



### Features

- DOE Level VI Efficiency Compliant
- ErP/Ecodesign Directive 2009/125/EC Regulation EU 2019/1782 Compliant
- EU CoC Tier 2 Compliant (except 12V model)
- Over Voltage, Short Circuit and Over Current Protection
- Non-Vented/Spill-Proof Case
- Class B EMI

### **Applications**

- Networking
- Peripherals
- Consumer Electronics



# PPL36U Series Specifications<sup>1</sup>

	Model	PPL36U-050	PPL36U-075	PPL36U-085	PPL36U-090	
Output	DC Output Voltage	5.0V	7.5V	8.5V	9.0V	
	Max Current	5.0A	4.0A	3.52A	3.34A	
	Output Power	25.0W	30.0W	29.92W	30.06W	
	Regulation	± 6%	± 5%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	80mV	75mV	85mV	90mV	
	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	1.0A max				
	Inrush Current	70A max., 230VAC (Cold Start at ambient 25°C)				
Input	No Load Power Consumption at 115VAC Input	0.056W	0.035W	0.058W	0.042W	
input	No Load Power Consumption at 230VAC Input	0.076W	0.062W	0.08W	0.059W	
	115VAC Average Efficiency <sup>3</sup>	86.5%	89.1%	88.6%	89.1%	
	230VAC Average Efficiency <sup>3</sup>	86.4%	89.0%	88.7%	89.1%	
	230VAC 10% Load Efficiency <sup>3</sup>	80.1%	85.0%	84.8%	82.9%	
	Leakage Current	<3.5mA				
Protection	Over-Voltage	180% max	180% max	180% max	180% max	
	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	200% max	200% max	200% max	200% max	
	Operating Temperature	0°C to +40°C				
Environmental	Non-Operating Temperature	-20º to +80ºC				
	Operating Humidity	20 to +80%				
	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA				
	Insulation Resistance	Primary to Secondary: 10M ohm for 500VDC				
Cafatri	Standards	cULus 62368-1, IEC 62368-1				
Safety Approvals and	EMI Emissions	FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32 Class B Conducted and Radiated				
EMC	Harmonic Current Emissions	IEC 61000-3-2				
	Voltage Fluctuations & Flicker	IEC 61000-3-3				
	Immunity	EN 55024/CISPR 24: IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11				
	Dimensions (L x W x H)	100mm (3.94in) x 50mm (1.97in) x 33mm (1.30in)				
Mechanical	Weight	170g				
	Cable Length	1000mm		1500mm		
	DC Cable Type	16 AWG	16 AWG	18 AWG	18 AWG	
	DC Output Connector	2.1mm x 5.5mm x 10.0mm				
	DC Plug Pin Assignment	Inner (V+) / Outer GND (V-)				
	Input Connector	IEC 60320 C14				

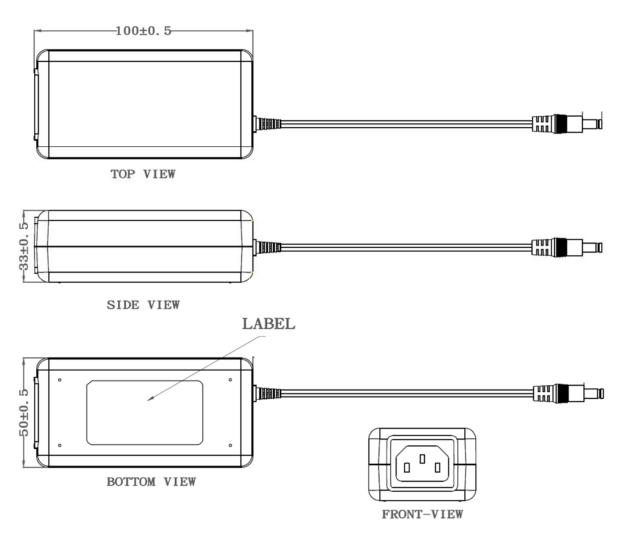
Phihong is not responsible for any error and reserves the right to make changes without notice. Please visit our website at www.phihong.com for the most up-to-date specifications and contact information. Revised 4/2/2020

	Model	PPL36U-120L6	PPL36U-135	PPL36U-150	PPL36U-160	
Output	DC Output Voltage	12.0V	13.5V	15.0V	16.0V	
	Max Current	3.0A	2.66A	2.4A	2.25A	
	Output Power	36.0W	35.91W	36.0W	36.0W	
	Regulation	± 5%	± 5%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	120mV	135mV	150mV	160mV	
	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	1.0A max				
	Inrush Current	70A max., 230VAC (Cold Start at ambient 25°C)				
	No Load Power Consumption at 115VAC Input	0.032W	0.038W	0.045W	0.043W	
Input	No Load Power Consumption at 230VAC Input	0.054W	0.064W	0.066W	0.07W	
	115VAC Average Efficiency <sup>3</sup>	87.6%	88.4%	88.5%	88.1%	
	230VAC Average Efficiency <sup>3</sup>	87.9%	88.4%	88.6%	88.4%	
	230VAC 10% Load Efficiency <sup>3</sup>	84.9%	84.7%	84.4%	84.6%	
	Leakage Current	<3.5mA				
	Over-Voltage	180% max	180% max	180% max	180% max	
Protection	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	170% max	200% max	200% max	200% max	
	Operating Temperature	0°C to +40°C				
Environmental	Non-Operating Temperature	-20º to +80ºC				
	Operating Humidity	20 to +80%				
	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA				
	Insulation Resistance	Primary to Secondary: 10M ohm for 500VDC				
Cofety	Standards	cULus 62368-1, IEC 62368-1				
Safety Approvals and	EMI Emissions	FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32 Class B Conducted and Radiated				
EMC	Harmonic Current Emissions	IEC 61000-3-2				
	Voltage Fluctuations & Flicker	IEC 61000-3-3				
	Immunity	EN 55024/CISPR 24: IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11				
	Dimensions (L x W x H)	100mm (3.94in) x 50mm (1.97in) x 33mm (1.3in)				
Mechanical	Weight	170g				
	Cable Length	1500mm				
	DC Cable Type	18 AWG	18 AWG	18 AWG	18 AWG	
	DC Output Connector	2.1mm x 5.5mm x 10.0mm				
	DC Plug Pin Assignment	Inner (V+) / Outer GND (V-)				
	Input Connector	IEC 60320 C14				

	Model	PPL36U-180	PPL36U-240	PPL36U-480		
Output	DC Output Voltage	18.0V	24.0V	48.0V		
	Max Current	2.0A	1.5A	0.75A		
	Output Power	36.0W	36.0W	36.0W		
	Regulation	± 5%	± 5%	± 5%		
	Ripple & Noise P-P(max) <sup>2</sup>	180mV	240mV	480mV		
	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	1.0A max				
	Inrush Current	70A max., 2	30VAC (Cold Start at am	bient 25°C)		
	No Load Power Consumption at 115VAC Input	0.039W	0.046W	0.058W		
Input	No Load Power Consumption at 230VAC Input	0.057W	0.064W	0.074W		
	115VAC Average Efficiency <sup>3</sup>	88.6%	89.2%	90.2%		
	230VAC Average Efficiency <sup>3</sup>	88.5%	89.3%	89.8%		
	230VAC 10% Load Efficiency <sup>3</sup>	83.5%	83.6%	83.5%		
	Leakage Current	<3.5mA				
	Over-Voltage	180% max	180% max	180% max		
Protection	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	200% max	200% max	200% max		
	Operating Temperature	0°C to +40°C				
Environmental	Non-Operating Temperature	-20° to +80°C				
	Operating Humidity	20 to +80%				
	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA				
	Insulation Resistance	Primary to Secondary: 10M ohm for 500VDC				
Cafatu	Standards	cULus 62368-1, IEC 62368-1				
Safety Approvals and	EMI Emissions	FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32 Class B Conducted and Radiated				
EMC	Harmonic Current Emissions	IEC 61000-3-2				
	Voltage Fluctuations & Flicker	IEC 61000-3-3				
	Immunity	EN 55024/CISPR 24: IEC 61000-4-2, IEC 61000-4-3, IEC 61000-4-4 IEC 61000-4-5, IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11				
	Dimensions (L x W x H)	100mm (3.94in) x 50mm (1.97in) x 33mm (1.3in)				
Mechanical	Weight	170g				
	Cable Length	1500mm				
	DC Cable Type	18 AWG	20 AWG	22 AWG		
	DC Output Connector	2.1mm x 5.5mm x 10.0mm				
	DC Plug Pin Assignment	Inner (V+) / Outer GND (V-)				
	Input Connector	IEC 60320 C14				



# PPL36U Outline Drawing



#### Supplier's Declaration of Conformity 47 CFR § 2.1077 Compliance Information

PPL36U-050 PPL36U-075 PPL36U-085 PPL36U-090 PPL36U-120L6 PPL36U-135 PPL36U-150 PPL36U-160 PPL36U-180 PPL36U-240 PPL36U-240 PPL36U-480

Phihong USA Corporation 47800 Fremont Boulevard Fremont, CA 94538 Telephone: (510) 445-0100 www.phihong.com

NOTE: This model has/The models in this product series have been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

-Reorient or relocate the receiving antenna.

-Increase the separation between the equipment and receiver.

-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

-Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to equipment not expressly approved by PHIHONG could void the user's authority to operate the equipment.



## PPL36U Line Cords Sold Separately

Model		AC30UNA-R	AC30UEU-R	AC30UUK-R
	Plug Type	North America NEMA 5-15P	Continental Europe CEE 7VIII	United Kingdom BS 1363
	Connector	IEC320 C13	IEC320 C13	IEC320 C13
	Wire Size	18 AWG	0.75mm	1.0mm
Specifications	Temperature	60°C	70°C	70 °C
	Amperage Rating	10A	6A	10A
	Voltage Rating	125V	250V	250V
	Cable Length	1830mm	1830mm	2500mm
Safety Approvals		CSA; UL	CEBEC; DEMKO; DVE; FIMKO; GOST; IMQ; KEMA; NEMKO; NF; OVE; SEMKO	BSI; Safety Mark
Photos		20	19/	<b>F</b>
		C. A. Marca	The second	Constanting of the second



## PPL36U Line Cords Outline Drawings

AC30UNA-R

