

### 65W Desktop C14 Adapter Series



#### **Features**

- DOE Level VI Efficiency Compliant
- ErP/Ecodesign Directive 2009/125/EC Regulation EU 2019/1782 Compliant
- EU CoC Tier 2 Compliant
- Over Voltage, Short Circuit and Over Current Protection
- Non-Vented/Spill-Proof Case
- Class B EMI
- Isolated Output (Earth ground & DC Return Connect Through Isolation Capacitor).
   Consult Phihong for Earth Ground tied to DC Return Version

#### **Applications**

- Networking
- Peripherals
- Consumer Electronics

\*NRCan approval for PPL65U-120, PPL65U-150, PPL65U-180, PPL65U-190, PPL65U-240, PPL65U-480, PPL65U-560 models only



# PPL65U Series Specifications<sup>1</sup>

Model		PPL65U-120*	PPL65U-135	PPL65U-150 <sup>*</sup>	PPL65U-160	
Output	DC Output Voltage	12.0V	13.5V	15.0V	16.0V	
	Max Current	5.0A	4.82A	4.34A	4.07A	
	Output Power	60.0W	65.1W	65.1W	65.12W	
	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	1.4A max				
	Inrush Current	80A max., 240VAC (Cold Start at ambient 25°C, full load)				
Input	No Load Power Consumption at 115VAC Input	0.031W	0.04W	0.037W	0.05W	
	No Load Power Consumption at 230VAC Input	0.034W	0.06W	0.031W	0.06W	
	115VAC Average Efficiency <sup>3</sup>	88.4%	89.1%	89.5%	89.4%	
	230VAC Average Efficiency <sup>3</sup>	89.1%	90.0%	90.3%	89.8%	
	230VAC 10% Load Efficiency <sup>3</sup>	87.4%	86.6%	87.7%	86.8%	
	Leakage Current	<3.5mA				
	Over-Voltage	150% max	150% max	150% max	150% max	
Protection	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	180% max	180% max	180% max	180% 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				
Safety	Standards	cULus 62368-1, IEC 62368-1				
Approvals and EMC	EMI Emissions	FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32 Class B Conducted and Radiated				
EIVIC	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)	115mm (4.53in) x 53mm (2.09in) x 38mm (1.50in)				
	Weight	310g				
Mechanical	Cable Length	1500mm				
	DC Cable Type	16 AWG	16 AWG	16 AWG	16 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				

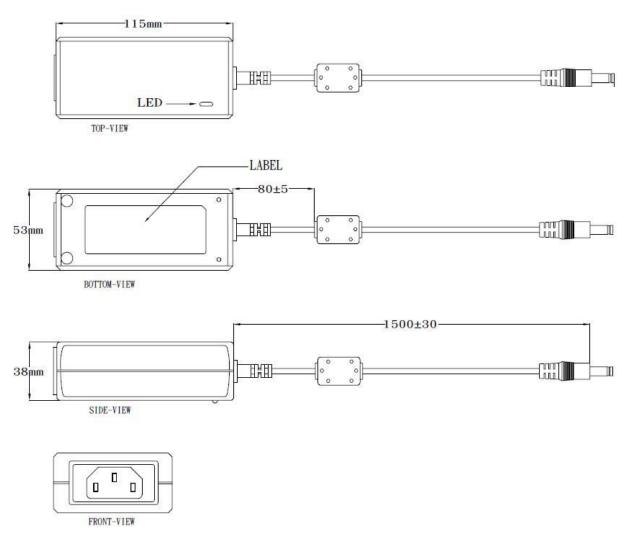
Model		PPL65U-180 <sup>*</sup>	PPL65U-190*	PPL65U-200	PPL65U-240*	
Output	DC Output Voltage	18.0V	19.0V	20.0V	24.0V	
	Max Current	3.62A	3.43A	3.25A	2.71A	
	Output Power	65.2W	65.2W	65.0W	65.04W	
	Regulation	± 5%	± 5%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	180mV	190mV	200mV	240mV	
	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	1.4A max				
	Inrush Current	80A max., 240VAC (Cold Start at ambient 25°C, full load)				
	No Load Power Consumption at 115VAC Input	0.033W	0.035W	0.05W	0.044W	
Input	No Load Power Consumption at 230VAC Input	0.033W	0.034W	0.07W	0.043W	
	115VAC Average Efficiency <sup>3</sup>	88.7%	88.5%	88.9%	89.7%	
	230VAC Average Efficiency <sup>3</sup>	89.6%	89.4%	89.4%	90.3%	
	230VAC 10% Load Efficiency <sup>3</sup>	87.6%	87.4%	87.4%	87.4%	
	Leakage Current		<3.5	5mA		
	Over-Voltage	150% max	150% max	150% max	150% max	
Protection	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	180% max	180% max	180% max	180% 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)	115mm (4.53in) x 53mm (2.09in) x 38mm (1.50in)				
Mechanical	Weight	310g				
	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		PPL65U-300	PPL65U-320	PPL65U-480 <sup>*</sup>	PPL65U-560*	
Output	DC Output Voltage	30.0V	32.0V	48.0V	56.0V	
	Max Current	2.17A	2.04A	1.36A	1.17A	
	Output Power	65.1W	65.3W	65.3W	65.5W	
	Regulation	± 5%	± 5%	± 5%	± 5%	
	Ripple & Noise P-P(max) <sup>2</sup>	300mV	320mV	480mV	560mV	
	AC Input Voltage Range	90 to 264VAC				
	AC Input Frequency	47 to 63Hz				
	Input Current	1.4A max				
	Inrush Current	80A max., 240VAC (Cold Start at ambient 25°C, full load)				
	No Load Power Consumption at 115VAC Input	0.07W	0.07W	0.075W	0.091W	
Input	No Load Power Consumption at 230VAC Input	0.08W	0.08W	0.071W	0.089W	
	115VAC Average Efficiency <sup>3</sup>	88.9%	89.2%	90.4%	90.7%	
	230VAC Average Efficiency <sup>3</sup>	89.5%	89.9%	91.1%	91.3%	
	230VAC 10% Load Efficiency <sup>3</sup>	87.2%	87.8%	87.4%	87.0%	
	Leakage Current		<3.5	5mA		
	Over-Voltage	150% max	150% max	150% max	150% max	
Protection	Short Circuit	Auto-recover after short-circuit fault is removed				
	Over-Current	180% max	180% max	180% max	180% 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				
Safatu	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)	115mm (4.53in) x 53mm (2.09in) x 38mm (1.50in)				
	Weight	310g				
	Cable Length	1500mm				
Mechanical	DC Cable Type	18 AWG	18 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>					

<sup>\*</sup>NRCan approval for PPL65U-120, PPL65U-150, PPL65U-180, PPL65U-190, PPL65U-240, PPL65U-480, PPL65U-560 models only



### PPL65U 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.

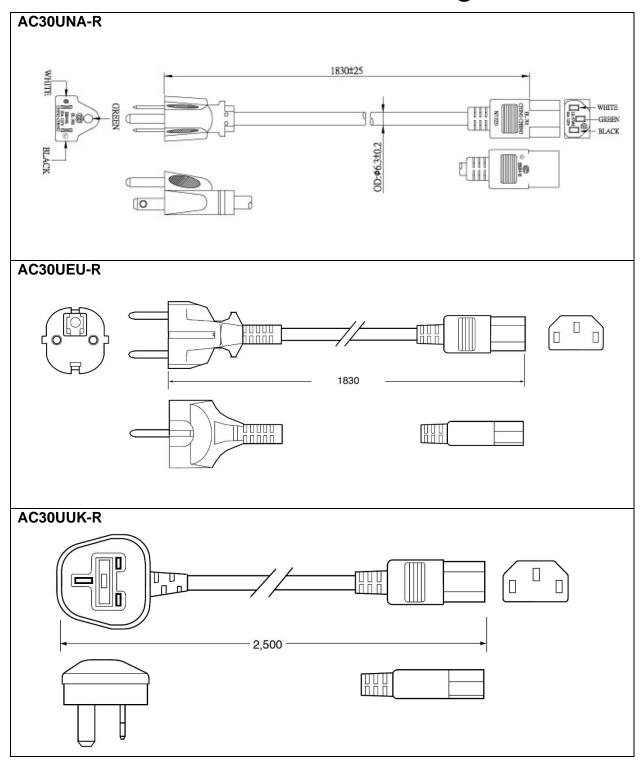


# PPL65U Line Cords Sold Separately

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				
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# PPL65U Line Cords Outline Drawings



### **Mouser Electronics**

**Authorized Distributor** 

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#### Phihong:

PPL65U-480 PPL65U-120 PPL65U-180 PPL65U-240