

Features

- Built-in active PFC function
- Short Circuit, overload, over voltage, over temperature protected
- Power Good Signal
- Approved to UL, cUL, TUV, CE, CB
- Universal AC input
- Optional top cover and fan
- Compact size 4.25" x 8" x 2"
- Extended temperature range: -40 ~ +75 °C available



Model	Preset Voltage	Output ^{1, 2, 3}	Output Current		Max. Power ^{4, 5}	Ripple & Noise ^{6, 7}	
			Minimum	Maximum		Regulation ⁶	(Vpp)
VPF-S350-03	3.3V	3 - 4 V	0 A	60 A	198 W	+/- 1%	1%
VPF-S350-05	5V	5 - 6 V	0 A	60 A	300 W	+/- 1%	1%
VPF-S350-12	12V	12 - 15 V	0 A	29.16 A	350 W	+/- 1%	1%
VPF-S350-15	15V	12 - 15 V	0 A	29.16 A	350 W	+/- 1%	1%
VPF-S350-18	18V	16 - 21 V	0 A	21.87 A	350 W	+/- 1%	1%
VPF-S350-24	24V	22 - 30 V	0 A	15.9 A	350 W	+/- 1%	1%
VPF-S350-36	36V	31 - 41 V	0 A	11.29 A	350 W	+/- 1%	1%
VPF-S350-48	48V	42 - 53 V	0 A	8.33 A	350 W	+/- 1%	1%

Notes:

1 Customer must specify output voltage.

2 Output is fully isolated.

3 Output voltage is measured at output power connector.

4 Provides peak power of 600 W within 500 μ S for all models. For longer duty duration please contact us.

5 Must use external forced airflow min. 30 CFM to achieve maximum power.

6 1% minimum load is required to maintain the ripple and regulation.

7 Ripple and noise is measured from 10 KHz to 20 MHz at output terminals with a 0.1 μ F ceramic capacitor and a 22 μ F electrolytic capacitor in parallel.

Input

Parameter	Conditions/Description	Min	Nom	Max	Units
Input Frequency		47		63	Hz
Input Voltage		90		264	VAC
Input Current	At 90 VAC at full load			5.5	A
Inrush Current	Peak measured at 230 VAC at full load, cold start			70	A
Power Factor	Active power factor correction meets EN61000-3-2 class D				

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	Measured at 230 V and full load 3.3 V model: 70% 5 V model: 75% 12 V model: 80% All other models: 82%				
Turn on delay	At 120 VAC			1	second
Hold up time	At 120 VAC and 80% of rated maximum load	20			mS
Adjustability	Adjustable with built-in trim pot.	+/- 5%			
LED display	Green - the power supply is operating normally.(LED 1)				
Power Good	Designated as PG on the CN3. This signal goes high 100-500 mS after the output reaches regulation. It goes low at least 1 mS before loss of regulation.				

Protection Circuit

Parameter	Conditions/Description
Input Fuse	Built-in ac fuse. A blown fuse usually indicates permanent damage to the power supply serviceable by factory only.
Input under-voltage	Power supply shuts down when ac input is under 80 VAC. When ac line reappears over 86 +/- 5 VAC, the power supply restarts automatically.
Overload	Current limiting starts at 110-135% hiccup mode and recovers automatically.
Short circuit	Short circuit can be continuous. Recovers automatically upon removal of short.
Output Over-voltage	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.	Power supply shuts down when temperature is in excess of 85 °C. Auto recovery.

General and Safety

Parameter	Conditions/Description	Min	Nom	Max	Units
Operating temp.	Derates linearly from 100% load at 50 °C to 50% load at 70 °C.	0		50	°C
Optional operating temp.	Derates linearly from 100% load at 50 °C to 37.5% load at 75 °C.	-40		75	°C
Storage temp.		-20		85	°C
Optional storage temp.		-40		85	°C
Operating humid.	Non-condensing	5%		90%	RH
Storage humid.	Non-condensing	5%		95%	RH
EMI	Pass FCC Part 15 Subject J Class B, CISPR 22 class B, CE Mark				
Safety	UL60950, CSA C22.2 No. 950-95, TUV EN60950 and CB				
Leakage Current	at 240 VAC			500	µA
	at 120 VAC			200	µA
Isolation Voltage (HI-POT)	Applied for 3 seconds				
	Primary to secondary:	3000			VAC
	Primary to transformer core:	1500			VAC
	Primary 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
Warranty	Standard warranty length			2	years
MTBF	According to MIL-HDBK-217 at 30 °C	100,000			hours
Burn-in	Full load, at 45 +/- 5 °C, 230 VAC.	1			hours

Note: Customer must specify extended temperature on PO.

Mechanical

Parameter	Conditions/Description	Min	Nom	Max	Units
Weight				800	grams
Enclosure	8.00(L) x 4.25(W) x 2.0(H) w/out fan and cover.				inches

Input Connector -

Parameter	Conditions/Description
AC input (Option 1)	Molex Part No. 26-48-1201 or similar (5 pin). Suggested mating plug: Molex Part No. 09-91-0500 or equivalent (5 pin, 3 used)
AC Input (Option 2)	Howder Terminal block Part No. HD-121-3P (3 pin, M3 Screw) 9.5mm spacing Suggested mating connector: Molex 19198-0045 or similar

Note: Input connector needs to be specified on the PO.

Output Connector -

Parameter	Conditions/Description
Output (Option 1)	Molex Part No. 26-48-1000 or similar.(10 pin) Output pin assignment, VO- (Pins 1-5), VO+ (Pins 6-10) Suggested mating connector: Molex Part No. 09-91-0500, contact:08-50-0106 or similar.
Output (Option 2)	Howder Terminal block Part No. HD-121-4P (4 pin, M3.5 Screw) 9.5mm spacing Output pin assignment, VO- (Pins 1-2), VO+ (Pins 3-4) Suggested mating connector: Molex 19198-0045 or similar.
Fan/PG	JST B2B-XH-A Suggested mating connector: JST XHP-2 or equivalent, Contact: SXH-001T-P0.6.

Note: Output connector needs to be specified on the PO.

Rev. 12-2006

Type A: U-Chassis only

