

## KEY FEATURES

- Ultra Compact Size: 2.53" x 1.78"
- Universal Input Range 90-305VAC, 47-440Hz
- I/O Isolation 4000VAC
- Operating Ambient Temperature Range -40°C to +85°C
- No Load Power Consumption < 0.1W
- High Efficiency up to 88%
- Screw Terminal for Option
- EMC Compliant without External Components
- Safety Approval to UL / IEC / EN 62368-1, IEC / EN 60950, IEC / EN 60335-1, IEC / EN 61558-2-16
- 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.

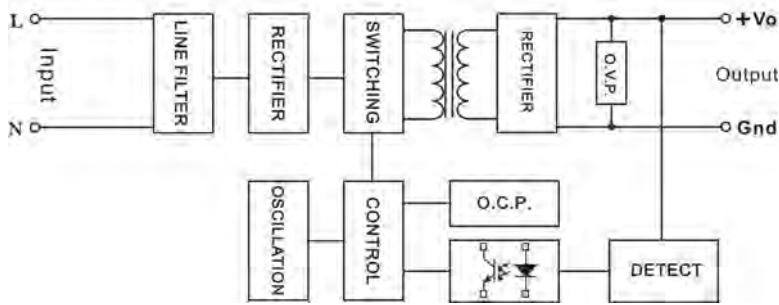
Model No.	VPTCH30-5.1S	VPTCH30-12S	VPTCH30-15S	VPTCH30-24S
Max Output Wattage (W)	23.46W	30W	30W	30W
Input	Voltage			
	90-305 VAC or 120-430 VDC			
	Frequency (Hz)			
	47-440 Hz			
	Current (Full load)			
600 mA max. (115 VAC) / 400 mA max. (230 VAC)				
Inrush Current (<2ms, Cold Start)				
30 A max. (115 VAC) / 60 A max. (230 VAC)				
Leakage Current				
0.25 mA max. (230 VAC)				
Output	Voltage (V.DC.)			
	5.1V			
	12V			
	15V			
	24V			
	Voltage Accuracy			
	±2%			
	Current (mA) max			
	4600			
	2500			
2000				
1250				
Maximum Capacitive Load				
6800uF				
1600uF				
1200uF				
470uF				
Minimum Load				
0%				
Line Regulation (LL-HL) (typ.)				
±1%				
Load Regulation (0-100%) (typ.)				
±3%				
±2%				
Ripple & Noise				
120mV max (Vp-p)				
150mV max (Vp-p)				
150mV max (Vp-p)				
240mV max (Vp-p)				
Efficiency (at 230 VAC)				
84%				
88%				
87%				
86%				
Hold-up Time (typ)				
36 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...+85°C (with derating)			
	Storage Temperature			
	-40°C...+85°C			
	Temperature Coefficient			
	±0.02%/°C			
	Humidity			
95% RH				
MTBF				
>400,000 h @ 25°C (MIL-HDBK-217F)				
Vibration				
IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)				
Shock				
IEC60068-2-27				
Physical	Dimensions (L x W x H)			
	2.53 x 1.78 x 0.85 Inches ( 64.3 x 45.1 x 21.7 mm ) Tolerance ±0.5 mm			
	Case Material			
	Plastic resin (flammability to UL 94V-0)			
Weight				
106 g				
Cooling Method				
Free air convection				
Safety	Agency Approvals			
UL / IEC / EN 62368-1, IEC / EN 60950, IEC / EN 60335-1, IEC / EN 61558-2-16				
EMC	EMI (Conducted & Radiated Emission)			
	EN 55032 class B			
EMS (Noise Immunity)				
EN 55035				

**NOTE**

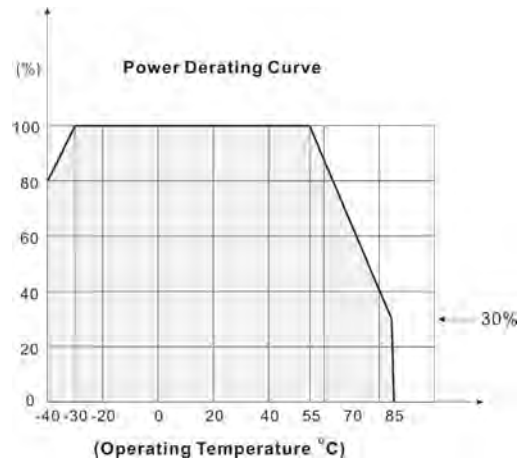
Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

**BLOCK DIAGRAM**

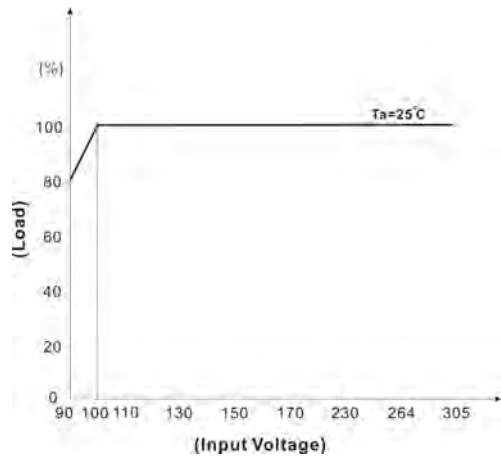
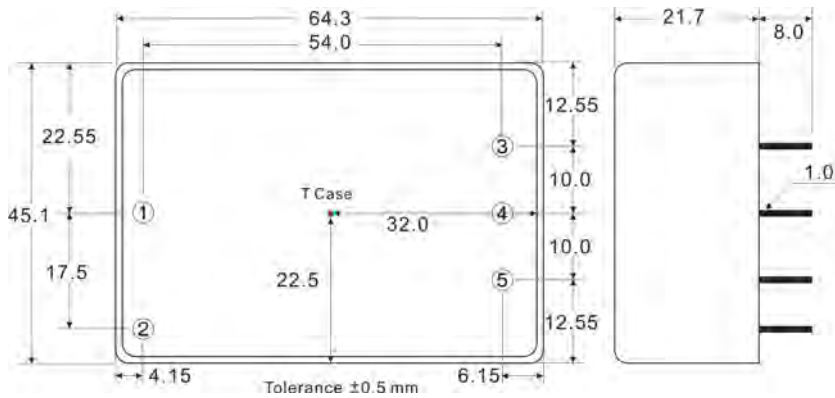
Single Output



**DERATING**



**MECHANICAL DIMENSIONS ( Top View )**



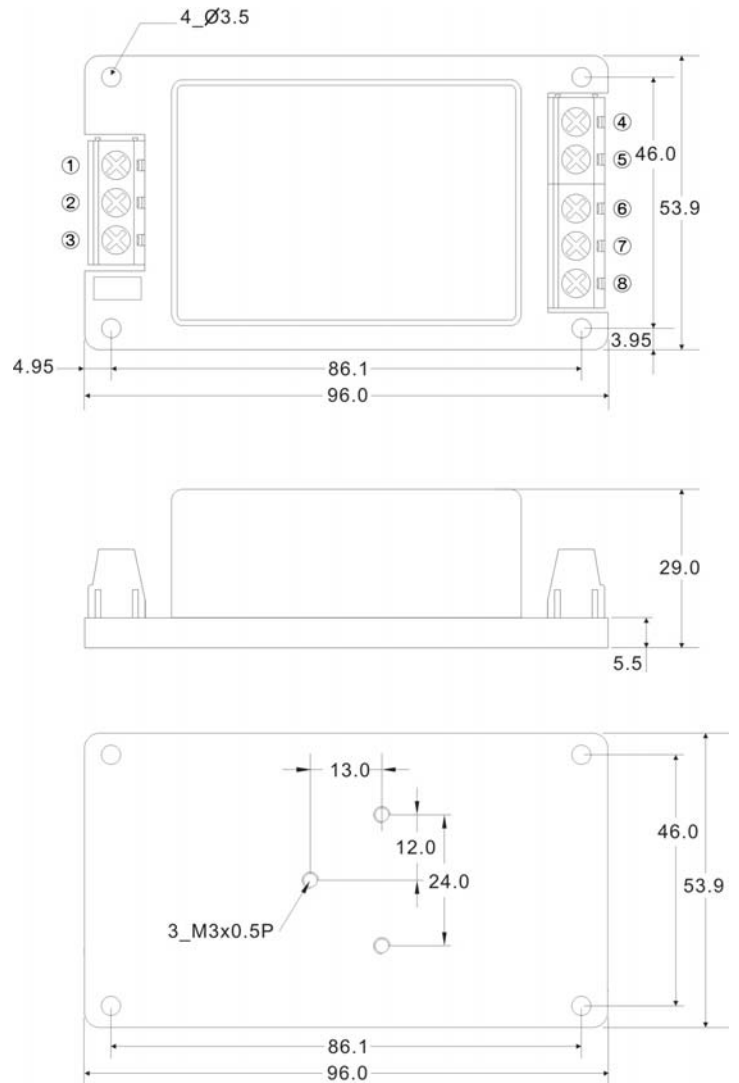
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

SCREW TERMINAL

VPTCH30-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



We reserve the right to make alterations in the product materials and specifications without prior notification and consent to improve reliability, function or design or otherwise.