

KEY FEATURES

- Ultra Compact Size: 2.92" x 1.85"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +70°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 89%
- Screw Terminal For Optional
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1
- Meet IEC / EN 60335-1
- 3-Year Product Warranty

**ELECTRICAL SPECIFICATIONS**

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No.	VPNCH50-12S	VPNCH50-15S	VPNCH50-24S	
Max Output Wattage (W)	50W			
Input	Voltage	90-305 VAC or 120-430 VDC		
	Frequency (Hz)	47-440 Hz		
	Current (Full load)	1000 mA max. (115 VAC) / 600 mA max. (230 VAC)		
	Inrush Current (Cold star)	45 A max. (115 VAC) / 90 A max. (230 VAC)		
	Leakage Current	0.25 mA max. (100-240 VAC)		
Output	Voltage (V.DC.)	12V	15V	24V
	Voltage Accuracy	±2%		
	Current (mA) max	4167	3333	2083
	Line Regulation (LL-HL) (typ.)	±2%		
	Load Regulation (0-100%) (typ.)	±2.5%		
	Minimum Load	0%		
	Maximum Capacitive Load	3500µF	3000µF	2200µF
	Ripple & Noise	120mV max (Vp-p)	150mV max (Vp-p)	240mV max (Vp-p)
	Efficiency (at 230 VAC)	89%	88%	88%
Hold-up Time (typ)	30 ms (at 230VAC)			
Protection	Over Power Protection	Hiccup technique, auto-recovery		
	Over Voltage Protection	Zener diode clamp		
	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)		
Isolation	Input-Output (V.AC)	4000V		
Environment	Operating Temperature	-40°C...+70°C (with derating)		
	Storage Temperature	-40°C...+85°C		
	Temperature Coefficient	±0.05%/°C		
	Humidity	95% RH		
	MTBF	>300,000 h @ 25°C (MIL-HDBK-217F)		
	Vibration	IEC60068-2-27 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)		
Physical	Shock	IEC60068-2-6		
	Dimension (L x W x H)	2.92 x 1.85 x 0.91 Inches (74.2 x 47.0 x 23.1 mm) Tolerance ±0.5 mm		
	Case Material	Plastic resin (flammability to UL 94V-0)		
	Weight	158 g		
Safety	Cooling Method	Free air convection		
	Agency Approvals	UL / IEC / EN 62368-1		
EMC	Meet	IEC / EN 60335-1		
	EMI (Conducted & Radiated Emission)	EN 55032 class B		
	EMS (Noise Immunity)	EN 55035		

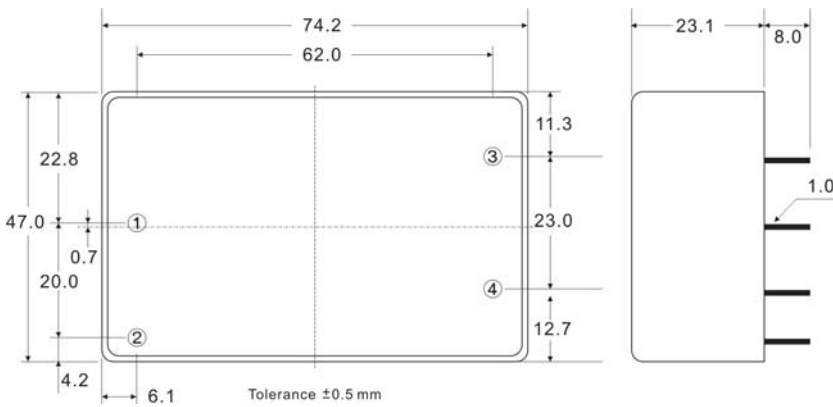
AC-DC ITE Power Module

VPNCH50 SERIES 50 Watts

NOTE

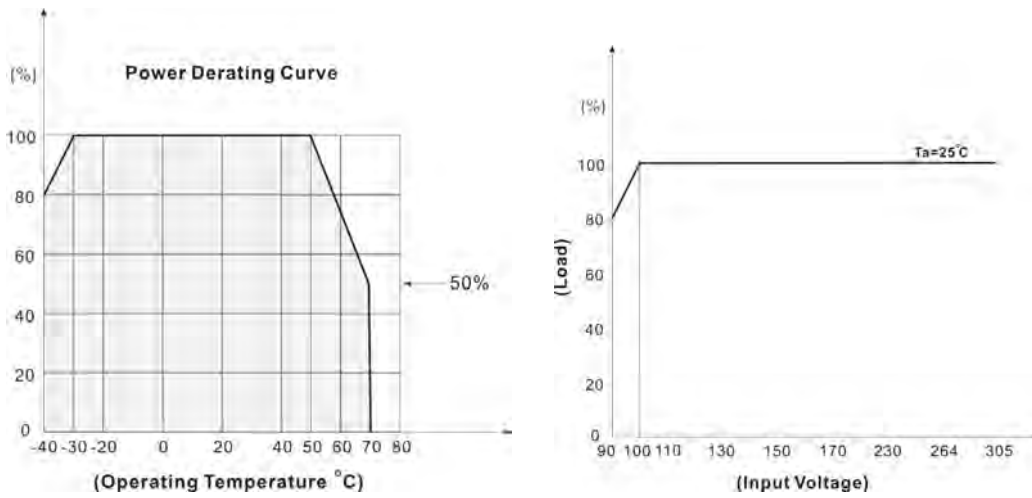
1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. CAUTION: Double pole, neutral fusing. Disconnect mains before servicing.

MECHANICAL DIMENSION (Top View)



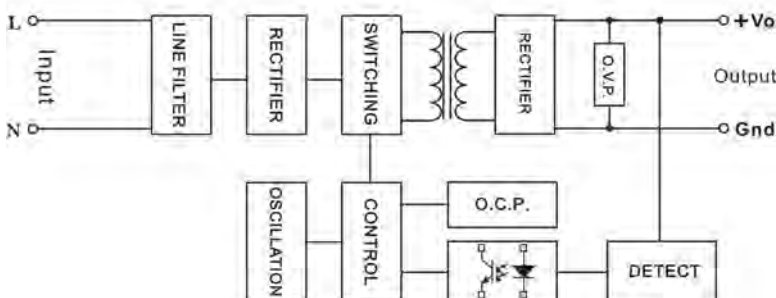
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	+DC OUT

DERATING



BLOCK DIAGRAM

Single Output



AC-DC ITE Power Module

VPNCH50 SERIES 50 Watts

SCREW TERMINAL

VPNCH50-A2



PIN#	Single
1	NO CONNECT
2	AC IN (N)
3	AC IN (L)
4	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT

