

SERIES: VUF-D400-D | **DESCRIPTION:** AC-DC POWER SUPPLY

FEATURES

- safety approvals: UL 60950-1, CSA C22.2 No. 60950-1-03
- dual output
- current monitoring and remote voltage adjustments (margin)
- compact 1U size and high power density: 5.56 W/inch³
- power factor corrected to EN 61000-3-2 Class D
- short circuit, overload, over voltage and over temperature protections
- optional IEC320 AC inlet or terminal block
- current sharing



MODEL	output voltage ^{1,2,3} (Vdc)	output current max.		ripple and noise ^{4,5} max (% Vp-p)	efficiency typ (%)
		convection (A)	22.95 CFM (A)		
VUF-D400-D312	3.3	30	40	±1	75
	12	16.7	25		
VUF-D400-D324	3.3	30	40	±1	75
	24	8.34	12.5		
VUF-D400-D512	5	30	40	±1	75
	12	16.7	25		
VUF-D400-D524	5	30	40	±1	75
	24	8.34	12.5		
VUF-D400-D1242	12	16.7	25	±1	75
	24	8.33	12.5		

Notes:

1. output is fully isolated
2. output voltage is measured at output power connector
3. provides peak power of 700 W within 500 μ s for all models
4. 1% minimum load is required to maintain the ripple and regulation
5. Ripple & noise are measured at 20 MHz BW with 0.1 μ F ceramic cap and a 22 μ F electrolytic capacitors on the output

PART NUMBER KEY


INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
current	at 90 Vac, full load			6.35	A
inrush current	at 230 Vac, full load, cold start			35	A
input fuse	Built-in ac fuse. A blown fuse usually indicates permanent damage to the power supply serviceable by factory only.				
power factor correction	meets EN 61000-3-2 Class D				

OUTPUT

parameter	conditions/description	min	typ	max	units
total regulation			±5		%
transient response	output voltage returns to within 1% in less than 2.5 ms, 50% load change, peak transient does not exceed 5%.				
overshoot	turn-on and turn-off overshoot shall not exceed 5% over nominal voltage.				
turn-on delay	at 230 Vac			1	s
hold-up time	at 80% load	20			ms
adjustment range	output user adjustable		±5		%
remote sense	Designated as RS+ and RS- on CN3. Total voltage compensation for cable losses with respect to the main output.				
remote on/off	Defined RSW on CN3, requiring a low signal to inhibit output.				
LED display (LED 1)	Green - the power supply is operating normally. Orange - when any protection occurs or RSW is low.				
power good	Designated as PG on CN3. This signal goes high 100~500 ms after the output reaches regulation. It goes low at least 1 ms before loss of regulation.				

PROTECTIONS

parameter	conditions/description	min	typ	max	units
input under voltage protection	Power supply shuts down when ac input is under 80 ±5 Vac. When ac line reappears over 86 ±5 Vac, the power supply restarts automatically.				
over voltage protection	shutdown and latches, ac input reset required to restart			130	%
over current protection	auto recovery	110		140	%Io
short circuit protection	auto recovery upon removal of short				
over temperature protection	shutdown	85			°C

SAFETY & COMPLIANCE

parameter	conditions/description	min	typ	max	units
isolation voltage	primary to secondary at 2 mA for 3 seconds	4,000			Vac
	primary to transformer core at 2 mA for 3 seconds	1,500			Vac
	primary to earth ground at 2 mA for 3 seconds	1,500			Vac
safety approvals	UL 60950-1, CSA C22.2 No. 60950-1-03, TUV EN 60950-1, CE Mark (LVD) EN 61204-3/61000-3-(2,3) & IEC 61000-4 Series Regulations, CB				
EMI/EMC	FCC Part 15, CISPR22 Class B, conducted				
leakage current				1.5	mA
grounding test	allowable resistance measured when 40 A current is applied from the ground pin of the three prong plug to the farthest earthed connection point.			0.1	Ω
RoHS compliant	yes				
MTBF	according to MIL-HBK-217F at 30°C	100,000			hours

ENVIRONMENTAL

parameter	conditions/description	min	typ	max	units
operating temperature	derating linearly at 2.5% from 50~70°C	0		50	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5		90	%RH
storage humidity	non-condensing	5		95	%RH

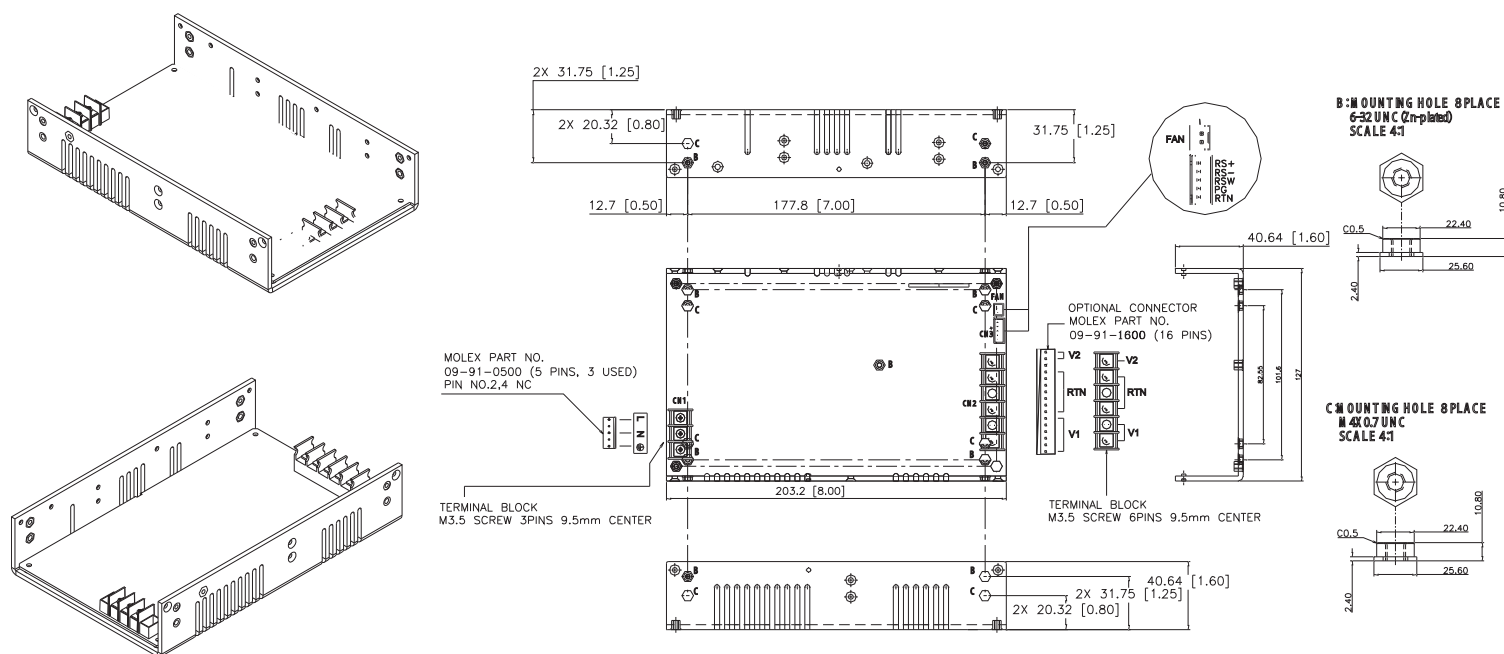
MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	8 x 5 x 1.6 (203.2 x 127 x 40.64 mm)				inch
weight				1.0	kg
Mounting screws	6-32, 1/4" or shorter				

MECHANICAL DRAWING

units: inches (mm)

tolerance: inches: x.xx = ± 0.02

mm: $x.xx = \pm 0.5$ 

INPUT CONNECTOR [CN1]	
Howder HD-121-3P (option 1)	Molex 26-48-1071 or similar. (option 2)
Suggested mating connector Molex 19198-0016 or similar	Suggested mating plug Molex Part No. 09-91-0700

OUTPUT CONNECTOR (CN2)			
Howder HD-121-6P (option 1)		Molex 26-48-1161 or similar. (option 2)	
Suggested mating connector Molex 19198-0045 or similar		Suggested mating connector Molex 09-91-1600	
PIN	FUNCTION	PIN	FUNCTION
1~2	+Vo	1~6	+Vo
3~5	RTN	7~13	RTN
6	-Vo	14~16	-Vo

LOGIC CONNECTOR {CN3}		FAN
JS B5B-XH-A		JS B2B-XH-A
Suggested mating connector JST XHP-5 or equivalent Contact: SXH-002T-P0.6		Suggested mating connector JST XHP-2 or equivalent, Contact: SXH-001T-P0.6
PIN	FUNCTION	
1	RTN - return	
2	PG - power good signal	
3	RSW - remove on/off	
4	RS- - remote sense (-)	
5	RS+ - remote sense (+)	

REVISION HISTORY

rev.	description	date
1.0	initial release	07/11/2006
1.04	new template applied, V-Infinity branding removed	08/28/2012

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



Headquarters
20050 SW 112th Ave.
Tualatin, OR 97062
800.275.4899

Fax 503.612.2383
cui.com
techsupport@cui.com

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