

TECHNICAL DATASHEET

90W Desktop Adapter Series



Applications

- Networking Device
- Monitor
- Notebook

Dimensions

141.5 x 62.5 x 33 mm
(5.57 x 2.46 x 1.30 inch)

Features

- US DoE Level VI Efficiency Compliance
- CoC Tier 3 Compliance
- OVP, OCP, SCP, OTP Protections
- Class B EMI
- Operating Altitude to 5,000 Meters

Specifications

AA90X Series Specifications¹

Model		AA90U-120B-R
Output	DC Output Voltage	12.0V
	Max Current	7.5A
	Output Power	90.0W
	Regulation	± 5% Line
	Ripple & Noise P-P(max) ²	120mV
Input	AC Input Voltage Range	90 to 264VAC
	AC Input Voltage Rating	100 VAC to 240VAC
	AC Input Frequency	47 to 63Hz
	Inrush Current	200A @ 240VAC Max Load
	No Load Power Consumption at 115VAC Input	≤0.21W
	No Load Power Consumption at 230VAC Input	≤0.15W
	115VAC Average Efficiency ³	≥88%
	230VAC Average Efficiency ³	≥89%
	230VAC 10% Average Efficiency ³	≥79%
	Leakage Current	3.5mA max. @254vac, 50Hz
Protection	Over-Voltage	16V max., Auto-recovery
	Short Circuit	Auto-recovery
	Over-Current	10.5A max., Auto-recovery
	Over-Temperature	Auto-recovery
	External Latch	Protection by NTC
Environmental	Operation Temperature ⁴	-10°C to +40°C
	Operating Humidity	5% to 90% RH max
	Operating Altitude	Up to 5000m
Safety and EMC Standards (Designed to meet)	Dielectric Withstand (Hi-pot)	Primary to Secondary: 3000VAC or 4242Vdc for 1min, 10mA
	Insulation Resistance	Primary to Secondary: >7M ohm for 500VDC
	Standards	IEC 62368-1, UL 62368-1 3 rd Edition
	EMI Emissions	EN55032 Class B, FCC Class B, CAN ICES-003(B)/NMB-003(B) Conducted and Radiated
	Harmonic Current Emissions	IEC 61000-3-2
	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-G), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
Mechanical	Dimension(LxWxH)	141.5mm (5.57in) x 62.5mm (2.46in) x 33mm (1.30in)
	Cable Length	1000mm
	Input Connector	IEC 60320 C14
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. (10 μ F) at output connector terminals (nominal line voltage, full load).

3. Efficiency is measured after 30 minutes burn-in.

4. Refer to Operating temperature curve

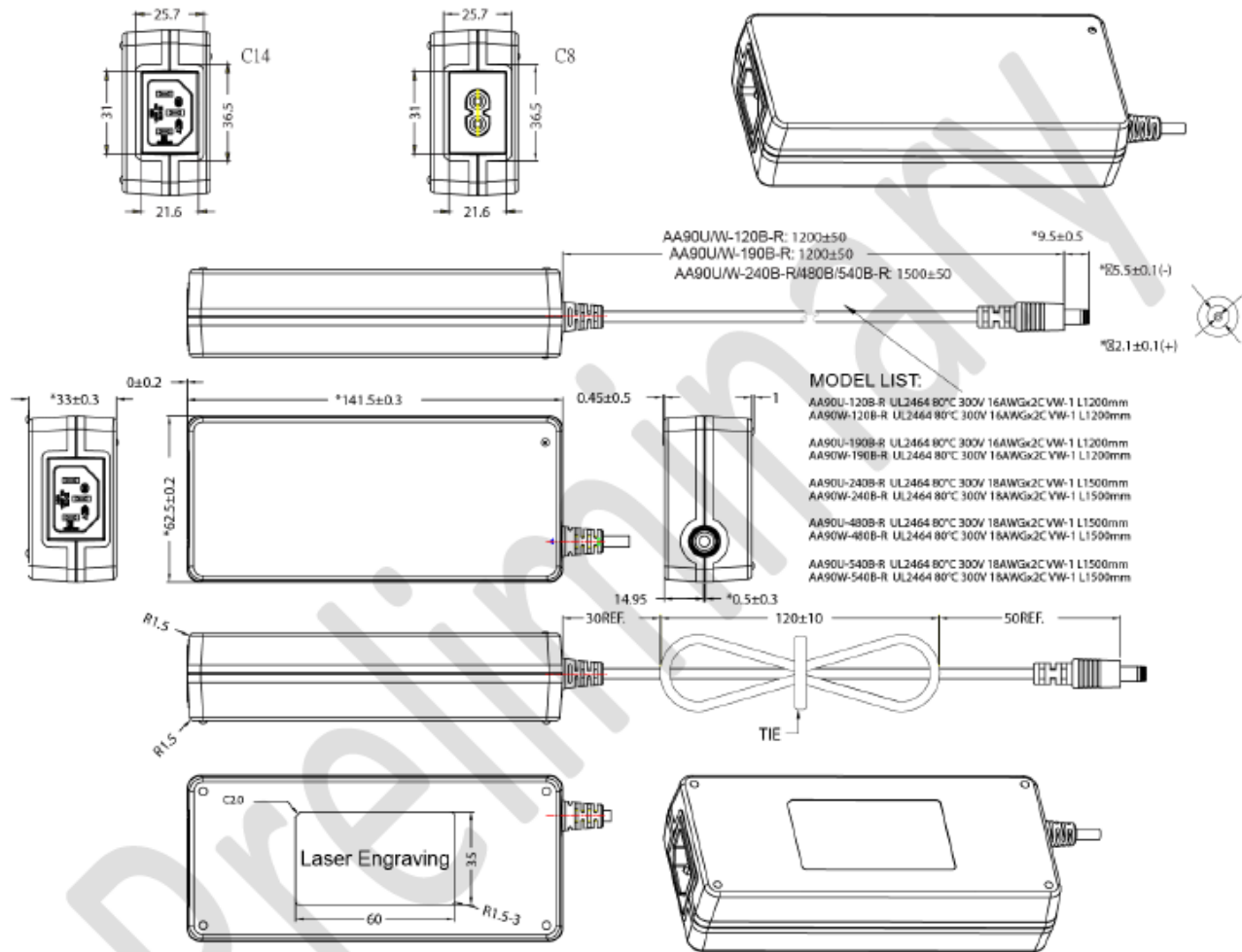
Model		AA90U-190B-R
Output	DC Output Voltage	19.0V
	Max Current	4.74A
	Output Power	90.0W
	Regulation	± 5% Line
	Ripple & Noise P-P(max) ²	190mV
Input	AC Input Voltage Range	90 to 264VAC
	AC Input Voltage Rating	100 VAC to 240VAC
	AC Input Frequency	47 to 63Hz
	Inrush Current	200A @ 240VAC Max Load
	Power Factor	>0.95 @ 120 VAC; >0.90 @ 240 VAC Full Load
	No Load Power Consumption at 115VAC Input	≤0.21W
	No Load Power Consumption at 230VAC Input	≤0.15W
	115VAC Average Efficiency ³	≥88%
	230VAC Average Efficiency ³	≥89%
	230VAC 10% Average Efficiency ³	≥79%
	Leakage Current	3.5mA max. @254vac, 50Hz
Protection	Over-Voltage	25V max., Auto-recovery
	Short Circuit	Auto-recovery
	Over-Current	6.6A max., Auto-recovery
	Over-Temperature	Auto-recovery
	External Latch	Protection by NTC
Environmental	Operation Temperature ⁴	-10°C to +40°C
	Operating Humidity	5% to 90% RH max
	Operating Altitude	Up to 5000m
Safety and EMC Standards (Designed to meet)	Dielectric Withstand (Hi-pot)	Primary to Secondary: 3000VAC or 4242Vdc for 1min, 10mA
	Insulation Resistance	Primary to Secondary: >7M ohm for 500VDC
	Standards	IEC 62368-1, UL 62368-1 3 rd Edition
	EMI Emissions	EN55032 Class B, FCC Class B, CAN ICES-003(B)/NMB-003(B) Conducted and Radiated
	Harmonic Current Emissions	IEC 61000-3-2
	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-G), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
Mechanical	Dimension(LxWxH)	141.5mm (5.57in) x 62.5mm (2.46in) x 33mm (1.30in)
	Cable Length	1200mm
	Input Connector	IEC 60320 C14
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. Refer to Operating temperature curve 	

Model		AA90U-240B-R
Output	DC Output Voltage	24.0V
	Max Current	3.75A
	Output Power	90.0W
	Regulation	± 5% Line
	Ripple & Noise P-P(max) ²	240mV
Input	AC Input Voltage Range	90 to 264VAC
	AC Input Voltage Rating	100 VAC to 240VAC
	AC Input Frequency	47 to 63Hz
	Power Factor	>0.95 @ 120 VAC; >0.90 @ 240 VAC Full Load
	No Load Power Consumption at 115VAC Input	≤0.21W
	No Load Power Consumption at 230VAC Input	≤0.15W
	115VAC Average Efficiency ³	≥88%
	230VAC Average Efficiency ³	≥89%
	230VAC 10% Average Efficiency ³	≥79%
	Leakage Current	3.5mA max. @254vac, 50Hz
Protection	Over-Voltage	35V max., Auto-recovery
	Short Circuit	Auto-recovery
	Over-Current	5.3A max., Auto-recovery
	Over-Temperature	Auto-recovery
	External Latch	Protection by NTC
Environmental	Operation Temperature ⁴	-10°C to +40°C
	Operating Humidity	5% to 90% RH max
	Operating Altitude	Up to 5000m
Safety and EMC Standards (Designed to meet)	Dielectric Withstand (Hi-pot)	Primary to Secondary: 3000VAC or 4242Vdc for 1min, 10mA
	Insulation Resistance	Primary to Secondary: >7M ohm for 500VDC
	Standards	IEC 62368-1, UL 62368-1 3 rd Edition
	EMI Emissions	EN55032 Class B, FCC Class B, CAN ICES-003(B)/NMB-003(B) Conducted and Radiated
	Harmonic Current Emissions	IEC 61000-3-2
	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-G), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
Mechanical	Dimension(LxWxH)	141.5mm (5.57in) x 62.5mm (2.46in) x 33mm (1.30in)
	Cable Length	1500mm
	Input Connector	IEC 60320 C14
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. Refer to Operating temperature curve 	

Model		AA90U-480B-R
Output	DC Output Voltage	48.0V
	Max Current	1.875A
	Output Power	90.0W
	Regulation	± 5% Line
	Ripple & Noise P-P(max) ²	480mV
Input	AC Input Voltage Range	90 to 264VAC
	AC Input Voltage Rating	100 VAC to 240VAC
	AC Input Frequency	47 to 63Hz
	Inrush Current	200A @ 240VAC max Load
	Power Factor	>0.95 @ 120 VAC; >0.90 @ 240 VAC Full Load
	No Load Power Consumption at 115VAC Input	≤0.21W
	No Load Power Consumption at 230VAC Input	≤0.15W
	115VAC Average Efficiency ³	≥88%
	230VAC Average Efficiency ³	≥89%
	230VAC 10% Average Efficiency ³	≥79%
	Leakage Current	3.5mA max. @254vac, 50Hz
Protection	Over-Voltage	60V max., Auto-recovery
	Short Circuit	Auto-recovery
	Over-Current	2.7A max., Auto-recovery
	Over-Temperature	Auto-recovery
	External Latch	Protection by NTC
Environmental	Operation Temperature	-10°C to +40°C
	Operating Humidity	5% to 90% RH max
	Operating Altitude	Up to 5000m
Safety and EMC Standards (Designed to meet)	Dielectric Withstand (Hi-pot)	Primary to Secondary: 3000VAC or 4242Vdc for 1min, 10mA
	Insulation Resistance	Primary to Secondary: >7M ohm for 500VDC
	Standards	IEC 62368-1, UL 62368-1 3 rd Edition
	EMI Emissions	EN55032 Class B, FCC Class B, CAN ICES-003(B)/NMB-003(B) Conducted and Radiated
	Harmonic Current Emissions	IEC 61000-3-2
	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-G), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
Mechanical	Dimension (LxWxH)	141.5mm (5.57in) x 62.5mm (2.46in) x 33mm (1.30in)
	Cable Length	1500mm
	Input Connector	IEC 60320 C14
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. Refer to Operating temperature curve 	

Model		AA90U-540B-R
Output	DC Output Voltage	54.0V
	Max Current	1.67A
	Output Power	90.0W
	Regulation	± 5% Line
	Ripple & Noise P-P(max) ²	540mV
Input	AC Input Voltage Range	90 to 264VAC
	AC Input Voltage Rating	100 VAC to 240VAC
	AC Input Frequency	47 to 63Hz
	Inrush Current	200A @ 240VAC max Load
	Power Factor	>0.95 @ 120 VAC; >0.90 @ 240 VAC Full Load
	No Load Power Consumption at 115VAC Input	≤0.21W
	No Load Power Consumption at 230VAC Input	≤0.15W
	115VAC Average Efficiency ³	≥88%
	230VAC Average Efficiency ³	≥89%
	230VAC 10% Average Efficiency ³	≥79%
	Leakage Current	3.5mA max. @254vac,50Hz
Protection	Over-Voltage	60V max., Auto-recovery
	Short Circuit	Auto-recovery
	Over-Current	2.4A max., Auto-recovery
	Over-Temperature	Auto-recovery
	External Latch	Protection by NTC
Environmental	Operation Temperature	-10°C to +40°C
	Operating Humidity	5% to 90% RH max
	Operating Altitude	Up to 5000m
Safety and EMC Standards (Designed to meet)	Dielectric Withstand (Hi-pot)	Primary to Secondary: 3000VAC or 4242Vdc for 1min, 10mA
	Insulation Resistance	Primary to Secondary: >7M ohm for 500VDC
	Standards	IEC 62368-1, UL 62368-1 3 rd Edition
	EMI Emissions	EN55032 Class B, FCC Class B, CAN ICES-003(B)/NMB-003(B) Conducted and Radiated
	Harmonic Current Emissions	IEC 61000-3-2
	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-G), IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11
Mechanical	Dimension(LxWxH)	141.5mm (5.57in) x 62.5mm (2.46in) x 33mm (1.30in)
	Cable Length	1500mm
	Input Connector	IEC 60320 C14
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. Refer to Operating temperature curve 	

AA90X Series Outline Drawing: mm

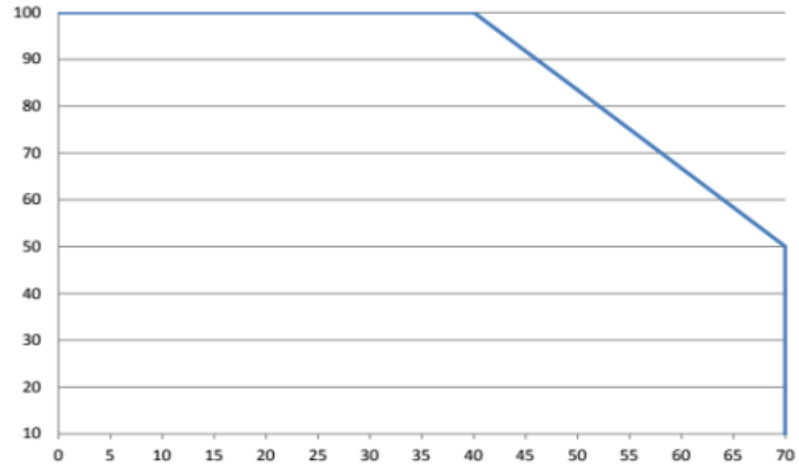


AA90x Series Derating Curve


Operating temperature:

-10°C to 40°C

(100% load at +40°C, 80% load at +50°C, 50% load at +70°C)

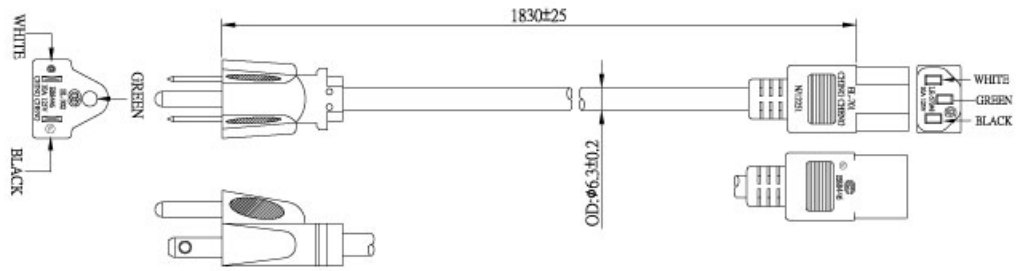


AA90U Line Cords Sold Separately

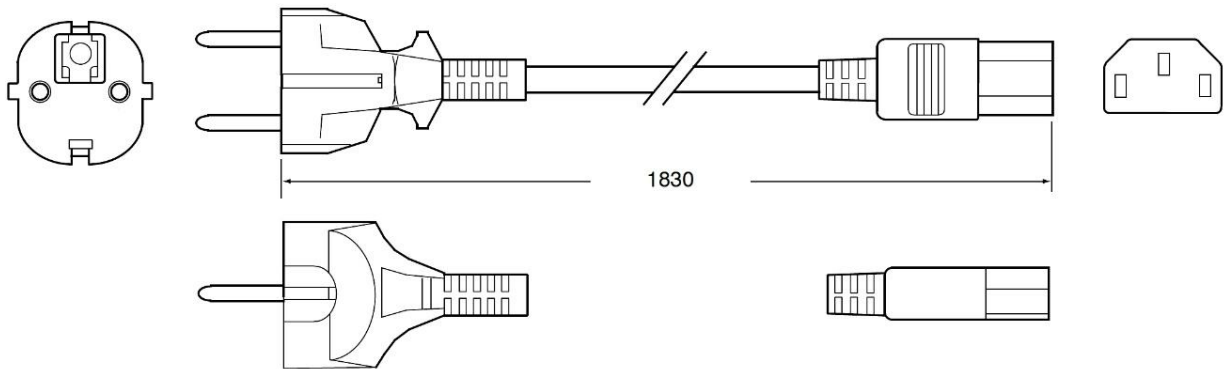
Model		AC30UNA-R	AC30UEU-R	AC30UUK-R
Specifications	Plug Type	North America NEMA 5-15P	Continental Europe CEE 7VIII	United Kingdom BS 1363
	Connector	IEC320 C13	IEC320 C13	IEC320 C13
	Wire Size	18 AWG	0.75mm	1.0mm
	Temperature	60°C	70°C	70°C
	Amperage Rating	10A	6A	10A
	Voltage Rating	125V	250V	250V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

AA90U Line Cords Outline Drawings

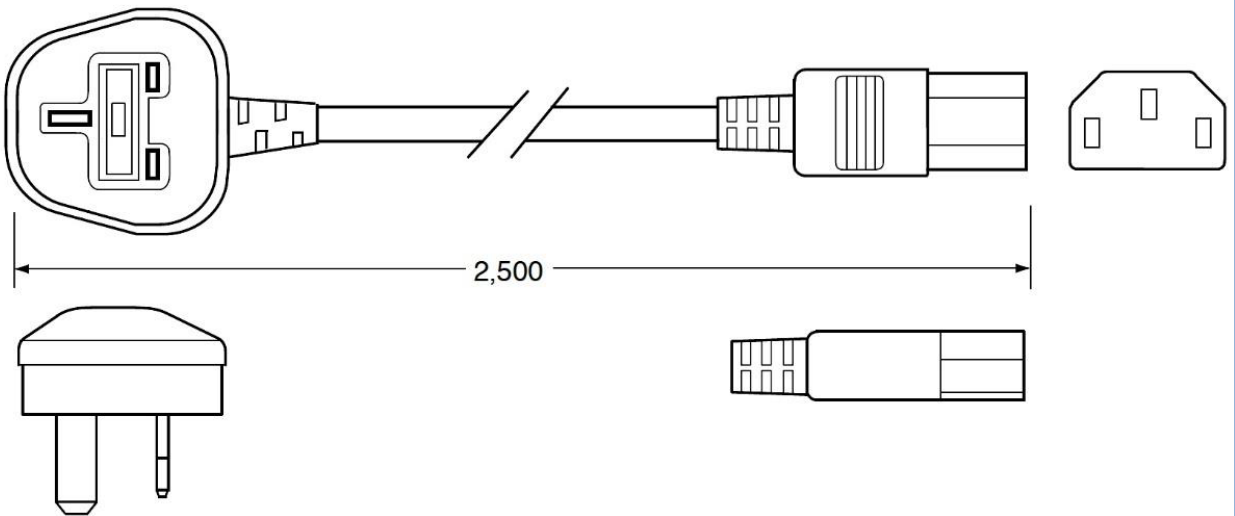
AC30UNA-R



AC30UEU-R



AC30UUK-R



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