SERIES: VF-S250-XXA | **DESCRIPTION:** AC-DC POWER SUPPLY

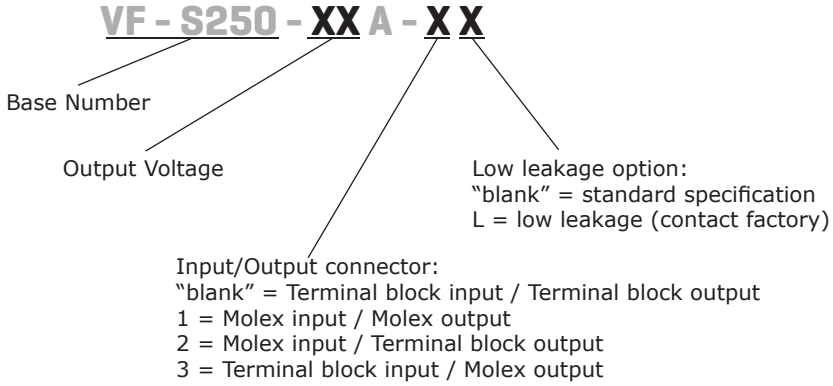
FEATURES

- up to 250 W continuous power
- 600 W peak power within 500 µs duty duration
- passive power factor correction
- power good signal
- remote on/off control
- 3000 Vac isolation voltage
- over load, over voltage, over temperature, and short circuit protections
- UL, cUL, and TUV 60950-1 safety approvals
- efficiency up to 85%

MODEL	output voltage (Vdc)	output current max (A)	output[1] power max (W)	ripple and noise [2,3] max (mVp-p)	efficiency typ (%)
VF-S250-05A	5	40	200	50	75%
VF-S250-09A	9	25	225	90	83%
VF-S250-12A	12	20.83	250	120	80%
VF-S250-15A	15	16.67	250	150	83%
VF-S250-18A	18	13.89	250	180	83%
VF-S250-24A	24	10.42	250	240	83%
VF-S250-28A	28	8.93	250	280	83%
VF-S250-36A	36	6.93	250	360	83%
VF-S250-48A	48	5.21	250	480	83%
VF-S250-54A	54	4.63	250	540	83%

Notes:
1. Maximum power must not exceed 135 W with convection cooling or 250 W for forced air. 5 and 9 V models maximum current listed.
2. 1% minimum load is required to maintain the ripple and regulation.
3. 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.

PART NUMBER KEY



INPUT

parameter	conditions/description	min	typ	max	units
voltage	90-132/180-264 auto selectable	90/180		132/264	Vac
frequency		47		63	Hz
current	at 110~120 Vac, cold start at 200~240 Vac, cold start			6 3	A A
inrush current	at 115 Vac, cold start at 230 Vac, cold start			35 70	A A
power factor	Compliant to EN 61000-3-2 class A				
remote on/off	Designated as RMSW on the CN1, requires a low signal to inhibit output, hiccup mode				

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	low line to high line		±1		%
load regulation	all other outputs		±1		%
temperature coefficient			0.25		mV/°C
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%.				
start-up time	At 120 Vac			1	s
rise time		0.2		20	ms
hold-up time	At 120 Vac and 80% of rated maximim load	20			ms
adjustability			±5		%
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				
fan drive	12 Vdc / 300 mA for external fan				

PROTECTIONS

parameter	conditions/description	min	typ	max	units
over voltage protection	AC input needs to be reset to restart the power supply			130	%
over current protection	Automatically recovers		110	140	%
short circuit protection	Short circuit can be continuous, recovers automatically upon removal of short				
over temperature protection	Auto recovery			85	°C

SAFETY & COMPLIANCE

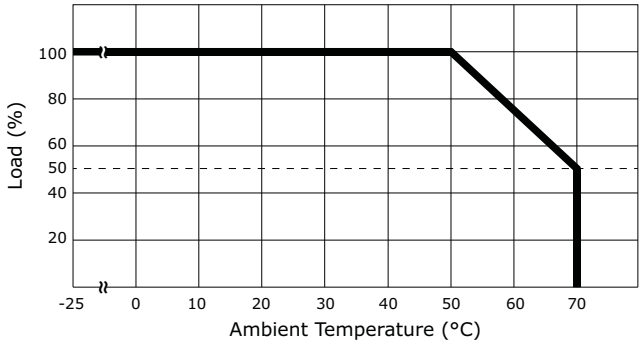
parameter	conditions/description	min	typ	max	units
isolation voltage	Applied for 3 seconds at 10 mA max Primary to secondary: Primary to transformer core: Primary to earth chassis:	 3,000 1,500 1,500			 Vac Vac Vac
safety approvals	UL 60950-1, CSA C22.2 No. 60950-1, TUV EN 60950-1 and CB				
EMI/EMC	CISPR 22/EN 55022 class B, EN 61000-3-2, 3, EN 61000-4-2, 3, 4, 5, 6, 8, 11, EN 55024 CE marked (LVD)				
leakage current	At 240 Vac, (optional for 500 µA at 240 Vac, 300 µA at 120 Vac)			1.5	mA
RoHS compliant	yes				
MTBF	According to MIL-HDBK-217 at 30 ºC	100,000			hrs

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature		0		50	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5%		90%	%
storage humidity	non-condensing	5%		95%	%
vibration	Acceleration ± 7.35 M/(SxS), on X, Y and Z Axis	5		50	Hz

DERATING CURVE

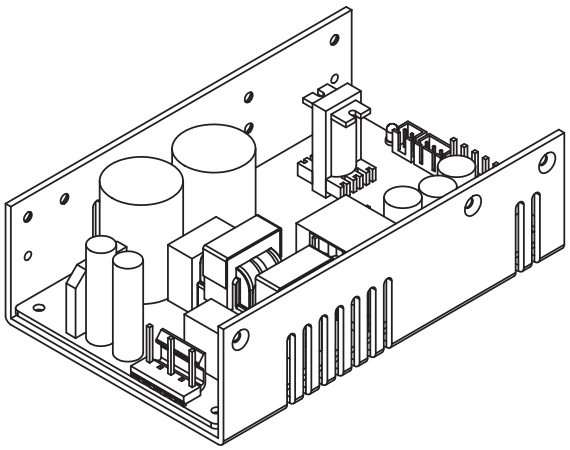
output power vs. ambient temperature

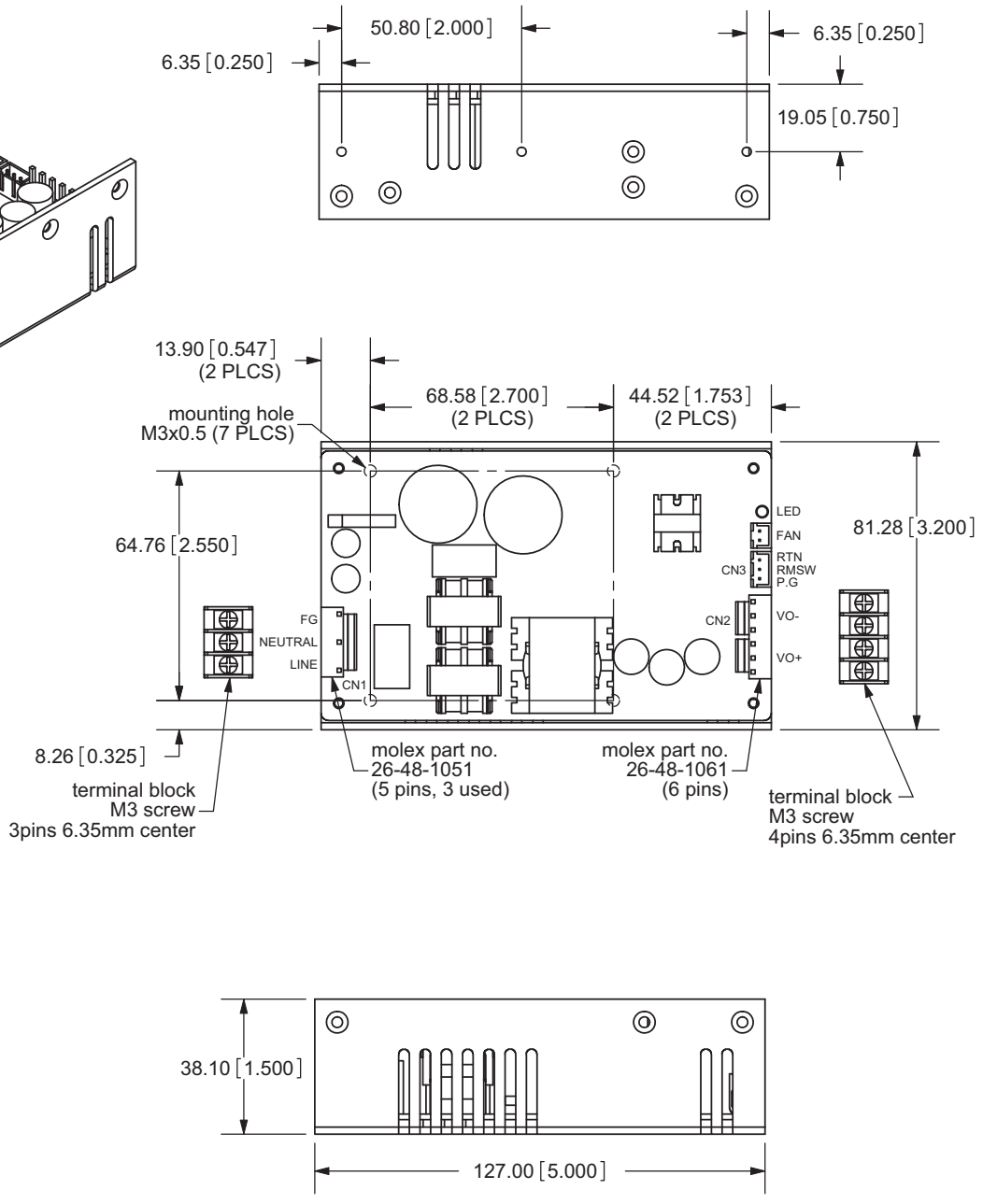


MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	5 x 3.2 x 1.5 (127.00 x 81.28 x 38.10 mm)				inch
weight			400		g

MECHANICAL DRAWING





CN1	
1	ground
2	ac neutral
3	ac line

CN2	
1	Vo+
2	Vo+
3	Vo+
4	Vo-
5	Vo-
6	Vo-

CN3	
1	Power Good
2	remote switch
3	RTN

Notes:
1. CN1 mates with molex part no. 09-91-0500 and molex 2478, 2578, 8818 crimp pins.
2. CN2 mates with molex part no. 09-91-0600 and molex 2478, 2578, 8818 crimp pins.
3. CN3 mates with JST part no. XHP-3 or equivalent (Chyao Shiunn JS-2001-03) and JST SXH-002T-P0.6 mating pins
4. Fan drive connector mates with JST part no. XHP-2 or equivalent

REVISION HISTORY

rev.	description	date
1.0	initial release	05/5/2009
1.01	new template applied	12/16/2011
1.02	V-Infinity branding removed	08/28/2012

The revision history provided is for informational purposes only and is believed to be accurate.

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