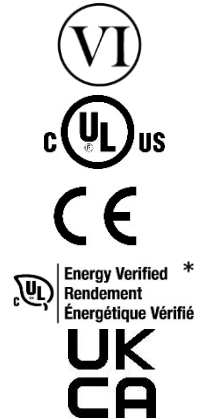




90W Desktop C6 Adapter Series



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 PPL90M-120, PPL90M-150, PPL90M-180, PPL90M-190, PPL90M-240, PPL90M-480, PPL90M-560 models only

Phihong Taiwan - No.568, Fuxing 3rd Rd., Guishan Dist., Taoyuan City (33383), Taiwan, ROC

Phihong USA - 47800 Fremont Blvd. Fremont, CA 94538, USA

Phihong Europe - Wattstraat 50, 2171 TR Sassenheim, The Netherlands



PPL90M Series Specifications¹

Model		PPL90M-120 ¹	PPL90M-150 ¹	PPL90M-160	PPL90M-180 ¹
Output	DC Output Voltage	12.0V	15.0V	16.0V	18.0V
	Max Current	7.0A	6.0A	5.63A	5.0A
	Output Power	84.0W	90.0W	90.1W	90.0W
	Regulation	± 5%	± 5%	± 5%	± 5%
	Ripple & Noise P-P(max) ²	120mV	150mV	160mV	180mV
Input	AC Input Voltage Range	90 to 264VAC			
	AC Input Frequency	47 to 63Hz			
	Input Current	1.2A max			
	Inrush Current	80A max., 240VAC (Cold Start at ambient 25°C, full load)			
	No Load Power Consumption at 115VAC Input	0.066W	0.074W	0.08W	0.087W
	No Load Power Consumption at 230VAC Input	0.077W	0.08W	0.1W	0.096W
	115VAC Average Efficiency ³	90.1%	89.7%	89.9%	90.0%
	230VAC Average Efficiency ³	89.8%	89.6%	89.7%	89.5%
	230VAC 10% Load Efficiency ³	87.0%	86.7%	86.4%	86.6%
	Leakage Current	<3.5mA			
Protection	Over-Voltage	150% max	150% max	150% max	150% max
	Short Circuit	Auto-recover after short-circuit fault is removed			
	Over-Current	170% max	170% max	170% max	170% 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 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			
Mechanical	Dimensions (L x W x H)	151mm (5.94in) x 64mm (2.52in) x 36mm (1.42in)			
	Weight	580g			
	Cable Length	1200mm	1500mm		
	DC Cable Type	14 AWG	16 AWG	16 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 C6			

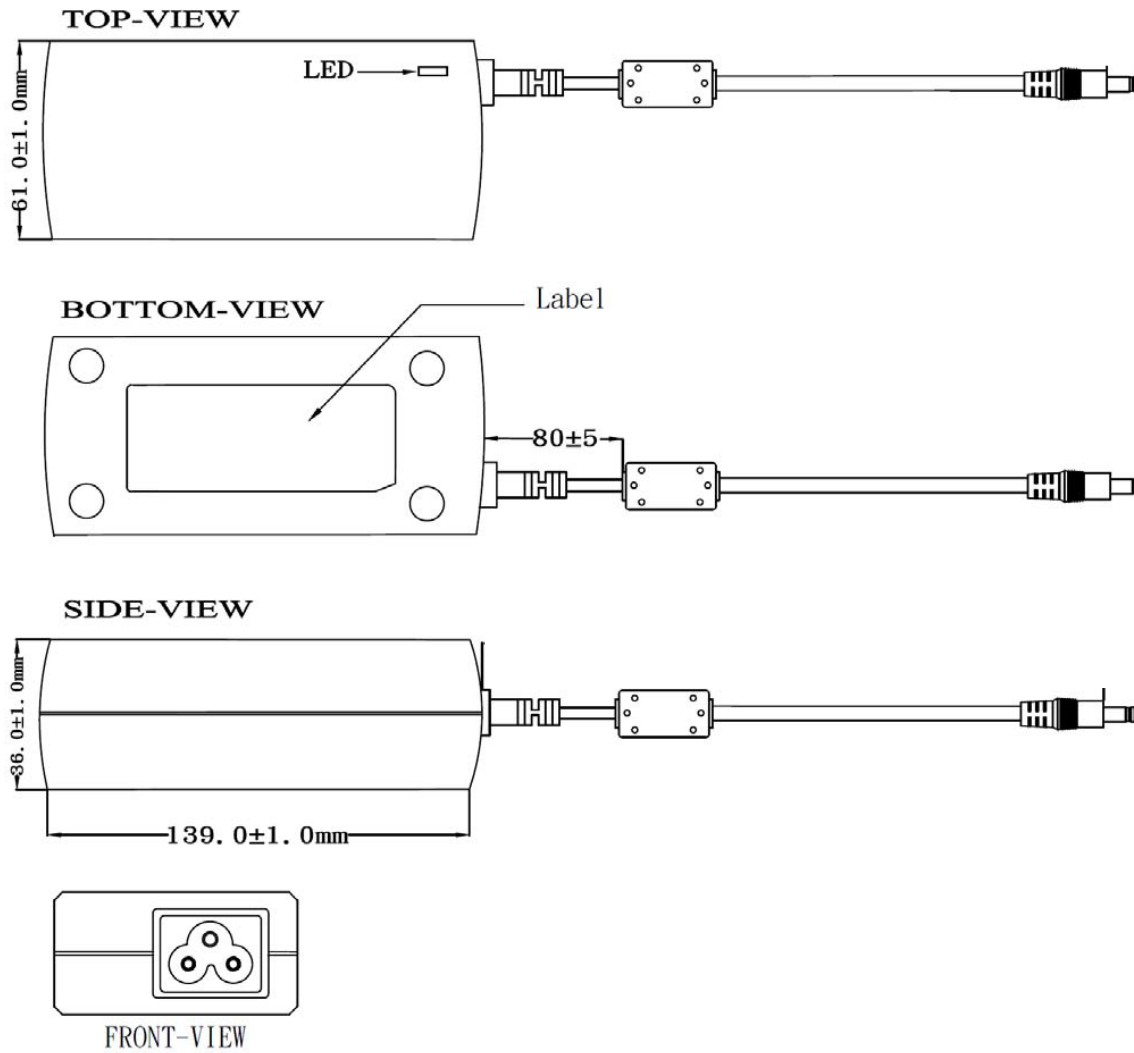
Model		PPL90M-190*	PPL90M-200	PPL90M-240*	PPL90M-300
Output	DC Output Voltage	19.0V	20.0V	24.0V	30.0V
	Max Current	4.74A	4.5A	3.75A	3.0A
	Output Power	90.1W	90.0W	90.0W	90.0W
	Regulation	± 5%	± 5%	± 5%	± 5%
	Ripple & Noise P-P(max) ²	190mV	200mV	240mV	300mV
Input	AC Input Voltage Range	90 to 264VAC			
	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	0.085W	0.08W	0.075W	0.09W
	No Load Power Consumption at 230VAC Input	0.094W	0.11W	0.085W	0.12W
	115VAC Average Efficiency ³	90.3%	89.5%	90.2%	90.1%
	230VAC Average Efficiency ³	90.0%	89.2%	90.2%	89.9%
	230VAC 10% Load Efficiency ³	86.2%	85.1%	87.2%	85.9%
	Leakage Current	<3.5mA			
Protection	Over-Voltage	150% max	150% max	150% max	150% max
	Short Circuit	Auto-recover after short-circuit fault is removed			
	Over-Current	170% max	170% max	170% max	170% 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 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			
Mechanical	Dimensions (L x W x H)	151mm (5.94in) x 64mm (2.52in) x 36mm (1.42in)			
	Weight	580g			
	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 C6			

Model		PPL90M-480*	PPL90M-560*
Output	DC Output Voltage	48.0V	56.0V
	Max Current	1.88A	1.6A
	Output Power	90.24W	89.6W
	Regulation	± 5%	± 5%
	Ripple & Noise P-P(max) ²	480mV	560mV
Input	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	0.095W	0.114W
	No Load Power Consumption at 230VAC Input	0.107W	0.126W
	115VAC Average Efficiency ³	91.1%	90.9%
	230VAC Average Efficiency ³	90.9%	91.1%
	230VAC 10% Load Efficiency ³	87.2%	86.7%
	Leakage Current	<0.25mA	
Protection	Over-Voltage	150% max	150% max
	Short Circuit	Auto-recover after short-circuit fault is removed	
	Over-Current	170% max	170% 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 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	
Mechanical	Dimensions (L x W x H)	151mm (5.94in) x 64mm (2.52in) x 36mm (1.42in)	
	Weight	580g	
	Cable Length	1500mm	
	DC Cable Type	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 C6	
Notes	<ol style="list-style-type: none"> The specifications defined are at ambient temperature of 25°C, unless otherwise specified. 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). Efficiency is measured after 30 minutes burn-in. 		

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PPL90M 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.



PPL90M Line Cords Sold Separately

Model		AC30MNA-R
Specifications	Plug Type	North America NEMA 5-15P
	Connector	IEC320 C6
	Wire Size	18 AWG
	Temperature	60°C
	Amperage Rating	7A
	Voltage Rating	125V
	Cable Length	1829mm
Safety Approvals		CSA; UL
Photos		



PPL90M Line Cords Outline Drawings

