

VPHCH10 SERIES 10 Watts

KEY FEATURES

- Ultra Compact Size: 2.1" x 1.1"
- 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 86%
- 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. (Single Output)	VPHCH10-5S	VPHCH10-12S	VPHCH10-15S	VPHCH10-24S
Max Output Wattage (W)	10W			
Input	Voltage			
	90-305 VAC or 120-430 VDC (L Connect +Vin ;N Connect -Vin)			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
230 mA max. (115 VAC) / 140 mA max. (230 VAC)				
Inrush Current				
30 A max. (115 VAC) / 60 A max. (230 VAC)				
Leakage Current				
0.25 mA max.				
Output	Voltage (V.DC.)			
	5V	12V	15V	24V
	Voltage Accuracy			
	±2%			
	Current (mA) max			
	2000	833	667	417
	Line Regulation (LL-HL) (typ.)			
	±0.2%			
Load Regulation (0-100%) (typ.)				
±1%			±0.5%	
Maximum Capacitive Load				
3,500uF	630uF	470uF	180uF	
Ripple & Noise (Vp-p) max				
<100mV			<150mV	
Efficiency (at 230VAC)				
80.5%	85%	86%	85.5%	
Hold-up Time (at 230VAC)				
30 ms min.				
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			
	±0.02%/°C			
	Humidity			
95% RH				
MTBF				
>450,000 h @ 25°C (MIL-HDBK-217F)				
Vibration				
IEC60068-2-27 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)				
Shock				
IEC60068-2-6				
Physical	Dimension (L x W x H)			
	2.055 x 1.055 x 0.75 Inches (52.2 x 26.8 x 19.0 mm) Tolerance ±0.5 mm			
	Case Material			
	Plastic resin (flammability to UL 94V-0)			
Weight				
37 g				
Cooling Method				
Free air convection				
Safety	Agency Approvals			
	UL / IEC / EN 62368-1			
Meet				
IEC / EN 60335-1				
EMC	EMI (Conducted & Radiated Emission)			
	EN 55032 class B			
EMS (Noise Immunity)				
EN 55035				

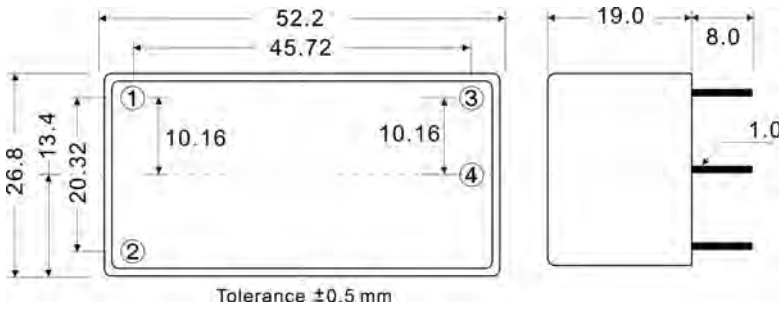
VP HCH10 SERIES 10 Watts



NOTE

Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

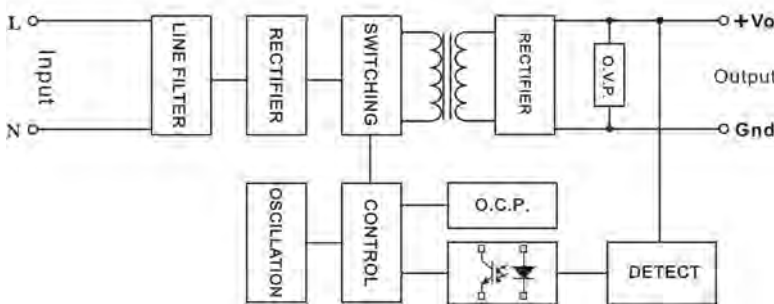
MECHANICAL DIMENSION (Top View)



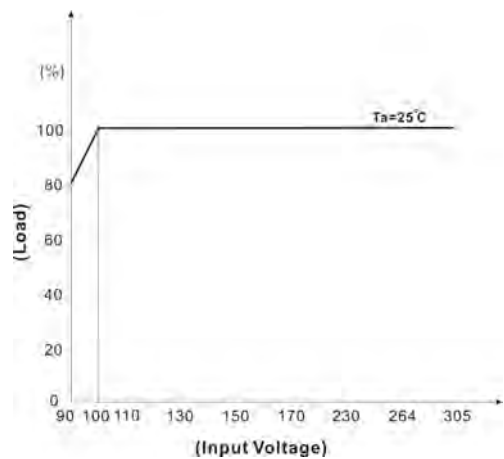
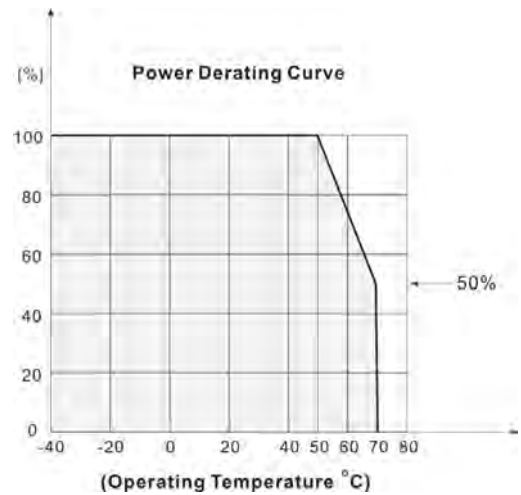
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	+DC OUT
4	-DC OUT

BLOCK DIAGRAM

Single Output



DERATING



AC-DC ITE Power Module

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SCREW TERMINAL

VPCH10-A2



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

