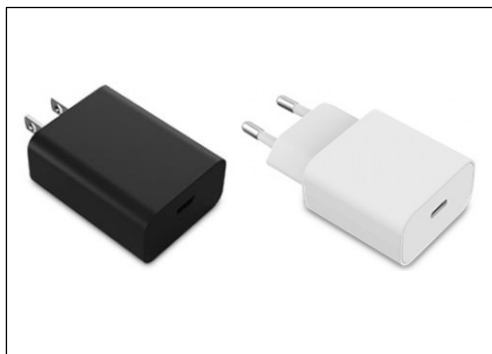




18W USB 3.1 Type C Adapter

AQ18A/E-120A-H

- 5V/3A, 12V/1.5A
- Type-C Reversible plug-in
- DoE 6, CoC V5 Tier 2
- Work with MacBook & Chromebook



Phihong 18W USB 3.1 Type-C Power Delivery (PD) adapter is an ideal charging solution for mobile devices. 18W follows USB PD Profile 2 with 3A for 5V output and it supports automatic sensing and switching between 5V & 12V output voltages to charge MacBook and Chromebook. Moreover, it allows the USB 3.1 cable reversible plug in with USB 3.1 Type-C receptacle. It delivers both low no-load power consumption (<75mW) and high average efficiency (>85.45%) to meet DoE Level 6 and CoC V5 Tier 2 requirements.

Features :

Efficiency	DoE Level VI and CoC V5 tier 2
No Load Input Power	$\leq 75\text{mW}$ @ 115/230Vac
Protection	OVP, OCP, SCP, OTP, Brown-in/Brown-out
Isolation	3000Vac, Primary to secondary 10mA, 1 min
Insulation Resistance	$>50\text{M}\Omega$ @ 500Vdc, Primary to secondary
OCP, SCP, OTP	Auto recovery
OVP	$< 18\text{ V}$
Average Efficiency	5V/3A: $>81.84\%$; 12V/1.5A: $>85.45\%$
Efficiency @ 10% load	5V/3A $>72.48\%$; 12V/1.5A: $>75.45\%$
Altitude	5000m
Dimension	US: 40 x 52 x 23.3 mm; EU: 40 x 58 x 23.3 mm
Weight	US: 55g; EU: 52g
AC Plug	US, EU

Electrical Specifications :

Input Voltage	100~240Vac (90~264Vac min/max)
Frequency	50/60Hz Nom (47~63Hz min/max)
Input Current	0.5A (RMS) max @ 100Vac
Output Voltage Range	$5\text{V}\pm 5\%$; $12\text{V}\pm 5\%$
Output Current Range	5V mode: 3~3.6A @ 4.75~3.8V output *12V operate @ OCP Mode (3.6A Max)
Maximum Output Power	18W
Output Ripple & Noise	150mVpk-pk @ max load
Earth Leakage Current	20uA Max.
AC Inrush Current	60A max @ 240Vac, Cold Star
Hold-up Time	10mS min @ 115Vac/230Vac, Max load
Turn-On Delay Time	1.0S Max. @ 90Vac/60Hz & Max load
Rise Time	30mS Max. @ 90Vac/264Vac

Environmental Specifications :

Operating Temperature	$0^{\circ}\text{C} \sim +40^{\circ}\text{C}$
Storage Temperature	$-40^{\circ}\text{C} \sim +85^{\circ}\text{C}$
Humidity, Operation	90% RH Max
Humidity, Storage	90% RH Max
Altitude	5000m
E-cap Life time	$>2\text{year}$ @ 25°C , Full load.
MTBF (MIL-HDBK-217F)	$>100\text{K hrs}$ @ 230Vac, 25°C

Safety and Compliance :

Safety Certifications	IEC/EN/UL 60950 Standard.
ESD test	EN 61000-4-2; Contact discharges: $\pm 8\text{KV}$ Criterion B Air discharges: $\pm 15\text{KV}$ Criterion B
Lightning Surge	EN 61000-4-5 Line to Line: 1KV Criterion A
EMI Requirement	FCC Class B, EN55022 Class B



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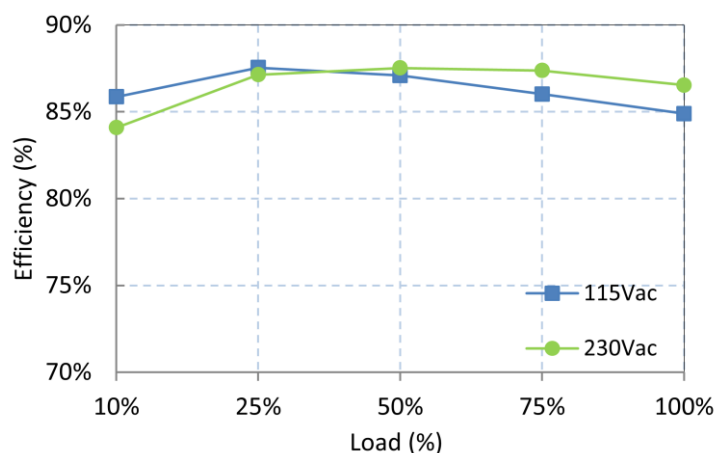
18W USB 3.1 Type C Adapter

AQ18A/E-120A-H

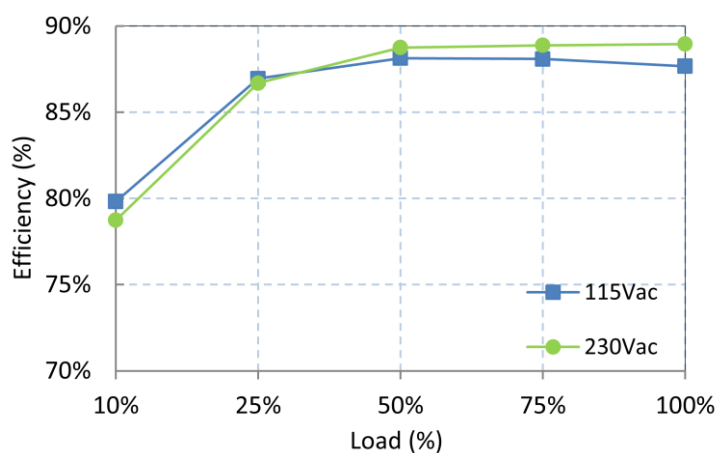
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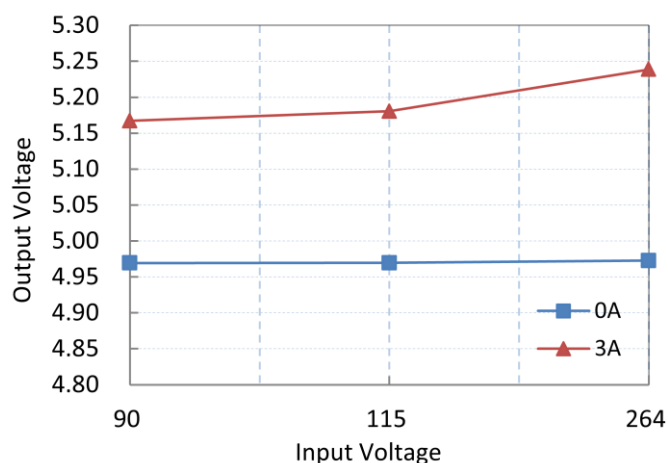
Efficiency (5V/3A)



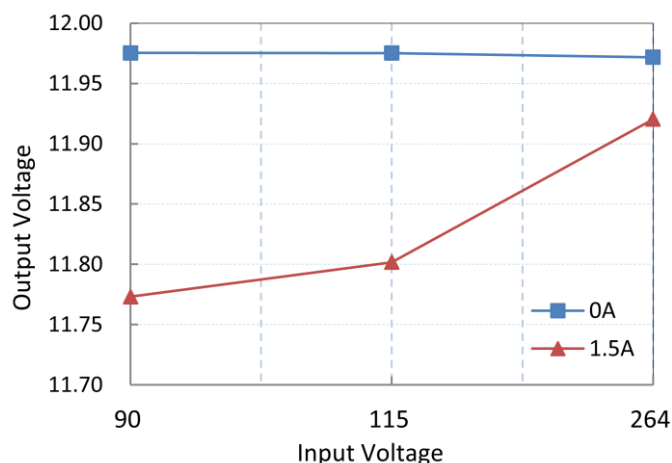
Efficiency (12V/1.5A)



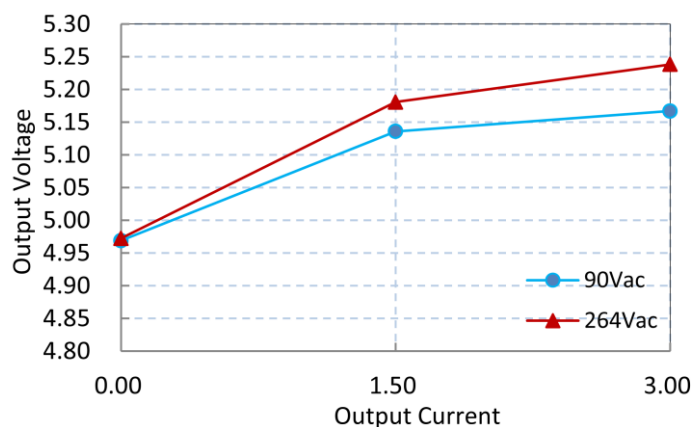
Load Regulation (5V/3A)



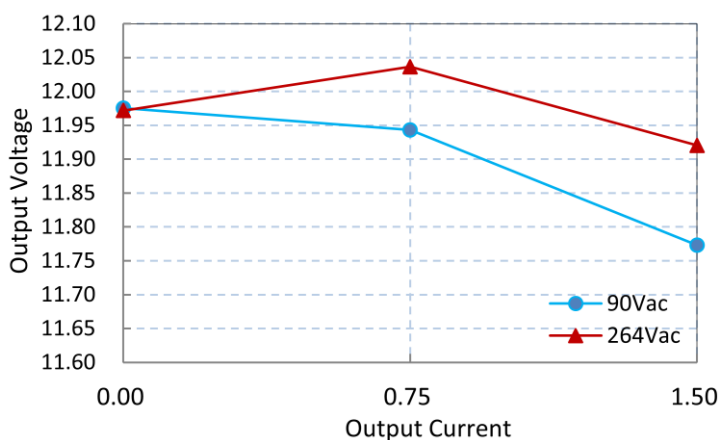
Load Regulation (12V/1.5A)



Line Regulation (5V/3A)



Line Regulation (12V/1.5A)



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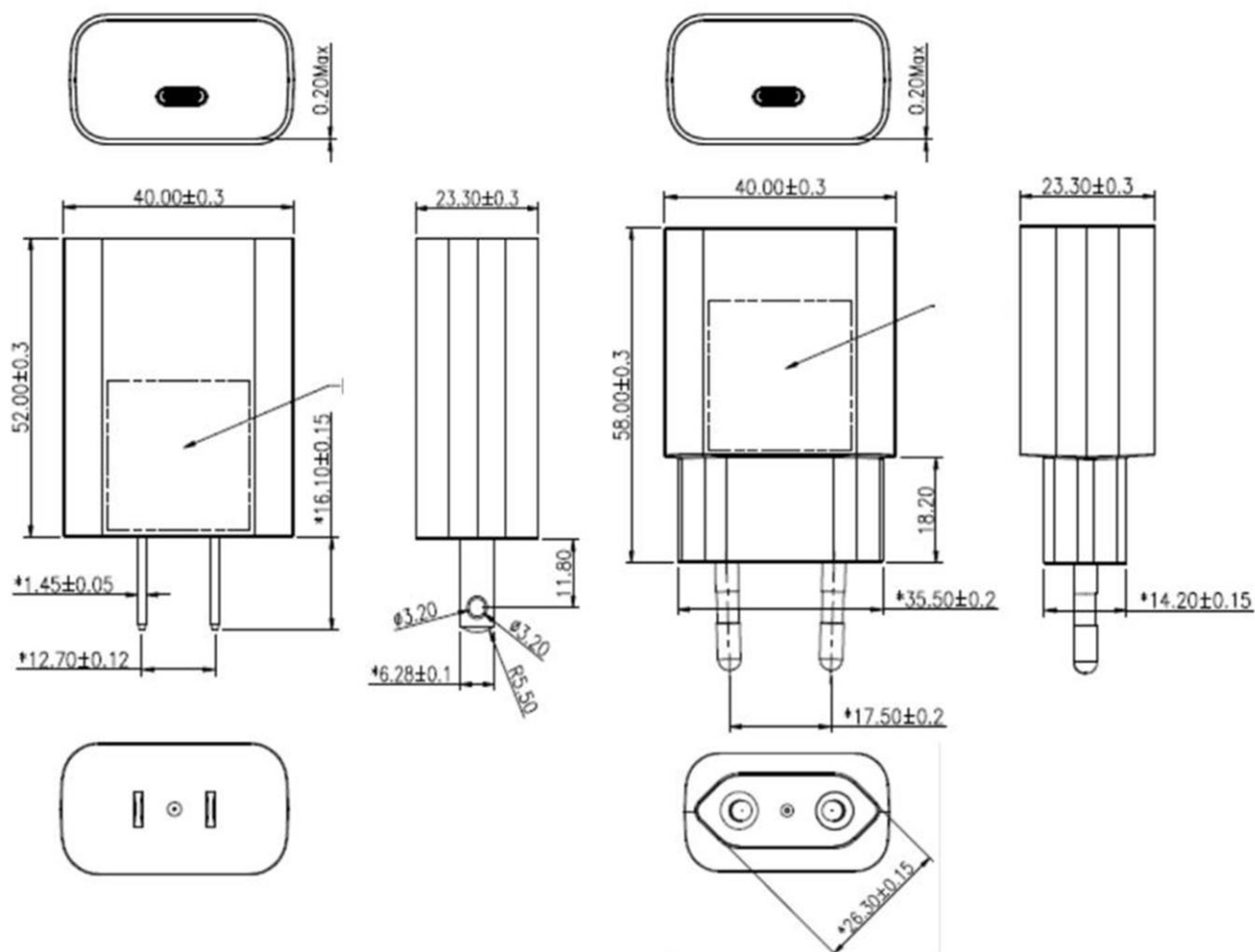
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Dimensions: mm



Model Selections

Model Number	Plug Type	Case Color	Output Voltage (Vdc)	Output Current (A ±5%)	Max. Output Power (W)
AQ18x-120A-H	Fixed	Black	5/ 12	3/ 1.5	18
AQ18x-120AW-H	Fixed	White	5/ 12	3/ 1.5	18

x=A & E(A=US, E=Europe)

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