

**SERIES:** VPF-S400 | **DESCRIPTION:** AC-DC POWER SUPPLY

**FEATURES**

- universal AC Input, Full Range
- remote Sense & Remote On/Off
- high power density: 7.15 watts/inch<sup>3</sup>
- power factor corrected to EN 61000-3-2 class D
- approved to UL, CUL, TUV, CB, CE & Class B Emissions
- protections: short circuit, overload, overvoltage protections



MODEL	preset voltage (Vdc)	output voltage <sup>1,2,3</sup>		output current <sup>4,5</sup>	ripple and noise <sup>6,7</sup>	output power	efficiency
		min (Vdc)	max (Vdc)	max (A)	max (% Vp-p)	max (W)	typ (%)
VPF-S400-12	12	12	15	33.34	±1	400	80
VPF-S400-18	18	16	21	25	±1	400	80
VPF-S400-24	24	22	30	18.19	±1	400	80
VPF-S400-36	36	31	41	12.9	±1	400	80
VPF-S400-48	48	42	55	9.53	±1	400	80

**Notes:**

1. customer must specify output voltage
2. output is fully isolated
3. output voltage is measured at output power connector
4. output current limited by max. power
5. must use external forced airflow min. 22 CFM to achieve maximum current
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 µF ceramic capacitor and 22 µF electrolytic capacitor in parallel.

**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			5	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			±1		%
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.				
turn-on delay	120 Vac			1	s
hold-up time	at 80% load	20			ms
adjustment range	output user adjustable		±5		%
remote sense	designated as V1S+ and V1S- on CN3. Voltage compensates for up to 0.5V line drop				
remote on/off	defined INH on CN3, requiring a TTL remote on-off, 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	continuous, auto recovery upon removal of short				

**SAFETY & COMPLIANCE**

parameter	conditions/description	min	typ	max	units
isolation voltage	primary to secondary 10 mA for 3 seconds	3,000			Vac
	primary to transformer core 10 mA for 3 seconds	1,500			Vac
	primary to earth ground 10 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 61000-3-(2,3) & IEC 61000-4 Series Regulations, CB				
EMI/EMC	FCC Part 15, CISPR 22 class B, Conducted				
leakage current	at 240 Vac			3.5	mA
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	$\Omega$
RoHS compliant	yes				
MTBF	according to MIL-HBK-217F at 30°C	100,000			hours

**ENVIRONMENTAL**

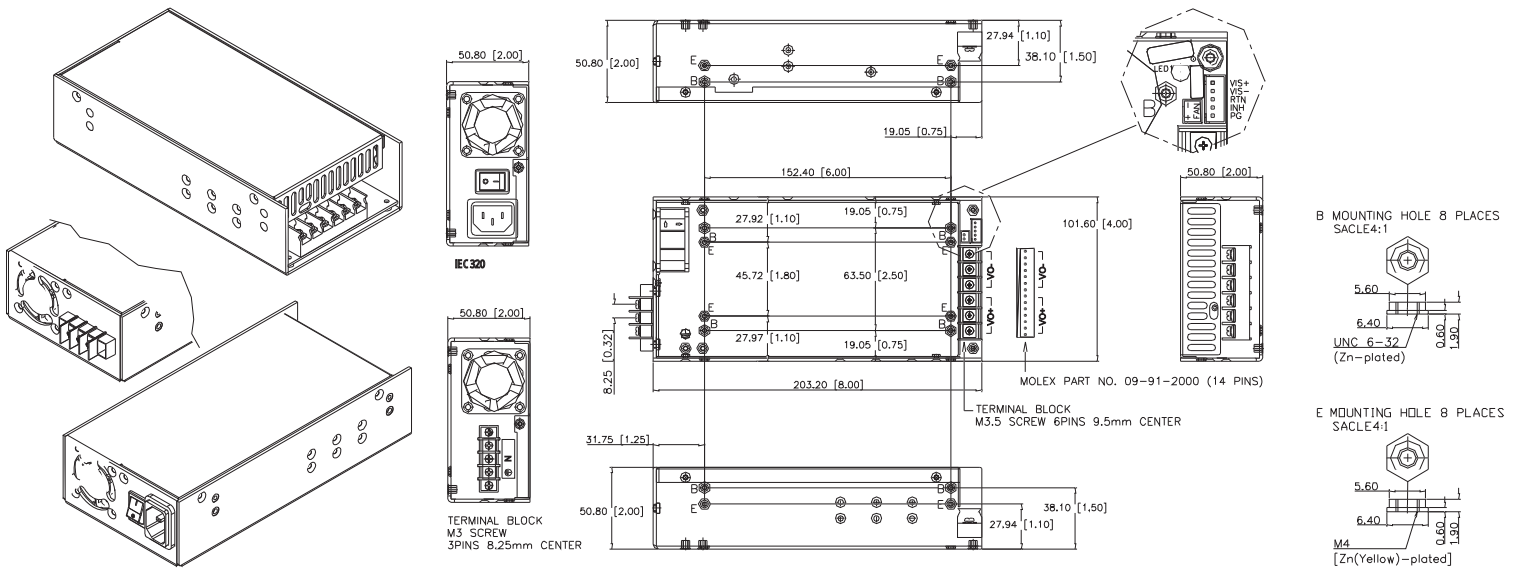
parameter	conditions/description	min	typ	max	units
operating temperature	derating linearly at 2.5% from 50~70°C	0		70	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5		90	%RH
storage humidity	non-condensing	5		95	%RH

## MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	7 x 4 x 2 (177.8 x 101.6 x 50.8 mm)				inch
weight				0.95	kg
Mounting holes	Two sets of 8 threaded mounting holes available on the enclosure. B: 6-32, maximum insertion depth of 0.2 inches. C: M4, maximum insertion depth of 2.0 inches.				

## MECHANICAL DRAWING

units: inches (mm)  
tolerance: inches: x.xx = ±0.02  
mm: x.xx = ±0.5



INPUT CONNECTOR [CN1]	
Molex Part No. 26-48-1201 or similar (option 1)	DINKLE DT-35-A02W-03 (option 2)
Suggested mating plug Molex 09-91-0500 or equivalent	Suggested mating connector Molex 19198-0016 or similar

OUTPUT CONNECTOR [CN2]			
Molex 09-91-2000 or similar. (option 1)		Howder HD-121-8P (option 2)	
Suggested mating connector Molex 09-91-1400		Suggested mating connector Molex 19198-0045 or similar	
PIN	FUNCTION	PIN	FUNCTION
1~7	+Vo	1~3	+Vo
8~14	-Vo	4~6	-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	PG - power good signal	
2	INH - inhibit / remote On-Off	
3	RTN - return	
4	VIS- - output voltage remote sense-	
5	VIS+ - output voltage remote sense+	

## REVISION HISTORY

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rev.	description	date
1.0	initial release	07/21/2006
1.01	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.



**CUI INC**<sup>®</sup>

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

Fax 503.612.2383  
**cui.com**  
techsupport@cui.com

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