



### **Features**

- DoE Level VI Compliance
- Ecodesign/ErP Lot 7 (EU) 2019/1782 Compliance
- CoC Version 5 Tier 2 Compliance
- AS/NZS4665.1-2005+A1:2009, AS/NZS4665.2-2005+A1:2009 Compliance
- Limited Power Source
- Class B EMI
- Class II Double Insulated
- Interchangeable Clips (sold separately)

#### **Applications**

- Wireless Communications
- Portable Equipment
- Peripherals
- Consumer Electronics

Energy Verified Rendement Énergétique Vérifié

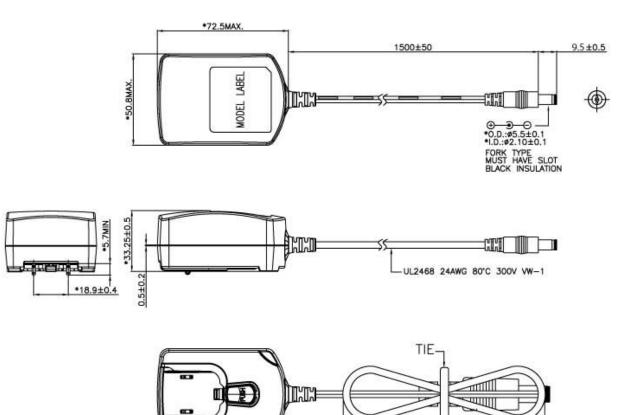


## AA20R Series Specifications<sup>1</sup>

DC Output Voltage Max Current	12.0V	24.0V	49.01/
Max Current			48.0V
	1.67A	0.83A	0.42A
Output Power	20.04W	19.92W	20.16W
Regulation	± 5%	± 5%	± 5%
Ripple & Noise P-P(max) <sup>2</sup>	120mV	240mV	480mV
AC Input Voltage Range	90 to 264VAC 47 to 63Hz 0.5A @120VAC; 0.25A @240VAC 40A max., 120VAC; 80A max., 240VAC (Cold Start at ambient 25°C, full load)		
AC Input Frequency			
Input Current			
Inrush Current			
No Load Power Consumption at			
115VAC Input	0.042W	0.042W	0.038W
No Load Power Consumption at 230VAC Input	0.063W	0.069W	0.058W
115VAC Average Efficiency <sup>3</sup>	86.51%	88.31%	88.09%
230VAC Average Efficiency <sup>3</sup>	86.61%	87.16%	86.78%
230VAC 10% Load Efficiency <sup>3</sup>	81.63%	79.05%	76.71%
Leakage Current	<0.25mA		
Over-Voltage	<23Vpk	<35Vpk	<62Vpk
Short Circuit	Output can be shorted without damage		
Over-Current	Auto restart		
Operating Temperature	0°C to +40°C -25° to +75°C		
Non-Operating Temperature			
Operating Humidity	20 to +90%		
Dielectric Withstand (HI-POT)	Primary to Secondary: 3000VAC for 1min, 10mA		
Insulation Resistance	Input to Output: 50M ohm min., 500VDC cULus 62368-1, IEC 62368-1, AS/NZS 62368.1:2018 FCC Part 15 Class B, CAN ICES-003(B)/NMB-003(B), EN 55032/CISPR 32, AS/NZS CISPR 32:2015, Class B Conducted		
Standards			
EMI Emissions			
Harmonic Current Emissions	IEC 61000-3-2		
Voltage Fluctuations & Flicker	IEC 61000-3-3 EN 55024/CISPR 24: IEC 61000-4-2 (+/- 8kV air, +/-6kV contact), IEC 61000-4-3, IEC 61000-4-4, IEC 61000-4-5 (+/-1kV), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11		
Immunity			
Dimensions (L x W x H)	72.5mm (2.85in) x 50.8mm (2.00in) x 33.25mm (1.31in)		
Weight	146g 1500mm		
Cable Length			
DC Cable Type	18 AWG	22 AWG	24 AWG
DC Output Connector	2.1mm x 5.5mm x 10.0mm		
DC Plug Pin Assignment	Inner (V+) / Outer GND (V-)		
	AC Input Frequency nput Current nrush Current No Load Power Consumption at 115VAC Input No Load Power Consumption at 230VAC Input 115VAC Average Efficiency <sup>3</sup> 230VAC Average Efficiency <sup>3</sup> 230VAC 10% Load Efficiency <sup>3</sup> 200Fr Current Dover-Voltage Short Circuit Dver-Current Dperating Temperature Non-Operating Temperature Doperating Humidity Dielectric Withstand (HI-POT) nsulation Resistance Standards EMI Emissions Harmonic Current Emissions Voltage Fluctuations & Flicker mmunity Dimensions (L x W x H) Neight Cable Length DC Cable Type DC Output Connector DC Plug Pin Assignment 1. The specifications defined are at am 2. 200HIz bandwidth frequency oscillos terminals (norminal line voltage, full	AC Input Frequency nput Current 0.5A nrush Current 0.5A No Load Power Consumption at 0.042W No Load Power Consumption at 0.063W 115VAC Input 0.063W 115VAC Average Efficiency <sup>3</sup> 86.51% 230VAC Average Efficiency <sup>3</sup> 86.61% 230VAC Average Efficiency <sup>3</sup> 81.63% Leakage Current Dver-Voltage <23Vpk Short Circuit 0utput Dver-Voltage <23Vpk Short Circuit 0utput Dver-Current Dperating Temperature Non-Operating Temperature Dperating Humidity Dielectric Withstand (HI-POT) Primary to S nsulation Resistance Input to Standards cULus 62368- FCC Part 15 C EMI Emissions Flicker Monoic Current Emissions Voltage Fluctuations & Flicker mmunity EN 55032/CISPR 32, Harmonic Current Emissions Voltage Fluctuations & Flicker Monoic Current Emissions Voltage Fluctuations & Flicker Meight Cable Length DC Cable Type 18 AWG DC Output Connector 2 DC Plug Pin Assignment Ir 1. The specifications defined are at ambient temperature of 25°C, unless 2. 20WHz bandwidth frequency oscilloscope, add a 0.1µF multilayer Cap teminals (noninal line voltage, full load).	AC Input Frequency 47 to 63Hz   nput Current 0.5A @120VAC; 0.25A @240   nrush Current 40A max., 120VAC; 80A max., 120VAC; 10A max., 120VAC; 120VAC; 10A max., 120A max., 120VAC; 120VAC; 10A max., 120A max., 120VAC; 120VAC; 10A max., 120A max., 120VAC; 120



## AA20R Outline Drawing



100±10

#### 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

NOTE: This model has/The models in this product series have been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -Reorient or relocate the receiving antenna.
- -Increase the separation between the equipment and receiver.
- -Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- -Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to equipment not expressly approved by PHIHONG could void the user's authority to operate the equipment.



# AC Input Clips - Sold Separately

