SERIES: VF-D250-DXXA-CF | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

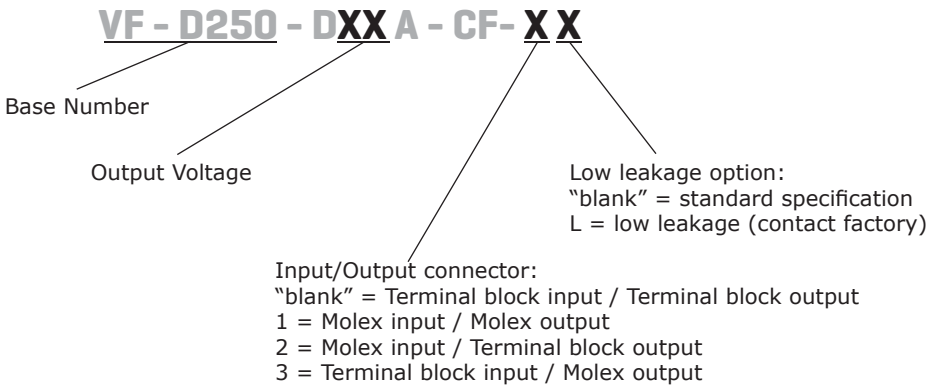
- up to 250 W continuous power
- 600W peak power within 500 µS duty duration
- metal top cover and fan
- passive power correction
- dual outputs
- power good signal
- remote on/off control
- 3000 Vac isolation voltage
- over load, over voltage, over temperature, and short circuit protections
- UL, cUL, and TUV 60950-1 safety approvals
- efficiency up to 70%

MODEL

MODEL	output voltage (Vdc)	output current max (A)	output[1] power max (W)	ripple and noise [2,3] max (mVp-p)	efficiency typ (%)
VF-D250-D312A-CF	3.3 12	24 12	288	120	70%
VF-D250-D324A-CF	3.3 24	24 6	576	240	70%
VF-D250-D512A-CF	5 12	24 12	288	120	70%
VF-D250-D524A-CF	5 24	24 6	576	240	70%
VF-D250-D548A-CF	5 48	24 3	1152	480	70%
VF-D250-D1224A-CF	12 24	12 6	288	240	70%

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, full load, cold start at 230 Vac, full load, cold start			35 70	A A
power factor	Compliant to EN61000-3-2 class A				
remote on/off	Designated as RMSW on the CN1, requires a low signal to inhibit output. Hiccough mode.				

OUTPUT

parameter	conditions/description	min	typ	max	units
line regulation	low line to high line		±5		%
load regulation	all other outputs		±5		%
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 / 400 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 temp. protection	Auto recovery.			85	°C

SAFETY & COMPLIANCE

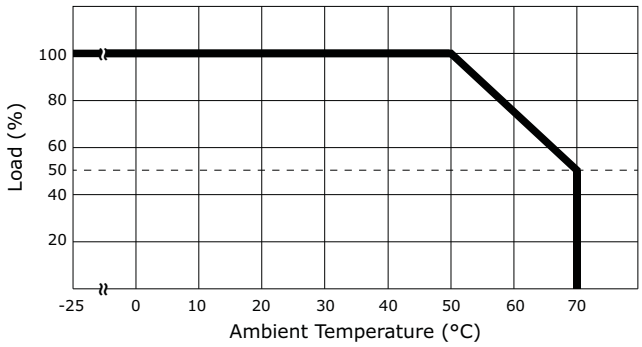
parameter	conditions/description	min	typ	max	units
isolation voltage	Applied for 3 seconds at 10 mA max. Primary to secondary: Primary to transformer core: Primary to earth chassis:	 3,000 1,500 1,500			 Vac Vac Vac
safety approvals	UL60950-1, CSA C22.2 No. 60950-1, TUV EN60950-1 and CB				
EMI/EMC	CISPR 22/EN55022 class B, EN61000-3-2, 3, EN61000-4-2, 3, 4, 5, 6, 8, 11, EN55024 CE marked (LVD)				
leakage current	at 240 Vac at 240 Vac at 120 Vac			1.5 500 300	mA µA µA
RoHS compliant	yes				
MTBF	According to MIL-HDBK-217 at 30 ºC	100,000			hrs

ENVIRONMENTAL

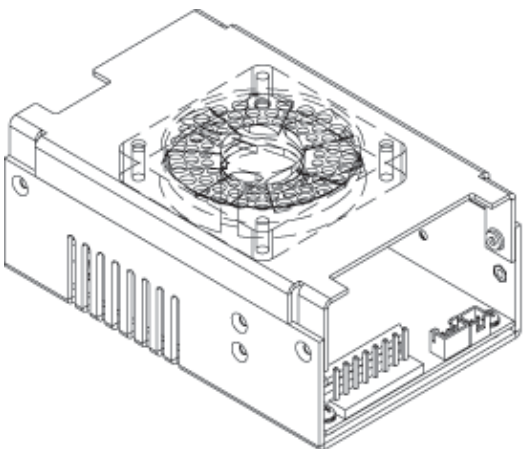
parameter	conditions/description	min	typ	max	units
operating temperature		0		50	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5%		90%	%
storage humidity		5%		95%	%
vibration	Acceleration ± 7.35 M/(SxS), on X, Y and Z Axis	5		50	Hz

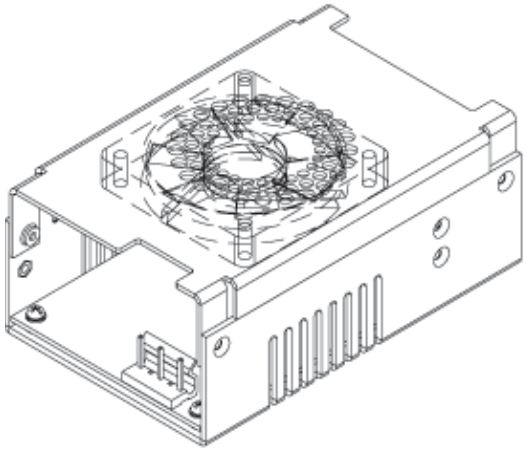
DERATING CURVES

output power vs. ambient temperature



MECHANICAL DRAWING

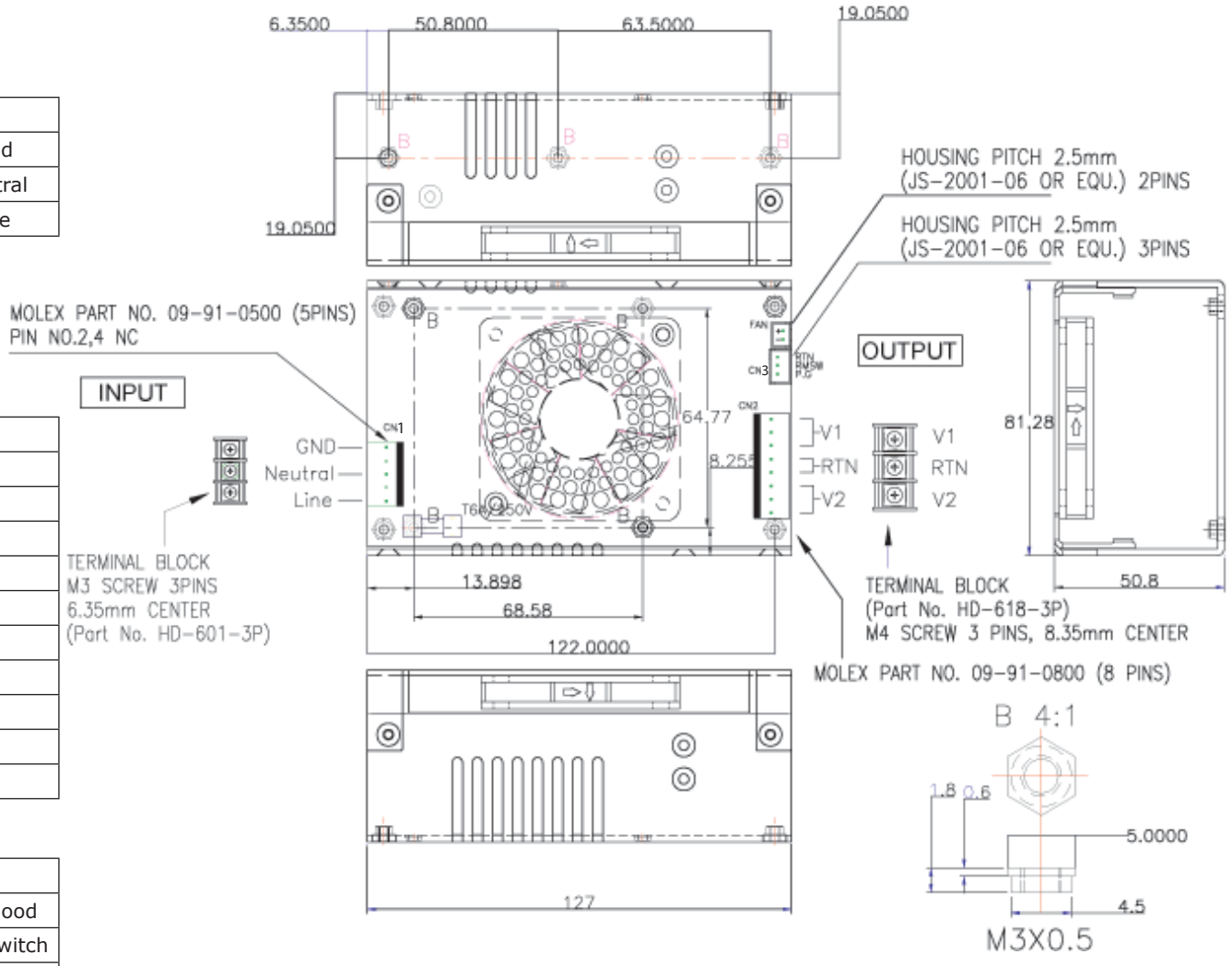




CN1	
1	ground
2	ac neutral
3	ac line

CN2	
1	Vo2
2	RTN
3	RTN
4	RTN
5	RTN
6	Vo1
7	Vo1
8	Vo1
9	Vo1
10	Vo1

CN3	
1	Power Good
2	remote switch
3	RTN



Notes:
1. CN1 mates with molex part no. JST XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03) and JST SXH-002T-P0.6 mating pins
2. CN2 mates with molex part no. 09-91-0600 and molex 2478, 2578, 8818 crimp pins.
3. CN3 mates with molex part no. 09-91-0500 or equivalent and molex 2478, 2578, 8818 crimp pins.
4. Fan drive connector mates with JST part no. XHP-2 or equivalent (CHYAO SHIUNN JS-2001-02).
5. Mounting hole max depth 2.30mm

REVISION HISTORY

rev.	description	date
1.0	initial release	05/5/2009
1.01	new template applied	12/17/2011
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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