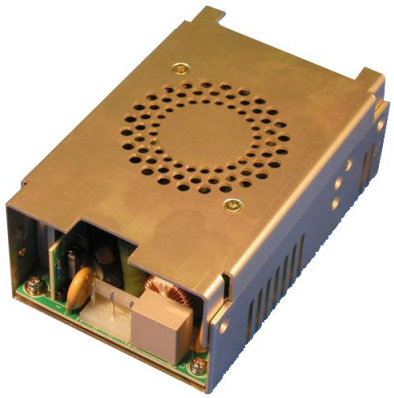
V·INFINITY

VF-S150 Series Switching Power Supply

Rev. 12-2006

Features

- AC input range auto-selectable
- Power factor correction
- Remote on/off
- Power good signal
- Short circuit protection
- Over load protection
- Over voltage protection
- Over temperature protection
- Providing Peak Power 600W within 500uS duty
- Approved to UL, CUL, TUV, CE with CB scheme
- High power density: 6.25watts.cu in.
- Extended temperature range: -40 ~ +75 ºC available



E222889

Model	Preset Voltage	Output[1, 2, 3]	Output Current Minimum	Output Current Maximum	Max. Power[4]	Ripple & Noise[5, 6] Regulation[5]	Ripple & Noise[5, 6] (Vpp)
VF-S150-03A-CF	3.3V	3 - 4 V	0 A	30 A	120 W	+/- 1%	50 mV
VF-S150-05A-CF	5V	5 - 6 V	0 A	30 A	150 W	+/- 1%	50 mV
VF-S150-12A-CF	12V	12 - 16 V	0 A	12.5 A	150 W	+/- 1%	1%
VF-S150-18A-CF	18V	17 - 23 V	0 A	8.82 A	150 W	+/- 1%	1%
VF-S150-24A-CF	24V	24 - 30 V	0 A	6.25 A	150 W	+/- 1%	1%
VF-S150-48A-CF	48V	36 - 56 V	0 A	4.28 A	150 W	+/- 1%	1%

Notes:

1 Customer must specify output voltage on PO.
2 Output is fully isolated.
3 Output voltage is measured at output power connector.
4 Provides peak power of 600 W within 500 µS for all models. For longer duty duration please contact us.
5 1% minimum load is required to maintain the ripple and regulation.
6 Ripple and noise is measured from 10 KHz to 20 MHz at output terminals with a 0.1 µF ceramic capacitor and a 22 µF electrolytic capacitor in parallel.

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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	A
	At 230 VAC			2	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 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	Measured at 230 V and full load				
	3.3 and 5 V model:	70%			
	All other models:	80%			
Turn on delay	At 120 VAC			1	second
Hold up time	At 120 VAC and 80% of rated maximim load	20			mS
Adjustability	Adjustable with built-in trim pot.	+/- 5%			
Remote Inhibit	Designated as RMSW on the CN1. Requires a low signal to inhibit the output.				
LED display	When green (LED1) is on 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.				

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.
Overload	Current limiting starts at 110-140% of the rated output current in foldback mode and recovers automatically.
Short circuit	Short circuit can be continuous. Recovers automatically upon removal of short.
Output Over-voltage	Output is protected agaist 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 ºC. Auto recovery.

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General and Safety

Parameter	Conditions/Description	Min	Nom	Max	Units
Operating temp.	Derates linearly from 100% load at 50 ºC to 50% load at 70 ºC.	0		50	ºC
Optional operating temp.	Derates linearly from 100% load at 50 ºC to 37.5% load at 75 ºC.	-40		75	ºC
Storage temp.		-20		85	ºC
Optional storage temp.		-40		85	ºC
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(E222889), CSA C22.2 No. 60950, TUV EN60950 and CB				
Leakage Current	at 264 VAC			3.5	mA
Switching Frequency			25K		Hz
Vibration	Acceleration +/- 7.35 M/(SxS), on X, Y and Z Axis	5		50	Hz
Isolation Voltage (HI-POT)	Applied for 3 seconds Primary to secondary: Primary to transformer core: Primary to earth ground:	 3000 1500 1500			 VAC VAC 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	Ω
Warranty	Standard warranty length			2	years
MTBF	According to MIL-HDBK-217 at 30 ºC	100,000			hours
Burn-in	Full load, at 45 +/- 5 ºC, 230 VAC.			1	hours
Cooling	Built-in DC fan speed control.				

Note: Customer must specify extended temperature on PO.

Mechanical

Parameter	Conditions/Description	Min	Nom	Max	Units
Weight				500	grams
Enclosure	5.0(L) x 3.2(W) x 2.0(H)				inches

Input Connector - (CN3)

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.

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Output Connector - (CN2)

Parameter	Conditions/Description
Output (Option 1)	Molex Part No. 26-48-1201 or similar.(6 pin)
	Output pin assignment, VO+ (Pins 1-3), VO- (Pins 4-6)
	Suggested mating connector: Molex Part No. 09-91-0600, contact:08-50-0106 or similar.
Output (Option 2)	Howder Terminal block Part No. HD-121-6P (6 pin, M3.5 Screw) 6.5mm spacing
	Output pin assignment, VO+ (Pins 1-3), VO- (Pins 4-6)
	Suggested mating connector: Howder HD-601-4P or similar.

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

Logic Connector - (CN1)

Parameter	Conditions/Description
Logic	JS B7B-XH-A
	Suggested mating connector: JST XHP-3 or equivalent , Contact: SXH-001T-P0.6.
Pin Assignments:	1. P.G - Power good
	2. RMSW - Remote on/off
	3. RTN - Return
Fan	JST B2B-XH-A
	Suggested mating connector: JST XHP-2 or equivalent, Contact: SXH-001T-P0.6.

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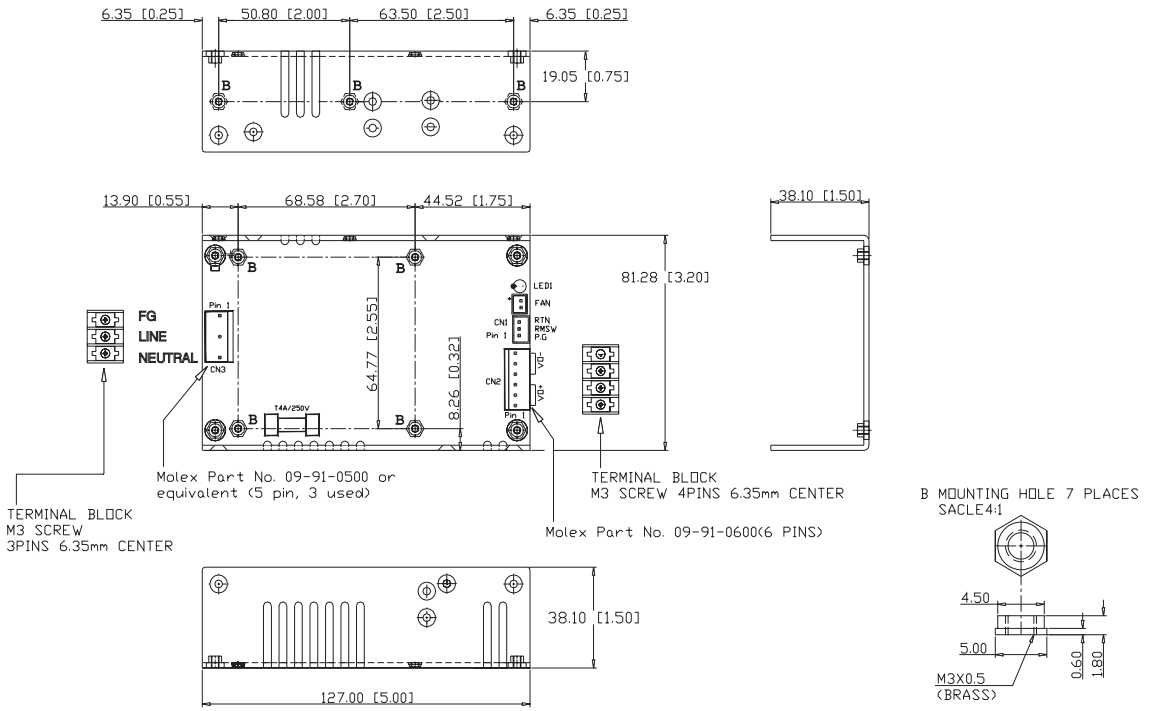
OUTLINE DRAWING: Overall Size: 5(L) x 3.2(W) x 2(H)inches; Weight: Maximum weight is 500g



COVER WITH
BUILT-IN DC FAN
FOR VF-S150-x-CF SERIES