



Size: 2.42in x 2.00in x 1.16in (61.5mm x 50.89mm x 29.39mm)

FEATURES

- Wide Input Range of 90~264VAC
- USB Type C Charger
- RoHS Compliant
- High Efficiency
- Over Power, Over Current, Over Voltage, and Short Circuit Protection
- Burn In Tested
- Meets UL60950 Safety Standard

DESCRIPTION

The WMUSB45 series of AC/DC USB Type C supplies offers 45 watts of output power in a compact 2.42" x 2" x 1.16" package. This series consists of single output models with a wide input voltage range of 90~264VAC and high efficiency. Each model in this series offers over power, over current, over voltage, and short circuit protection, is RoHS compliant, and meets UL60950 safety standard. This series has been burn in tested.

MODEL SELECTION TABLE

Model Number	Input Voltage Range	Output Voltage	Output Range	Output Current		Ripple & Noise ⁽¹⁾	Efficiency	Output Power
				Nominal Load	Max Load			
WMUSB45-5V	90~264VAC	5V	4.75~5.25VDC	3A	5A	150mV	81.39%	45 Watts
WMUSB45-9V		9V	8.55~9.45VDC	3A	5A	250mV	86.62%	
WMUSB45-15V		15V	14.25~15.75VDC	3A	5A	250mV	87.73%	
WMUSB45-20V		20V	20~21VDC	2.25A	4A	250mV	87.73%	

SPECIFICATIONS

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
Input Voltage Range		90	100~240	264	VAC
Input Frequency			60/50		Hz
Input AC Current	@100-240VAC Input & Full Load			1.3	A
Inrush Current	@264VAC Input, Cold Start			40	A
	Output positive and negative between slow application of 0-4.75VDC voltage, devices stable current does not allow for more than this measurement			5	mA
OUTPUT SPECIFICATIONS					
Output Voltage					See Table
Voltage Range					See Table
Linear Adjustment Rate	Max Output Current in Input Voltage Range	-2		+2	%
Load Regulation	Rated Input Voltage, Other outputs for max output current load variation: min→max→min	-5		+5	%
No Load Power Consumption	230/115VAC, No Load			0.1	W
Max Charger Load				3.0	A
Output Power					See Table
Output Current					See Table
Ripple & Noise ⁽¹⁾					See Table
Common Mode Noise Test	Conforms to EN62684			2	V
Dynamic Response Overshoot	25~50%, 50~75% load change, current change rate of 0.2A/us, cycle T1=T2=10mS, 50% duty cycle		±7		%Vout
Switch Machine Overshoot	Full Input Voltage Range, Rated Load			+10	%
Boot Delay	115VAC/Specified Load			3	S
Rise Time	115/230VAC Input Voltage, Rated Load			50	mS
Fall Time	115/230VAC Input Voltage, Rated Load			100	mS
Hold Time	115VAC/Specified Load	10			mS
PROTECTION					
Short Circuit Protection ⁽²⁾	Input power should decrease when output rail shorts, power supply should not damage, and will self-recover when fault condition is removed				
Over Current Protection	When output load current reaches or exceed current protection point, charger will start over current protection			2.6	A
Over Voltage Protection	Voltage clamped by internal protection circuit				
Over Power Protection				80	W

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SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature		0		40	°C
Storage Temperature		-20		80	°C
Operating Relative Humidity		10		90	%RH
Storage Relative Humidity	Non-Condensing @ Sea Level (Below 2,000 meters)	5		95	%RH
Vibration	10 to 300Hz sweep at a constant acceleration of 1.0G (breadth: 3.5mm) for 1 hour for each of the perpendicular axes: X, Y, Z				
Burn-In	Burn-in for 4 hours under normal input and 80% rated load at 40°C±5°C				
GENERAL SPECIFICATIONS					
Efficiency				See Table	
Dielectric Strength (Hi-Pot)	Primary to Secondary	3000VAC/10mA Max/60 Second			
	Primary to Secondary	3300VAC/5mA Max/3S			
Leakage Current	@264VAC/50Hz			0.25	mA
Insulation Resistance	@Primary to Secondary add 500VDC Test Voltage	50			MΩ
PHYSICAL SPECIFICATIONS					
Dimensions (L x W x H)		2.42in x 2.00in x 1.16in (61.5mm x 50.89mm x 29.39mm)			
SAFETY CHARACTERISTICS					
Safety Approvals		FCC		UL60950 ⁽⁴⁾	
EMS Standards ⁽³⁾	Electrostatic Discharge Req.	Air Discharge: Test Level ±8kV Contact Discharge: Test Level ±4kV		Test Criteria B Test Criteria B	
	Radiated Electromagnetic Field Susceptibility	Test Level: 3V/m Test Level: 80-1000MHz, 80% AM (1KHz) sine-wave		Test Criteria A	
	Electric Fast Transients (Burst) Immunity Req.	AC Input: Test Level 0.5kV AC Input: Test Level 1kV		Test Criteria A Test Criteria B	
	Surge Capability Req.	Common Mode: N/A Differential Mode: 1kV		Test Criteria A	
	Induced Radio Frequency Fields Conducted Disturbances Immunity Req.	Test Level: 3V 0.15-80MHz, 80% AM (1KHz)		Test Criteria A	

NOTES

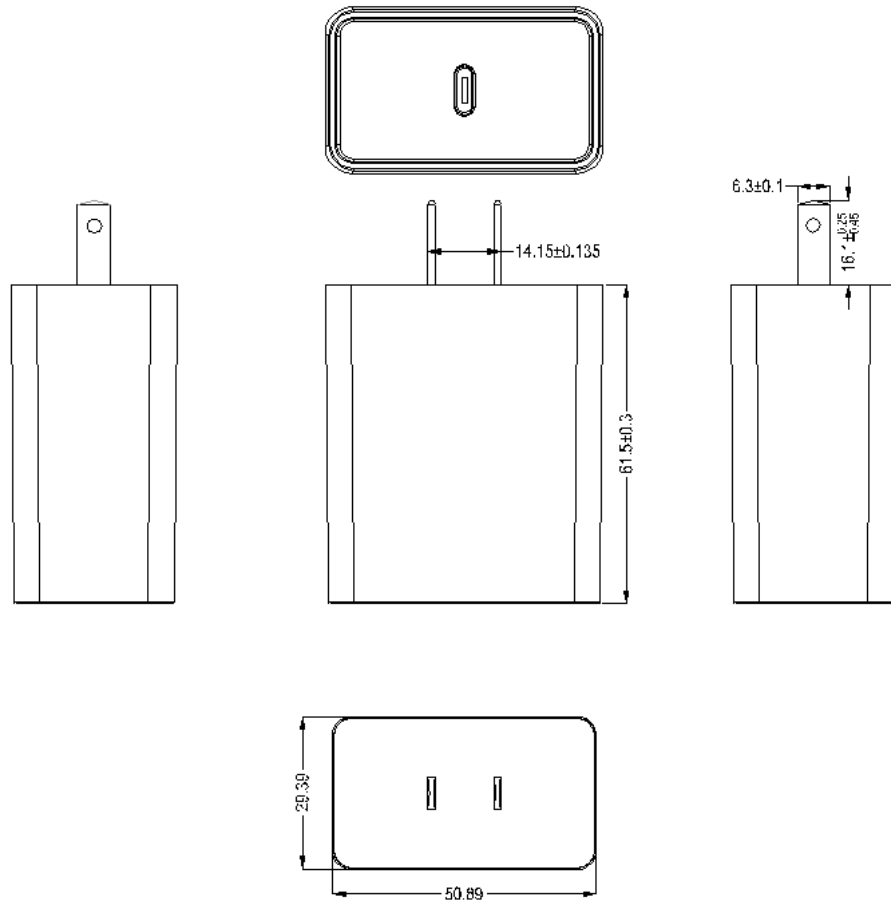
- Input AC 90/60Hz & 264V/50Hz test the full current load conditions & the output voltage of the charger ripple. The oscilloscope limit bandwidth is 20Mhz, the output increased 47uF electrolytic 0.1uF ceramic capacitors.
- This product can be damaged under continuous output short circuit operation. Short circuit can be before or after the power is turned on. When short circuit is removed, charger can automatically return to normal working condition. When output short circuits, charger will enter into short circuit protection mode. Short circuit when the circuit is put into cycle by cycle mode.
- Assessment Criteria

Acceptance Criteria	Performance
A	Agreed operational behavior within specified limits
B	Time limited functional diminishment or malfunction during the tests is permitted. The function is self-reactivating by the unit following completion of the tests.
C	Malfunction is permitted. The function can be reactivated either by reconnection to the mains or by operator intervention.

- This product is Listed to applicable standards and requirements by UL.

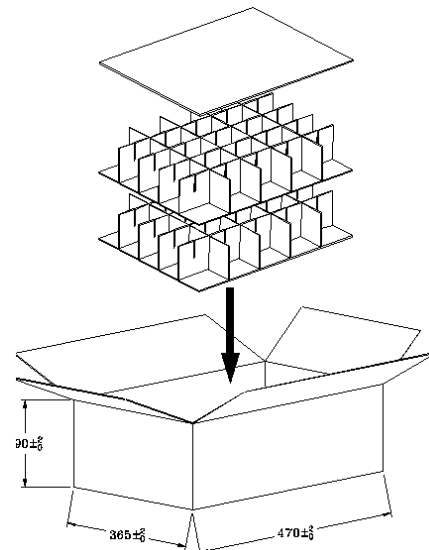
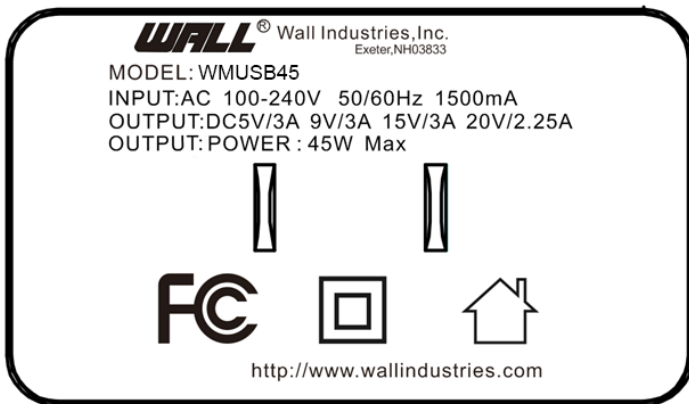
**Due to advances in technology, specifications subject to change without notice.*

MECHANICAL DRAWINGS



Label

Packaging



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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