

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Universal Input Range 90-305VAC, 47-440 Hz
- Single and Dual Output
- Low Ripple and Noise
- Isolation Class II
- Maximum No-Load Watts < 0.3W
- CE , UL Approval
- 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)	VPLC-3.3S	VPLC-5S	VPLC-8S	VPLC-9S	VPLC-12S	VPLC-14S	VPLC-15S	VPLC-24S	
Max Output Wattage (W)	6.6W	8W	8W	8W	8W	8W	8W	8W	
Input	Voltage								
	90-305 VAC or 120-430 VDC								
	Frequency (Hz)								
	47-440 Hz								
	Current (Full load)								
	190 mA max. (115 VAC) / 120 mA max. (230 VAC)								
Inrush Current (<500us)									
25 A max. (115 VAC) / 45 A max. (230 VAC)									
Leakage Current									
0.25 mA max.									
External Fuse (recommend)									
2 A slow blow type									
Output	Voltage (V.DC.)	3.3V	5V	8V	9V	12V	14V	15V	24V
	Voltage Accuracy	±2%							
	Current (mA) max	2000	1600	1000	888	666	571	533	335
	Line Regulation (LL-HL) (typ.)	±0.2%							
	Load Regulation (0-100%) (typ.)	±3%.	±2%	±0.5%.					
	Minimum Load	0%							
	Maximum Capacitive Load (at 230VAC)	8000uF	8000uF	4000uF	4000uF	1300uF	820uF	820uF	270uF
	Ripple	3.3S~15S : <100mV max (Vp-p)				24S : <150mV max (Vp-p)			
	Noise	3.3S~15S : <150mV max (Vp-p)				24S : <200mV max (Vp-p)			
	Efficiency	69%	75%	78%	79%	79%	80%	80%	81%
	Hold-up Time	10 ms min.							
Switching Frequency	132±8 KHz								
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)	3000V							
Environment	Operating Temperature	-40°C...+70°C (with derating)							
	Storage Temperature	-40°C...+85°C							
	Temperature Coefficient	±0.02%/°C							
	Humidity	95% RH							
	MTBF	>500,000 h @ 25°C (MIL-HDBK-217F)							
Physical	Dimension (L x W x H)	1.48 x 1.11 x 1.08 Inches (37.66 x 28.16 x 27.5 mm) Tolerance ±0.5 mm							
	Case Material	Plastic resin (flammability to UL 94V-0)							
	Weight	45 g							
	Cooling Method	Free air convection							
Safety	Agency Approvals	CE, UL, cUL							
EMC	EMI (Conducted & Radiated Emission)	EN 55032 class B							
	EMS (Noise Immunity)	EN 55024							

ELECTRICAL SPECIFICATIONS

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

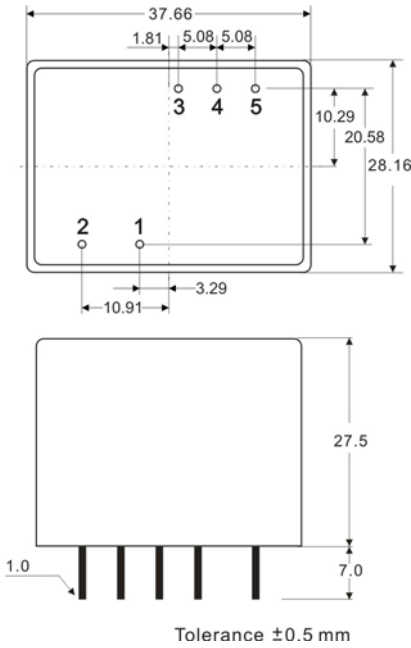
Model No. (Dual Output)	VPLC-5S3.3S	VPLC-8S5S	VPLC-12S5S
Max Output Wattage (W)	9W	8.5W	8.5W
Input	Voltage		
	90-305 VAC or 120-430 VDC		
	Frequency (Hz)		
	47-440 Hz		
	Current (Full load)		
	200 mA max. (115 VAC) / 125 mA max. (230 VAC)		
Inrush Current (<500us)			
25 A max. (115 VAC) / 45 A max. (230 VAC)			
Leakage Current			
0.25 mA max.			
External Fuse (recommend)			
2 A slow blow type			
Output	Voltage (V.DC.)		Vo : 5V Vr : 3.3V
	Voltage Accuracy		Vo : ±2% Vr : ±15%
	Current (mA) max		1600 / 310
	Line Regulation (LL-HL) (typ.)		Vo : ±0.2% Vr : ±3%
	Load Regulation (10-100%) (typ.)		Vo : ±0.5% Vr : ±5%
	Minimum Load		25%
	Maximum Capacitive Load (at 230VAC)		Vo : 4500uF Vr : 3800uF
	Ripple		<100mV max (Vp-p)
	Noise		<150mV max (Vp-p)
	Efficiency		73%
	Hold-up Time		10 ms min.
	Switching Frequency		132±8 KHz
	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)		
3000V			
Environment	Operating Temperature		
	-40°C...+70°C (with derating)		
	Storage Temperature		
	-40°C...+85°C		
	Temperature Coefficient		
±0.02%/°C			
Humidity			
95% RH			
MTBF			
>500,000 h @ 25°C (MIL-HDBK-217F)			
Physical	Dimensions (L x W x H)		
	1.48 x 1.11 x 1.08 Inches (37.66 x 28.16 x 27.5 mm) Tolerance ±0.5 mm		
	Case Material		
	Plastic resin (flammability to UL 94V-0)		
Weight			
45 g			
Cooling Method			
Free air convection			
Safety	Agency Approvals		
CE, UL, cUL			
EMC	EMI (Conducted & Radiated Emission)		
	EN 55032 class B		
EMS (Noise Immunity)			
EN 55024			

NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's necessary Varistor 14S561K at L / N input side in parallel.
3. It's necessary 10R / 15φ thermistor at L input side in series connection.



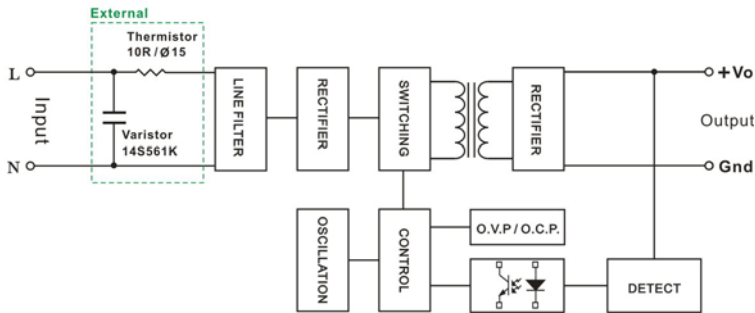
MECHANICAL DIMENSIONS (Top View)



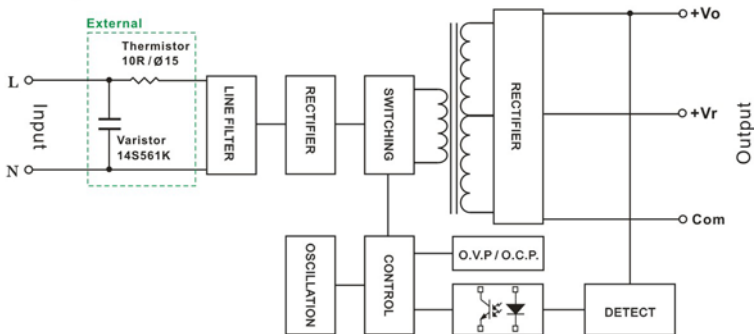
PIN#	Single	Dual
1	AC IN (N)	AC IN (N)
2	AC IN (L)	AC IN (L)
3	NC	+Vr
4	+VO	+VO
5	GND	GND

BLOCK DIAGRAM

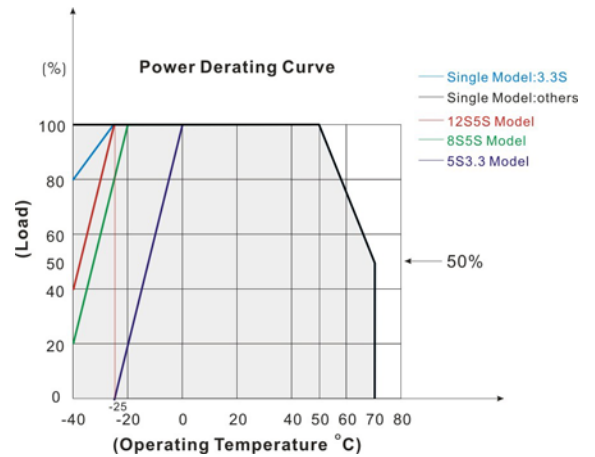
Single Output



Dual Output



DERATING



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.