
EMC requirement	CISPR 22/EN55022 class B, EN61000-3-2, 3, EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024 CE marked				
Safety regulation	Approved to UL60950, CSA C22.2 No. 60950, TUV EN60950 and CB.				
Leakage Current				3.5 mA	
HI-POT	Applied for 3 seconds Primary to Secondary: 3000 VAC Primary to transformer core: 1500 VAC Input to earth Ground: 1500 VAC				
Grounding Test	Allowable resistance measured when 25 A current is applied from the ground pin of the three prong plug to the farthest earthed connection point.			0.1	Ohm

## Reliability and Warranty

Parameter	Conditions/Description	Min	Nom	Max	Units
Warranty	Standard warranty length			2	years
MTBF	According to MIL-HBK-217F at 30 °C	100,000			hours

## Burn-in

Parameter	Conditions/Description	Min	Nom	Max	Units
Burn-in condition	Full load, at 45 +/- 5 °C, 230 VAC. Time reduced gradually as product matures.	1			hour

