



#### Features

- DOE Level VI Efficiency Compliant
- ErP/Ecodesign Directive 2009/125/EC Regulation EU 2019/1782 Compliant
- EU CoC Tier 2 Compliant (except 5V, 5.9V, 10V, 11V models)
- Over Voltage, Short Circuit and Over Current Protection
- Non-Vented/Spill-Proof Case
- Class B EMI

#### **Applications**

- Networking
- Peripherals
- Consumer Electronics

\*NRCan approval for PPL18U-050L6, PPL18U-060L6, PPL18U-090, PPL18U-120, PPL18U-150, PPL18U-180, PPL18U-240 models only



# PPL18U Series Specifications<sup>1</sup>

	Model	PPL18U-050L6*	PPL18U-060L6 <sup>*</sup>	PPL18U-070	PPL18U-075	
Output	DC Output Voltage	5.0V	5.9V	7.0V	7.5V	
	Max Current	3.0A	3.0A	2.5A	2.5A	
	Output Power	15.0W	17.7W	17.5W	18.75W	
	Regulation	± 6%	-3.4/+6.8%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	100mV	100mV	100mV	100mV	
Input	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	0.48A max				
	Inrush Current	50A max., 100VAC; 60A max., 230VAC				
	No Load Power Consumption at 115VAC Input	0.035W	0.045W	0.040W	0.043W	
	No Load Power Consumption at 230VAC Input	0.051W	0.056W	0.047W	0.053W	
	115VAC Average Efficiency <sup>3</sup>	82.0%	82.6%	86.1%	86.3%	
	230VAC Average Efficiency <sup>3</sup>	81.8%	83.3%	86.1%	86.4%	
	230VAC 10% Load Efficiency <sup>3</sup>	76.0%	76.5%	83.5%	83.4%	
	Leakage Current	<3.5A				
Protection	Over-Voltage	12V max	12V max	16V max	16V max	
	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	7A max	6A max	6A max	6A 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				
Cafaby	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 55035/CISPR 35: 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				
Mechanical	Dimensions (L x W x H)	100mm (3.94in) x 50mm (1.97in) x 33mm (1.3in)				
	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		PPL18U-090 <sup>*</sup>	PPL18U-100L6	PPL18U-110L6	PPL18U-120 <sup>*</sup>	
Output	DC Output Voltage	9.0V	10.0V	11.0V	12.0V	
	Max Current	2.2A	1.9A	1.6A	1.6A	
	Output Power	19.8W	19.0W	17.6W	19.2W	
	Regulation	± 5%	± 5%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	100mV	100mV	110mV	120mV	
Input	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	0.48A max				
	Inrush Current	50A max., 100VAC; 60A max., 230VAC				
	No Load Power Consumption at 115VAC Input	0.039W	0.038W	0.041W	0.045W	
	No Load Power Consumption at 230VAC Input	0.055W	0.067W	0.065W	0.064W	
	115VAC Average Efficiency <sup>3</sup>	86.3%	86.2%	85.8%	86.2%	
	230VAC Average Efficiency <sup>3</sup>	86.7%	85.7%	85.6%	86.4%	
	230VAC 10% Load Efficiency <sup>3</sup>	80.3%	82.0%	81.0%	80.3%	
	Leakage Current		<3	.5A		
Protection	Over-Voltage	16V max	22V max	22V max	22V max	
	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	5A max	5A max	5A max	5A 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				
0-(-)	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 55035/CISPR 35: 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				
Mechanical	Dimensions (L x W x H)	100mm (3.94in) x 50mm (1.97in) x 33mm (1.3in)				
	Weight	170g				
	Cable Length	1500mm				
	DC Cable Type	18 AWG	22 AWG	22 AWG	20 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				

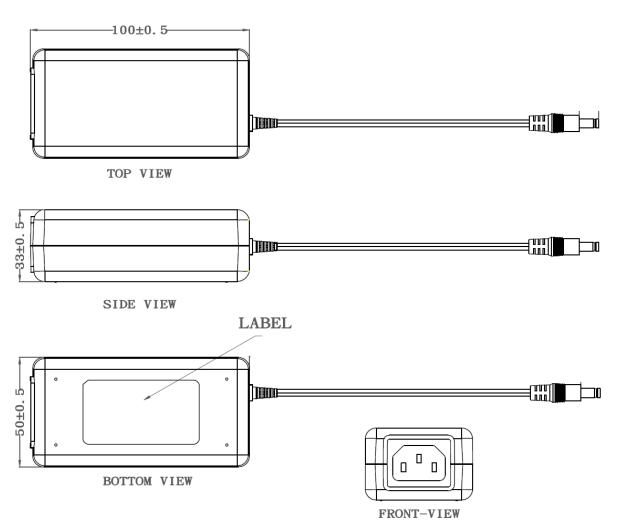
	Model	PPL18U-150 <sup>°</sup>	PPL18U-160	PPL18U-180 <sup>°</sup>	PPL18U-240*	
Output	DC Output Voltage	15.0V	16.0V	18.0V	24.0V	
	Max Current	1.3A	1.2A	1.1A	0.8A	
	Output Power	19.5W	19.2W	19.8W	19.2W	
	Regulation	± 5%	± 5%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	150mV	160mV	180mV	240mV	
	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	0.48A max				
	Inrush Current	50A max., 100VAC; 60A max., 230VAC				
	No Load Power Consumption at 115VAC Input	0.036W	0.035W	0.045W	0.036W	
Input	No Load Power Consumption at 230VAC Input	0.055W	0.066W	0.064W	0.057W	
	115VAC Average Efficiency <sup>3</sup>	87.4%	87.8%	88.1%	88.9%	
	230VAC Average Efficiency <sup>3</sup>	87.1%	87.4%	88.4%	88.7%	
	230VAC 10% Load Efficiency <sup>3</sup>	82.7%	82.5%	81.9%	81.8%	
	Leakage Current		<3	.5A		
Protection	Over-Voltage	32V max	32V max	32V max	45V max	
	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	4A max	4A max	4A max	2.5A max	
Environmental	Operating Temperature	0°C to +40°C				
	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				
0-4-4-	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 55035/CISPR 35: 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)				
	Weight	170g				
	Cable Length	1500mm				
Mechanical	DC Cable Type	22 AWG	22 AWG	22 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				
Notes	<ol> <li>The specifications defined are at ambient temperature of 25C, unless otherwise specified.</li> <li>20MHz bandwidth frequency oscilloscope, add a 0.1μF multilayer Cap. and Low ESR Electrolytic Cap. (10μF) at output connector terminals (nominal line voltage, full load).</li> <li>Efficiency is measured after 30 minutes burn-in.</li> </ol>					

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### **PPL18U** Outline Drawing





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

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

This device complies with/The devices in this product series comply with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.



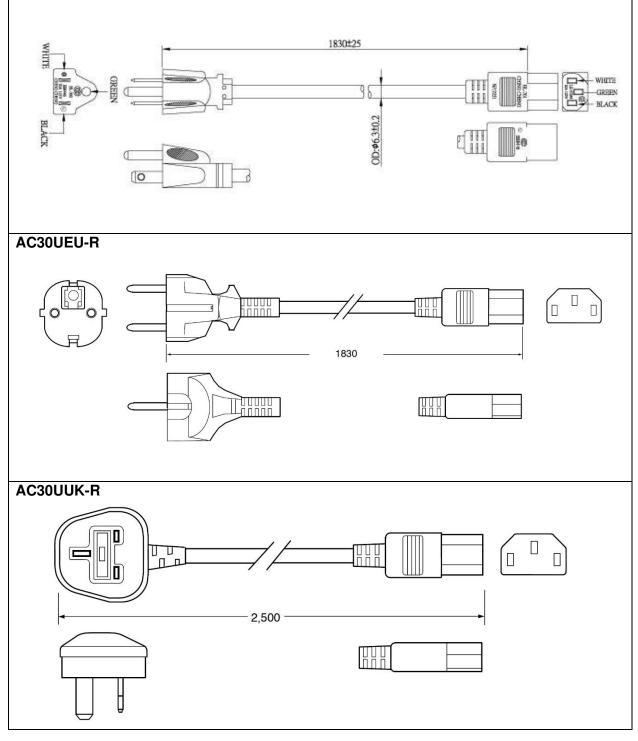
## PPL18U Line Cords Sold Separately

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	60ºC	70ºC	70 ºC	
	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	
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## PPL18U Line Cords Outline Drawings

AC30UNA-R



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