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

FEATURES

- universal input, full range
- remote sense & remote on/off
- high power density: 7.15 watts/inch^3
- power factor corrected to EN 61000-3-2 class D
- approved to UL/cUL, TUV, CB, CE & Class B Emissions
- metal-enclosed
- short circuit, overload, and overvoltage protections

MODEL	preset voltage	output voltage[1,2,3]		output current[4]	ripple and noise[5,6]	output power	efficiency
		min	max	max	max	max	typ
	(Vdc)	(Vdc)	(Vdc)	(A)	(% Vp-p)	(W)	(%)
VPM-S400-12	12	12	15	33.34	±1	400	80
VPM-S400-18	18	16	21	25	±1	400	80
VPM-S400-24	24	22	30	18.19	±1	400	80
VPM-S400-36	36	31	41	12.9	±1	400	80
VPM-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. 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 10 µF electrolytic capacitor in parallel.

PART NUMBER KEY

INPUT

parameter	conditions/description	min	typ	max	units
voltage		90		264	Vac
frequency		47		63	Hz
input current	at 90 Vac, full load			5	A
inrush current	at 230 Vac, full load, cold start			35	mA
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.				
start-up time	at 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 at 10 mA for 3 seconds primary to transformer core at 10 mA for 3 seconds primary to earth ground for at 10 mA 3 seconds	3,000 1,500 1,500			Vac Vac 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	EN 60601-1, EN 61204-3 Class B conducted/radiated, EN 61000-3-(2,3), IEC 61000-4-(2,3,4,5,6,8,11)				
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	Ω
RoHS compliant	yes				
MTBF	according to MIL-HBK-217F at 30°C	100,000			hours

ENVIRONMENTAL

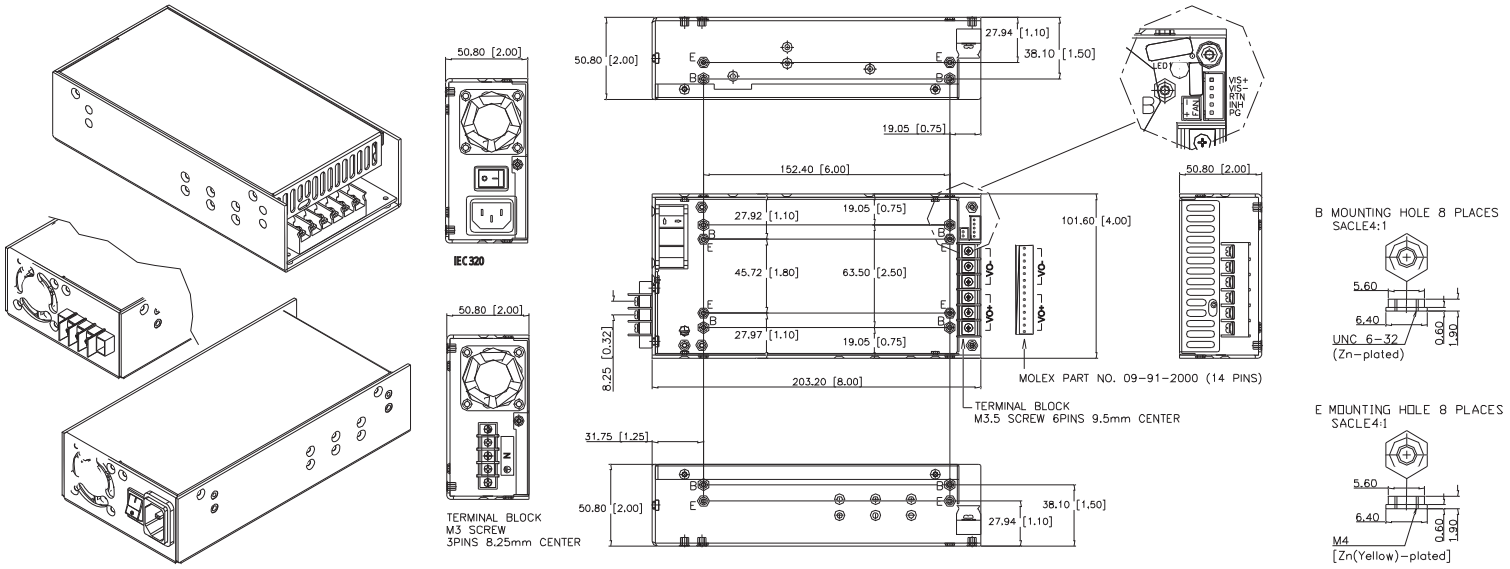
parameter	conditions/description	min	typ	max	units
operating temperature	derating linearly at 2.5% from 50~70°C	0		70	°C
storage temperature		-20		85	°C
operating humidity	non-condensing	5		90	%RH
storage humidity	non-condensing	5		95	%RH

MECHANICAL

parameter	conditions/description	min	typ	max	units
dimensions	8 x 4 x 2 (203.2 x 101.6 x 50.8 mm)				inch
weight				1.05	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 0.2 inches.				

MECHANICAL DRAWING

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



INPUT CONNECTOR (CN1)	
IEC320 or equivalent snap-in mounting type (option 1)	DINKLE DT-35-A02W-03 (option 2)
Suggested mating plug IEC320	Suggested mating connector Molex 19198-0016 or similar

OUTPUT CONNECTOR (CN2)			
Molex Part No. 26-48-1141 or similar. (option 1)		Howder HD-121-6P (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

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.

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