



# 120W Desktop C14 Adapter Series



## Features

- Non-Vented Case
- US DoE Level VI Efficiency Compliance
- Ecodesign/ErP Lot 7 (EU) 2019/1782 Compliance
- EU CoC Ver 5 Tier 2 Compliance
- Class B EMI
- 5,000 Meter Operating Altitude

## Applications

- Industrial
- Test and Measurement
- Peripherals
- Networking



# AA120U Series Specifications<sup>1</sup>

Model		AA120U-120B-R	AA120U-120B1-R <sup>2</sup>	AA120U-240B-R
Output	DC Output Voltage	12.0V	12.0V	24.0V
	Max Current	9.0A (11.0A peak @ 10 Sec.)	10.0A (11.0A peak @ 10 Sec.)	5.0A (6.0A peak @ 10 Sec.)
	Output Power	108.0W	120.0W	120.0W
	Regulation	± 5%	± 5%	± 5%
	Ripple & Noise P-P(max) <sup>3</sup>	200mV@9A	250mV@10A	380mV
Input	AC Input Voltage Range	90 to 264VAC		
	AC Input Frequency	47 to 63Hz		
	Power Factor	>0.95 at 115VAC, >0.9 at 230VAC @ rated load, EN61000-3-2 Class D		
	Input Current	1.5A (RMS) max @115VAC, 0.75A (RMS) max @230VAC		
	Inrush Current	220A max @115VAC (Cold start at ambient 25°C)		
	No Load Power Consumption	≤0.0452W @115VAC ≤0.0738W @230VAC	≤0.0444W @115VAC ≤0.0677W @230VAC	≤0.0624W @115VAC ≤0.0906W @230VAC
	115VAC Average Efficiency <sup>4</sup>	≥88.54%	≥88.43%	≥90.42%
	230VAC Average Efficiency <sup>4</sup>	≥89.09%	≥89.10%	≥90.82%
	230VAC 10% Load Efficiency <sup>4</sup>	≥87.14%	≥87.31%	≥86.73%
Leakage Current	250uA Max			
Protection	Over-Voltage	13.2V ~17V Latch mode		25.2V ~32V Latch mode
	Short Circuit	Auto recover and no component damage		
	Over-Current	<15A, Auto recover and no component damage		<8A, Auto recover and no component damage
	Over-Temperature	Latch mode		
Environmental	Operating Temperature <sup>5</sup>	0°C to +60°C		
	Non-Operating Temperature	-40° to +85°C		
	Operating Humidity	5 to +95% Relative Humidity		
Safety Approvals and EMC	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA Primary to PE: 1500VAC for 1min, 10mA		
	Insulation Resistance	Primary to Secondary: >50M ohm for 500VDC Primary to PE: >50M ohm for 500VDC		
	Standards	cULus /IEC/EN62368-1		
	EMI Emissions	FCC Part 15 Class 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 (+/- 15kV air, +/- 8kV contact), IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5 (+/- 1kV L-L, +/- 2kV L-PE), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11		
Mechanical	Dimensions (L x W x H)	150mm (5.90in) x 65mm (2.56in) x 35mm (1.38in)		
	Cable Length	1000mm	1000mm	1500mm
	DC Output Connector	4 pin Mini DIN	4 pin Mini DIN	2.5mm x 5.5mm x 10.0mm Right Angle
	DC Wire Type	16 AWG	15 AWG	18 AWG
	DC Plug Pin Assignment	Pins 2 & 4: V+ Pins 1 & 3: V-	Pins 2 & 4: V+ Pins 1 & 3: V-	Inner (V+) / Outer GND (V-)
	Input Connector	IEC 60320 C14		
Notes	<ol style="list-style-type: none"> <li>The specifications defined are at ambient temperature of 25°C, unless otherwise specified.</li> <li>Special order item. Minimum order quantity applies.</li> <li>Measuring is done by 20MHz bandwidth oscilloscope and terminated each output with a 10uF aluminum electrolytic capacitor and a 0.1uF ceramic capacitor.</li> <li>Efficiency is measured after 30 minutes burn-in.</li> <li>Refer to derating curve.</li> </ol>			



# AA120U Series Specifications<sup>1</sup>

Model		AA120U-480B-R	AA120U-540B-R
Output	DC Output Voltage	48.0V	54.0V
	Max Current	2.5A (3.0A peak @ 10 Sec.)	2.22A (2.66A peak @ 10 Sec.)
	Output Power	120.0W	120.0W
	Regulation	± 5%	± 5%
	Ripple & Noise P-P(max) <sup>3</sup>	480mV	500mV
Input	AC Input Voltage Range	90 to 264VAC	
	AC Input Frequency	47 to 63Hz	
	Power Factor	>0.95 at 115VAC, >0.9 at 230VAC @ rated load, EN61000-3-2 Class D	
	Input Current	1.5A (RMS) max @ 115VAC, 0.75A (RMS) max @ 230VAC	
	Inrush Current	220A max @ 115VAC (Cold start at ambient 25°C)	
	No Load Power Consumption	≤0.0732W @ 115VAC ≤0.0891W @ 230VAC	≤0.0713W @ 115VAC ≤0.0741W @ 230VAC
	115VAC Average Efficiency <sup>4</sup>	≥91.09%	≥90.95%
	230VAC Average Efficiency <sup>4</sup>	≥91.30%	≥91.19%
	230VAC 10% Load Efficiency <sup>4</sup>	≥87.95%	≥87.10%
	Leakage Current	250uA Max	
Protection	Over-Voltage	60V Max Latch mode	60V Max Latch mode
	Short Circuit	Auto recover and no component damage	
	Over-Current	<4A, Auto recover and no component damage	<3.5A, Auto recover and no component damage
	Over-Temperature	Latch mode	
Environmental	Operating Temperature <sup>5</sup>	0°C to +60°C	
	Non-Operating Temperature	-40° to +85°C	
	Operating Humidity	5 to +95% Relative Humidity	
Safety Approvals and EMC	Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA Primary to PE: 1500VAC for 1min, 10mA	
	Insulation Resistance	Primary to Secondary: >50M ohm for 500VDC Primary to PE: >50M ohm for 500VDC	
	Standards	cULus /IEC/EN62368-1	
	EMI Emissions	FCC Part 15 Class 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 (+/- 15kV air, +/- 8kV contact), IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5 (+/- 1kV L-L, +/- 2kV L-PE), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11	
Mechanical	Dimensions (L x W x H)	150mm (5.90in) x 65mm (2.56in) x 35mm (1.38in)	
	Cable Length	1500mm	1500mm
	DC Output Connector	2.5mm x 5.5mm x 10.0mm Right Angle	2.5mm x 5.5mm x 10.0mm Right Angle
	DC Wire Type	18 AWG	18 AWG
	DC Plug Pin Assignment	Inner (V+) / Outer GND (V-)	Inner (V+) / Outer GND (V-)
	Input Connector	IEC 60320 C14	
Notes	<ol style="list-style-type: none"> <li>The specifications defined are at ambient temperature of 25°C, unless otherwise specified.</li> <li>Special order item. Minimum order quantity applies.</li> <li>Measuring is done by 20MHz bandwidth oscilloscope and terminated each output with a 10uF aluminum electrolytic capacitor and a 0.1uF ceramic capacitor.</li> <li>Efficiency is measured after 30 minutes burn-in.</li> <li>Refer to derating curve.</li> </ol>		



# AA120U Outline Drawing

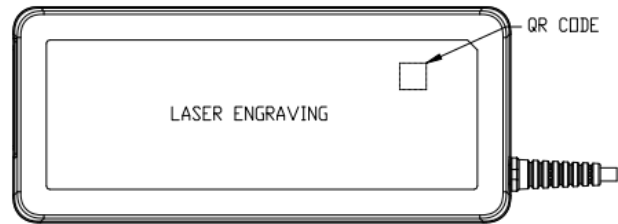
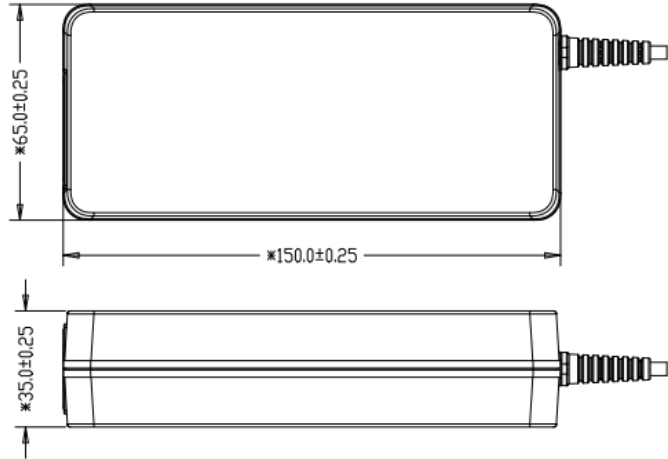
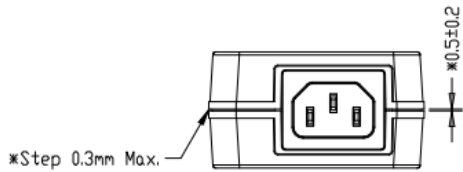
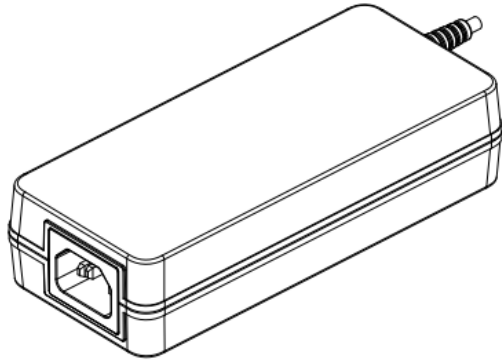
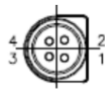


TABLE 1

MODEL NAME
AA120U-120B-R
AA120U-120B1-R
AA120U-240B-R
AA120U-480B-R
AA120U-540B-R

4 pin DN



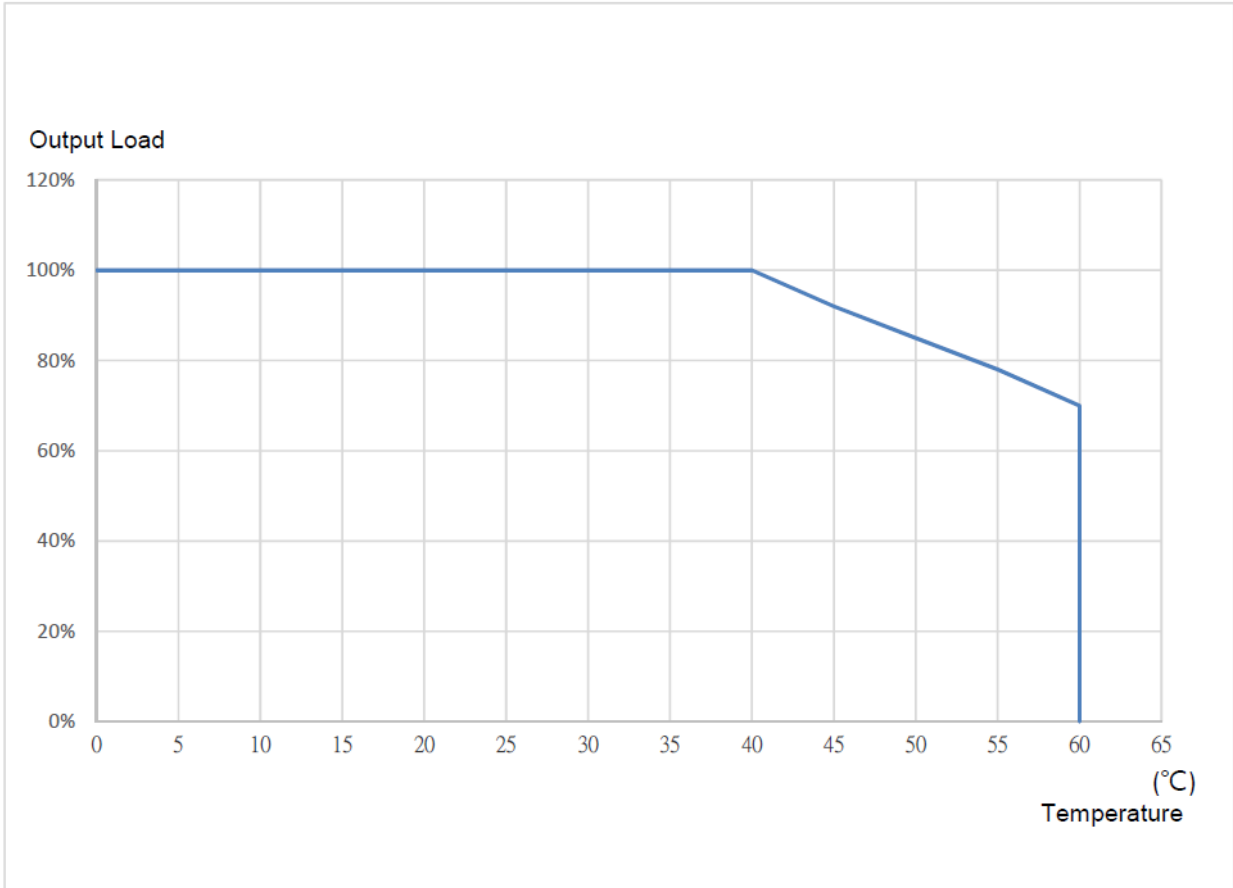
PLUG	POLAR
2,4	+
1,3	-

Barrel connector





# AA120U Series Derating Curve





**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](http://www.phihong.com)




MODELS

AA120U-120B-R  
AA120U-120B1-R  
AA120U-240B-R  
AA120U-480B-R  
AA120U-540B-R

*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.*



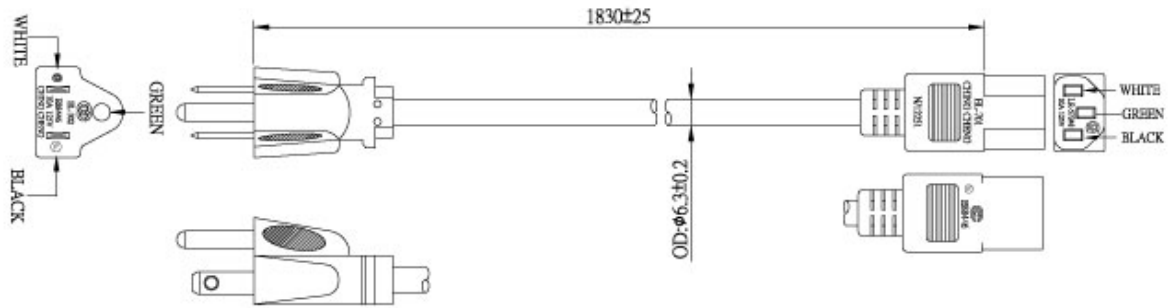
# Line Cord - Sold Separately

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	60°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				

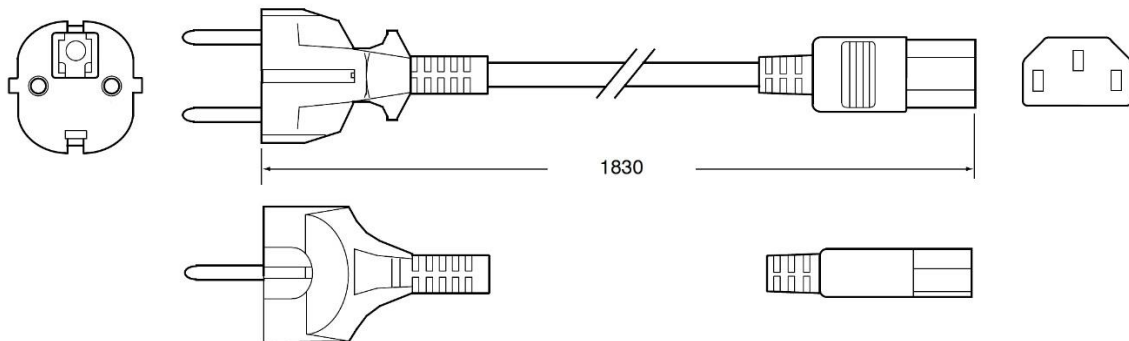


# Line Cords - Outline Drawing

## AC30UNA-R



## AC30UEU-R



## AC30UUK-R

