200W Single Output Moistureproof Adaptor

OWA-200U series

User's Manual



UL62368-1 IP67 (for power body)

Features

- Universal AC input / Full range
- Class Ⅱ power unit, no FG
- Built-in active PFC function
- High efficiency up to 94%
- No load power consumption <0.15W
- Energy efficiency Level Ⅵ
- Comply with EU Erp and CoC Version 5
- Fully isolated plastic case with IP67
- Fanless design, cooling by free air convection
- Protections: Short circuit / Over current / Over voltage / Over temperature
- UL LISTED, suitable for dry and damp locations
- 5 years warranty
- Various DC plug quick adapter accessory available (Plug kit sold sperately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)

Applications

- Industrial field PC adaptor
- POS or KIOSK system
- Portable Battery charger
- Electric Lawn mower charger
- General electronic products in dusty or humid environment
- Household Device

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

OWA-200U is one 200W single-output external power supply series. Pairing the North American type of AC plug and the prevailing DC connectors, OWA-200U, working like an adaptor, simplifies the connection with any electric device which needs waterproof function. The entire series is certified with the “UL LISTED” for dry and damp locations.

As a class Ⅱ (no FG) design, the enclosure of OWA-200U is a 94V-0 flame retardant plastic case. The interior is fully potted with silicone that enhances the heat dissipation. With the working efficiency up to 94%, OWA-200U is cooled by free air convection; the working temperature ranges from -40℃ to +70℃.

Model Encoding

OWA - 200U - 12

- 12 — Output voltage
- U — AC plug of North American type
- 200 — Output wattage
- OWA — Series name

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SPECIFICATION

MODEL			OWA-200U-12	OWA-200U-20	OWA-200U-24	OWA-200U-36	OWA-200U-42	OWA-200U-48	OWA-200U-54
OUTPUT	DC VOLTAGE		12V	20V	24V	36V	42V	48V	54V
	RATED CURRENT		15A	10A	8.3A	5.55A	4.75A	4.17A	3.71A
	RATED POWER		180W	200W	199W	199W	199W	200W	200W
	RIPPLE & NOISE (max.) Note.2		150mVp-p	150mVp-p	150mVp-p	200mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE TOLERANCE Note.3		±5.0%	±4.0%	±4.0%	±3.0%	±3.0%	±3.0%	±3.0%
	LINE REGULATION		±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION		±5.0%	±4.0%	±4.0%	±3.0%	±3.0%	±3.0%	±3.0%
	SETUP, RISE TIME Note.4		500ms, 80ms 230VAC / 115VAC						
	HOLD UP TIME (Typ.)		10ms at full load 230VAC / 115VAC						
INPUT	VOLTAGE RANGE		100 ~ 264VAC 142 ~ 370VDC						
	FREQUENCY RANGE		47 ~ 63Hz						
	POWER FACTOR (Typ.)		PF>0.97/115VAC, PF>0.96/230VAC at full load						
	EFFICIENCY (Typ.)	115VAC	88.5%	90%	90.5%	91.5%	91.5%	91.5%	91.5%
		230VAC	91%	92.5%	93%	94%	94%	94%	94%
	AC CURRENT (Typ.)		2.2A / 115VAC 1.1A / 230VAC						
	INRUSH CURRENT (Typ.)		COLD START 90A(twidth=300μs measured at 50% Ipeak) at 115VAC COLD START 180A(twidth=450μs measured at 50% Ipeak) at 230VAC						
	LEAKAGE CURRENT		<0.125mA / 120VAC <0.25mA / 240VAC						
	NO LOAD CONSUMPTION		<0.15W						
PROTECTION	OVER CURRENT		105% ~ 150%						
			Protection type : Hiccup mode, recovers automatically after fault condition is removed						
	SHORT CIRCUIT		Hiccup mode, recovers automatically after fault condition is removed						
	OVER VOLTAGE		13 ~ 18V	22 ~ 27V	27 ~ 34V	41 ~ 49V	46 ~ 57V	52 ~ 65V	59 ~ 70V
			Protection type : Shut down o/p voltage, re-power on to recover						
	OVER TEMPERATURE		Shut down o/p voltage, re-power on to recover						
ENVIRONMENT	WORKING TEMP.		-40 ~ +70℃ (Refer to "Derating Curve")						
	WORKING HUMIDITY		20 ~ 95% RH non-condensing						
	STORAGE TEMP., HUMIDITY		-40 ~ +80℃, 10 ~ 95% RH						
	TEMP. COEFFICIENT		±0.03%/℃ (0 ~ 50℃)						
	VIBRATION		10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes						
SAFETY & EMC	SAFETY STANDARDS		UL62368-1; IP67(for power body) approved; Design refer with UL1012						
	WITHSTAND VOLTAGE		I/P-O/P:4.2KVAC						
	ISOLATION RESISTANCE		I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH						
	EMC EMISSION		Compliance to FCC Part15						
OTHERS	MTBF		2680.8K hrs min. Telcordia SR-332 (Bellcore) 268.5K hrs min. MIL-HDBK-217F (25℃)						
	DIMENSION		195*68*39.5mm						
	PACKING		1.32Kg; 9 pcs/ 11.74 Kg/ 0.79 CUFT						

NOTE

1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Length of set up time is measured at cold first start. Turning ON/OFF the power supply may lead to increase of the set up time.
5. For battery charging purpose had better operation with a BMS controller.

※ Product Liability Disclaimer ： For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

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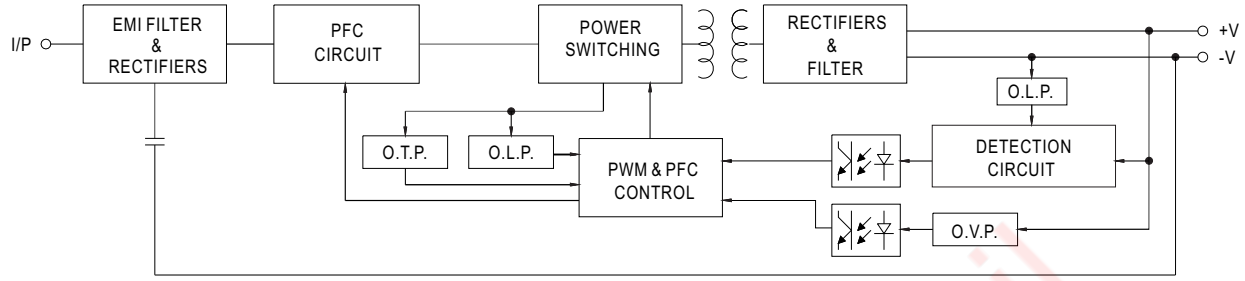
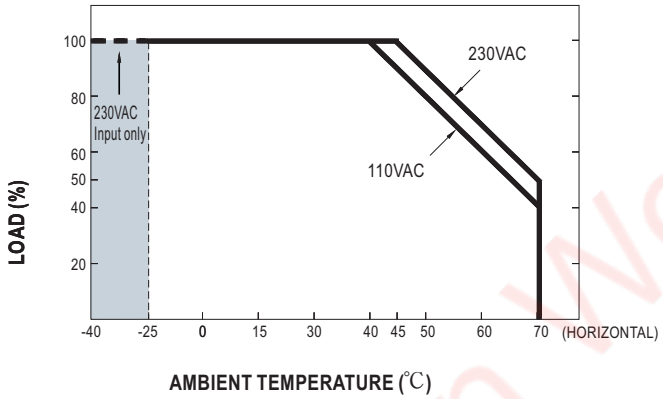
■ Block Diagram

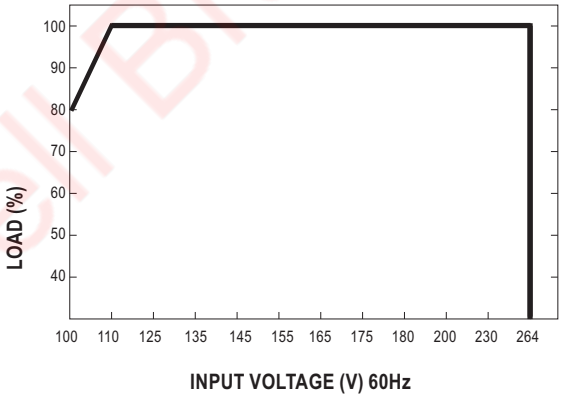
PFC fosc : 50~120KHz
PWM fosc : 60~130KHz



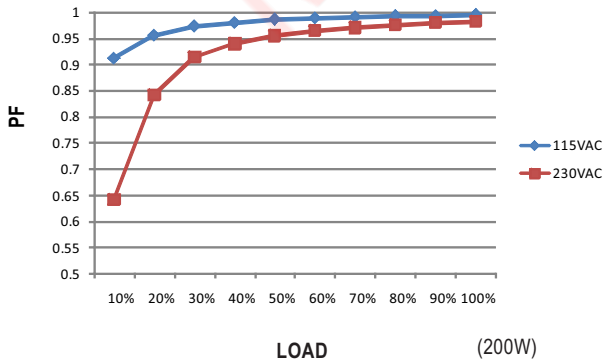
■ Derating Curve



■ Static Characteristics

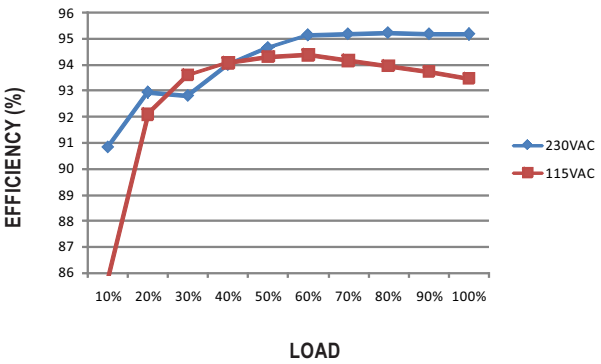


■ Power Factor Characteristic



■ EFFICIENCY vs LOAD (48V Model)

OWA-200 series possess superior working efficiency that up to 94% can be reached in field applications.



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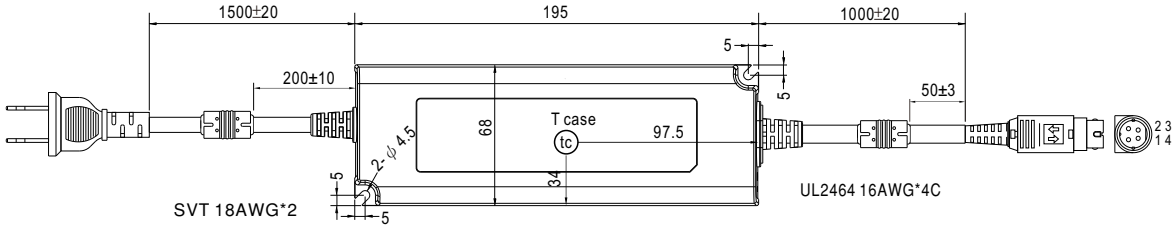
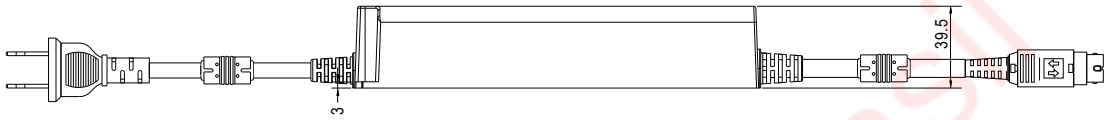
■ Mechanical Specification

Case No. PWM-200 Unit:mm

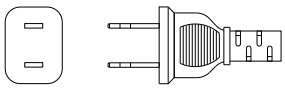


• tc : Max. Case Temperature



■ Input Plug Type

All models : NEMA 1-15p male plug



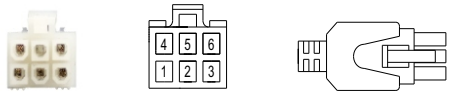
■ DC output plug

◎ Standard plug:

KYCON KPPX-4P equivalent	Type No.	Pin Assignment		
		PIN No.	Output	
 KYCON KPPX-4P equivalent	R7B	1	+Vo	Available for all model (Current rating: 15A max.)
		2	-Vo	
		3	-Vo	
		4	+Vo	

◎ Optional DC plug:

Tuning Fork Style	Type No.	A OD	B ID	C L	Adaptation model
 (Straight)	P1J	5.5	2.1	11.0	Available for 36V/48V/54V (Current rating: 7.5A max.)
	P1M	5.5	2.5	11.0	

MOLEX 39-01-2060 (4.2mm) equivalent	Type No.	Pin Assignment		
		PIN No.	Output	
 FG not connected to output connector	C6P	1	+Vo	Available for all model (Current rating: 15A max.)
		2	+Vo	
		3	+Vo	
		4	-Vo	
		5	-Vo	
		6	-Vo	

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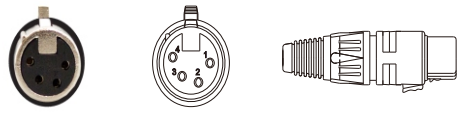
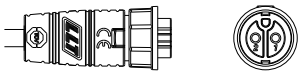
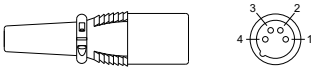
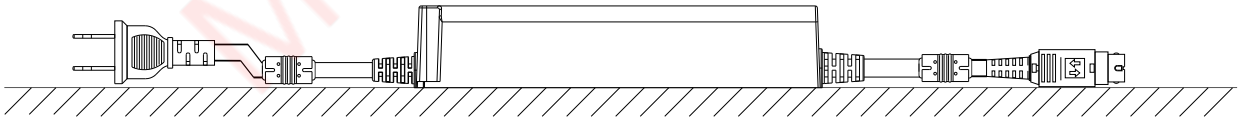
NEUTRIK XLR NC4FX equivalent	Type No.	Pin Assignment		
		PIN No.	Output	
	MIC4	1	+Vo	Available for all model (Current rating: 15A max.)
		2	+Vo	
		3	-Vo	
		4	-Vo	
LLT-M19-20002F307 equivalent	**Type No.**	**Pin Assignment**		
		PIN No.	Output	
	M19	1	+Vo	Available for all model (Current rating: 15A max.)
		2	-Vo	
DW-M15-02F equivalent	**Type No.**	**Pin Assignment**		
		PIN No.	Output	
	M15	1	+Vo	Available for 20V/24V/36V/48V/54V (Current rating: 10A max.)
		2	-Vo	
XLR4P, NEUTRIK NC4MX equivalent	**Type No.**	**Pin Assignment**		
		PIN No.	Output	
	XLR4P	1	+Vo	Available for all model (Current rating: 15A max.)
		2	+Vo	
		3	-Vo	
		4	-Vo	

※ For details, please contact MEAN WELL.

■ Recommend Mounting Direction



■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html

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