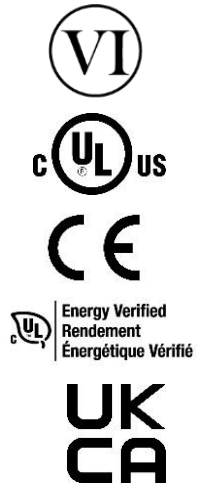


# 160W Desktop C14 Adapter Series



## Features

- DOE Level VI Efficiency Compliant
- ErP/Ecodesign Directive 2009/125/EC – Regulation EU 2019/1782 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

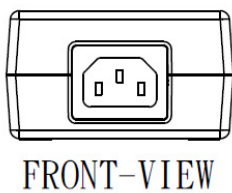
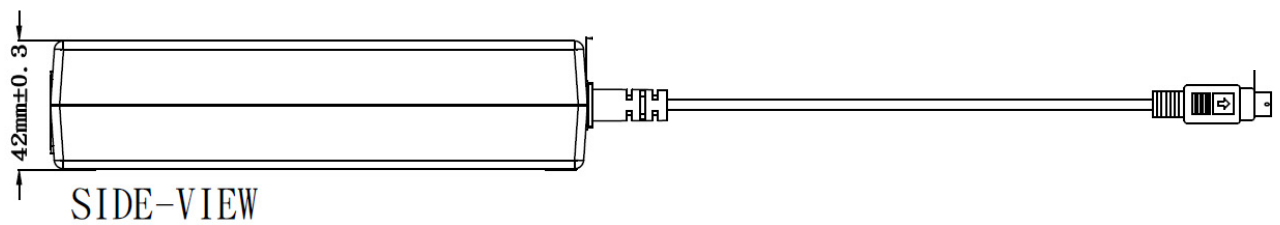
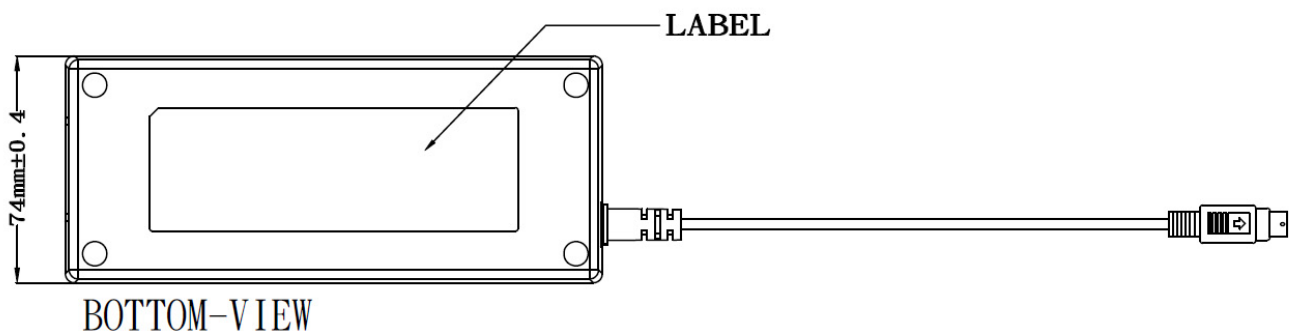
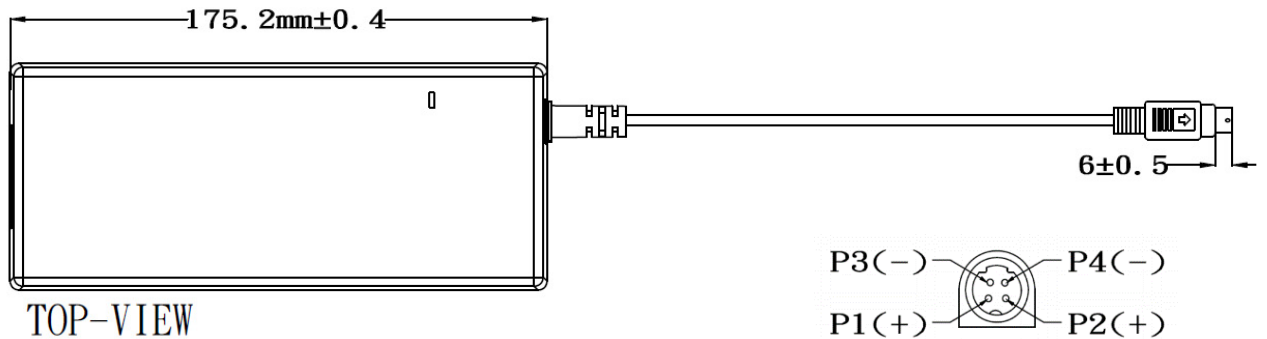
- Networking
- Peripherals
- Consumer Electronics

# PPL160U Series Specifications<sup>1</sup>




Model		PPL160U-120	PPL160U-150	PPL160U-190	PPL160U-240
Output	DC Output Voltage	12.0V	15.0V	19.0V	24.0V
	Max Current	12.5A	10.0A	8.4A	6.6A
	Output Power	150.0W	150.0W	159.6W	158.4W
	Regulation	± 5%	± 5%	± 5%	± 5%
	Ripple & Noise P-P(max) <sup>2</sup>	120mV	150mV	190mV	240mV
Input	AC Input Voltage Range	90 to 264VAC			
	AC Input Frequency	47 to 63Hz			
	Input Current	2.2A max			
	Inrush Current	140A max., 230VAC (cold start at 25 °C, full load)			
	No Load Power Consumption at 115VAC Input	0.154W	0.13W	0.13W	0.136W
	No Load Power Consumption at 230VAC Input	0.148W	0.14W	0.14W	0.139W
	115VAC Average Efficiency <sup>3</sup>	88.4%	89.2%	89.8%	90.8%
	230VAC Average Efficiency <sup>3</sup>	89.5%	90.1%	91.2%	91.9%
	230VAC 10% Load Efficiency <sup>3</sup>	85.7%	84.6%	89.1%	87.5%
	Leakage Current	<3.5mA			
Protection	Over-Voltage	150% max	150% max	150% max	150% max
	Short Circuit	Shutdown			
	Over-Current	150% max	150% max	150% max	150% max
Environmental	Operating Temperature	0°C to +40°C			
	Non-Operating Temperature	-20° to +80°C			
	Operating Humidity	20 to +80%			
Safety Approvals and EMC	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA			
	Insulation Resistance	Primary to Secondary: 10M ohm for 500VDC			
	Standards	cULus 62368-1, IEC 62368-1			
	EMI Emissions	FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32 Class B Conducted and Radiated			
	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)	175.2mm (6.90in) x 74mm (2.91in) x 42mm (1.65in)			
	Weight	700g			
	Cable Length	1200mm	1500mm		
	DC Cable Type	16AWG*4C	16AWG*4C	16AWG	16AWG*4C
	DC Output Connector	4 pin DIN			
	DC Plug Pin Assignment	P1(+); P2(+); P3(-); P4(-)			
	Input Connector	IEC 60320 C14			

Model		PPL160U-480	PPL160U-560
Output	DC Output Voltage	48.0V	56.0V
	Max Current	3.3A	2.86A
	Output Power	158.4W	160.2W
	Regulation	48.0V	56.0V
	Ripple & Noise P-P(max) <sup>2</sup>	480mV	560mV
Input	AC Input Voltage Range	90 to 264VAC	
	AC Input Frequency	47 to 63Hz	
	Input Current	1.4A max	
	Inrush Current	140A max., 230VAC (cold start at 25 °C, full load)	
	No Load Power Consumption at 115VAC Input	0.162W	0.13W
	No Load Power Consumption at 230VAC Input	0.1557W	0.14W
	115VAC Average Efficiency <sup>3</sup>	92.7%	92.3%
	230VAC Average Efficiency <sup>3</sup>	93.9%	93.6%
	230VAC 10% Load Efficiency <sup>3</sup>	88.3%	87.3%
	Leakage Current	<3.5mA	
Protection	Over-Voltage	150% max	150% max
	Short Circuit	Shutdown	
	Over-Current	150% max	150% max
Environmental	Operating Temperature	0°C to +40°C	
	Non-Operating Temperature	-20° to +80°C	
	Operating Humidity	20 to +80%	
Safety Approvals and EMC	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA	
	Insulation Resistance	Primary to Secondary: 10M ohm for 500VDC	
	Standards	cULus 62368-1, IEC 62368-1	
	EMI Emissions	FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32 Class B Conducted and Radiated	
	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)	175.2mm (6.90in) x 74mm (2.91in) x 42mm (1.65in)	
	Weight	700g	
	Cable Length	1500mm	
	DC Cable Type	18 AWG*4C	18 AWG*4C
	DC Output Connector	4 pin DIN	
	DC Plug Pin Assignment	P1(+); P2(+); P3(-); P4(-)	
	Input Connector	IEC 60320 C14	
Notes	<ol style="list-style-type: none"> <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>		

# PPL160U Outline Drawing

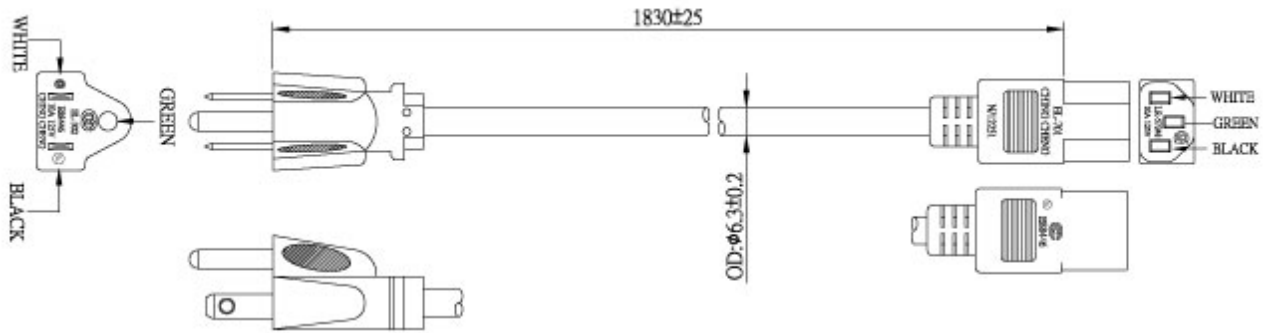


## Line Cords - Sold Separately

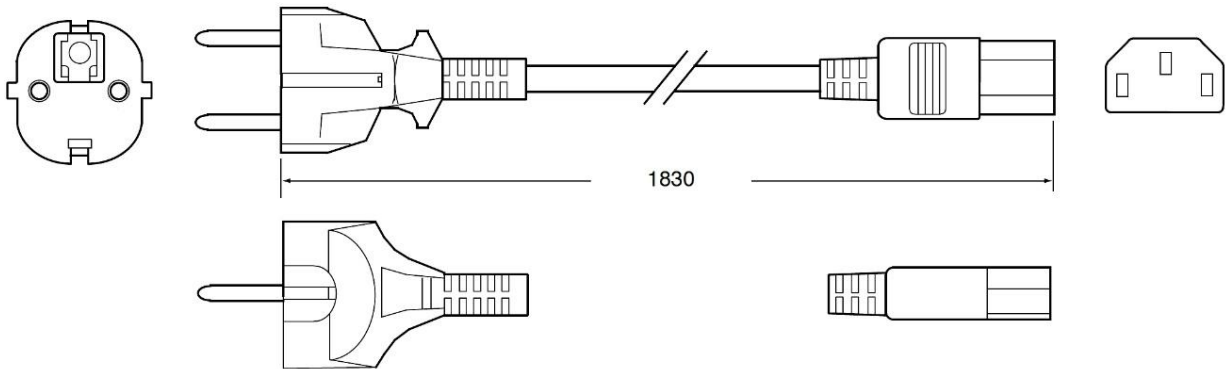
Model		AC30UNA-R	AC30UEU-R	AC30UUK-R
Specifications	Plug Type	North America NEMA 5-15P	Continental Europe CEE 7VIII	United Kingdom BS 1363
	Connector	IEC320 C13	IEC320 C13	IEC320 C13
	Wire Size	18 AWG	0.75mm	1.0mm
	Temperature	60°C	70°C	70 °C
	Amperage Rating	10A	6A	10A
	Voltage Rating	125V	250V	250V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

# Line Cords - Outline Drawings

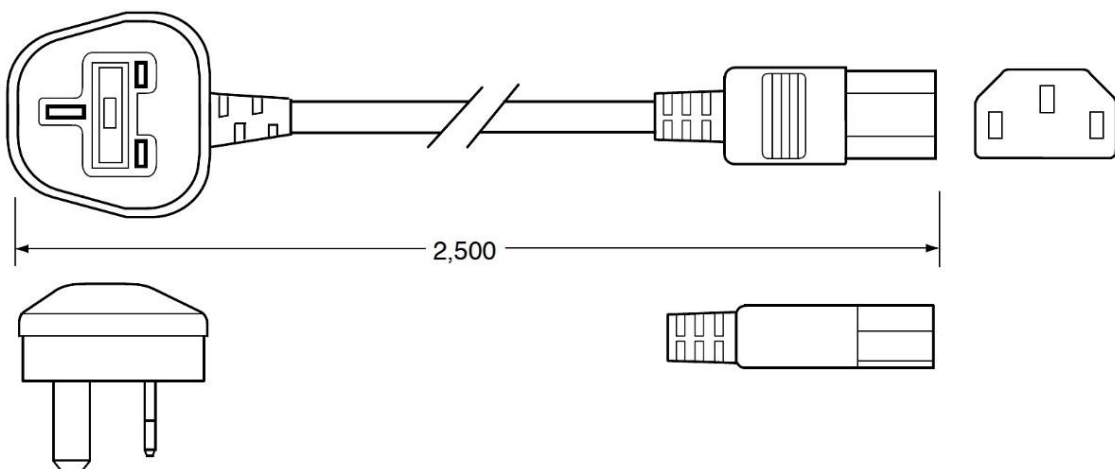
## AC30UNA-R



## AC30UEU-R



## AC30UUK-R



Revised 2/27/2023