60W Single Output Moistureproof Adaptor

OWA-60U series

User's Manual



UL8750 (for 42V,48V,54V) c UL us UL8750 (except for 42V,48V,54V) FC VI IP67 (for power body)

Features

- Universal AC input / Full range (up to 264VAC)
- High efficiency up to 91%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Class Ⅱ power unit, no FG
- Class 2 power unit
- Fully isolated plastic case
- Fanless design, cooling by free air convection
- No load power consumption <0.15W
- Comply with EISA 2007 DoE and NRCan
- UL LISTED, suitable for dry and damp locations
- Various DC plug quick adapter accessory available
  (Plug kit sold sperately, please refer to : https://www.meanwell.com/upload/pdf/DC_plug.pdf)
- 5 years warranty

Applications

- Indoor LED lighting
- LED decorative lighting
- LED office lighting
- General electronic products in dusty or humid environment

GTIN CODE

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

Description

OWA-60U is one 60W single-output external LED power supply series. Pairing the North American type of AC plug and the prevailing DC connectors, OWA-60U, working like an adaptor, simplifies the connection with LED lighting fixtures without extra wiring efforts. 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-60U 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 91%, OWA-60U is cooled by free air convection; the working temperature ranges from -35℃ to +70℃.

Model Encoding

OWA - 60U - 12

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

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SPECIFICATION

MODEL			OWA-60U-12	OWA-60U-15	OWA-60U-20	OWA-60U-24	OWA-60U-30	OWA-60U-36	OWA-60U-42	OWA-60U-48	OWA-60U-54
OUTPUT	DC VOLTAGE		12V	15V	20V	24V	30V	36V	42V	48V	54V
	CONSTANT CURRENT REGION		6 ~ 12V	7.5 ~ 15V	10 ~ 20V	12 ~ 24V	15 ~ 30V	18 ~ 36V	21 ~ 42V	24 ~ 48V	27 ~ 54V
	RATED CURRENT		5A	4A	3A	2.5A	2A	1.67A	1.5A	1.25A	1.12A
	RATED POWER		60W	60W	60W	60W	60W	60.12W	63W	60W	60.48W
	RIPPLE & NOISE (max.) Note.2		150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	250mVp-p	250mVp-p	350mVp-p
	VOLTAGE TOLERANCE Note.3		±4.0%	±4.0%	±4.0%	±3.0%	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION		±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION		±1.5%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME Note.4		500ms, 80ms/230VAC 1000ms, 80ms/115VAC at 95% load								
	HOLD UP TIME (Typ.)		10ms at full load 115VAC / 230VAC								
INPUT	VOLTAGE RANGE		90 ~ 264VAC 127 ~ 370VDC								
	FREQUENCY RANGE		47 ~ 63Hz								
	EFFICIENCY (Typ.)	115VAC	87%	88%	88%	88.5%	88.5%	88.5%	88.5%	88.5%	89%
		230VAC	88%	89%	89%	90%	90%	90%	90%	91%	91%
	AC CURRENT (Typ.)		1.2A / 115VAC 0.7A / 230VAC								
	INRUSH CURRENT (Typ.)		COLD START 35A(twidth=750μs measured at 50% Ipeak) at 115VAC COLD START 65A(twidth=750μs measured at 50% Ipeak) at 230VAC								
	MAX. No. of PSUs on 16A CIRCUIT BREAKER		2 units (circuit breaker of type B) / 4 units (circuit breaker of type C) at 230VAC								
	LEAKAGE CURRENT		<0.25mA / 240VAC								
PROTECTION	OVER CURRENT		95 ~ 108%								
			Protection type : Constant current limiting, recovers automatically after fault condition is removed								
	SHORT CIRCUIT		Hiccup mode, recovers automatically after fault condition is removed								
	OVER VOLTAGE		14 ~ 16V	17.5 ~ 23V	23 ~ 27V	28 ~ 34V	34 ~ 40V	41 ~ 50V	46 ~ 54V	53 ~ 62V	58 ~ 66V
			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.		-35 ~ +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		UL8750 listed; CSA C22.2 No.250.13-12(except for 42V,48V,54V); IP67 approved for power body								
	WITHSTAND VOLTAGE		I/P-O/P:3.75KVAC								
	ISOLATION RESISTANCE		I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH								
	EMC EMISSION		Compliance to FCC Part15								
OTHERS	MTBF		4386.2K hrs min. Telcordia SR-332 (Bellcore) 522.9K hrs min. MIL-HDBK-217F (25℃)								
	DIMENSION		130*53*35mm								
	PACKING		0.41Kg; 16pcs/9.5Kg/0.85CUFT								

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.

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

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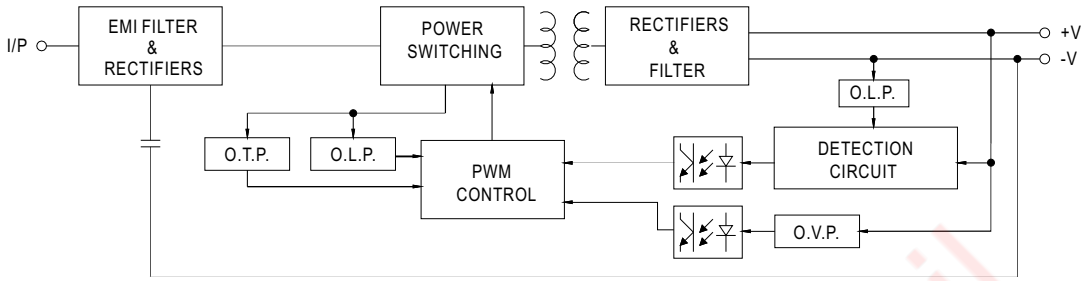
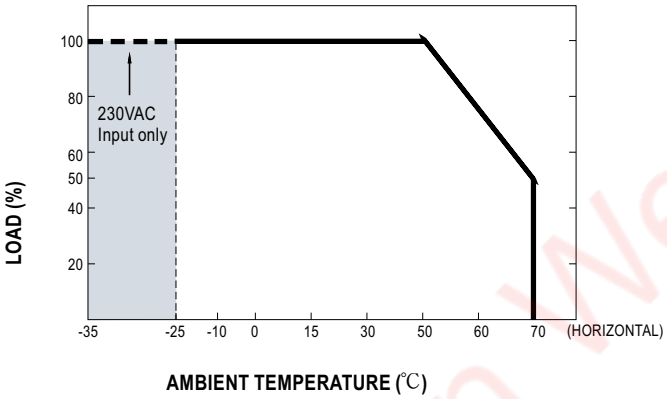
■ Block Diagram

PWM fosc : 25~67KHz

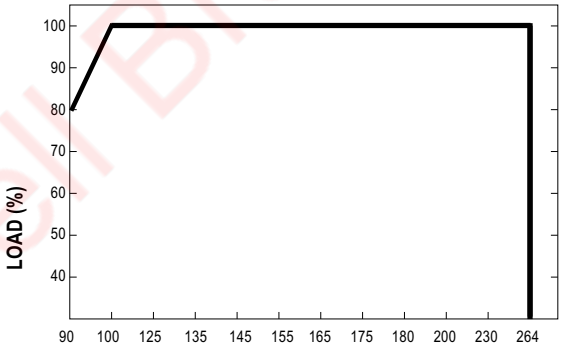


■ Derating Curve



AMBIENT TEMPERATURE (℃)

■ Static Characteristics



INPUT VOLTAGE (V) 60Hz

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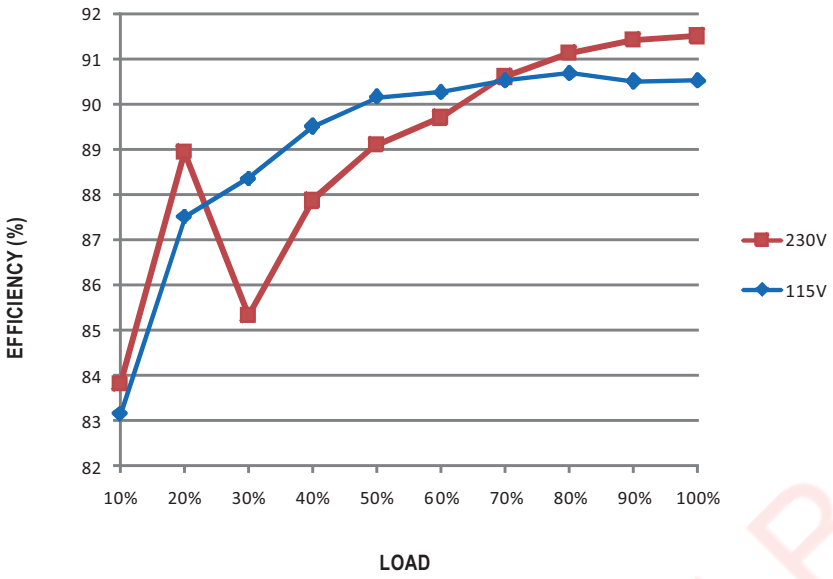
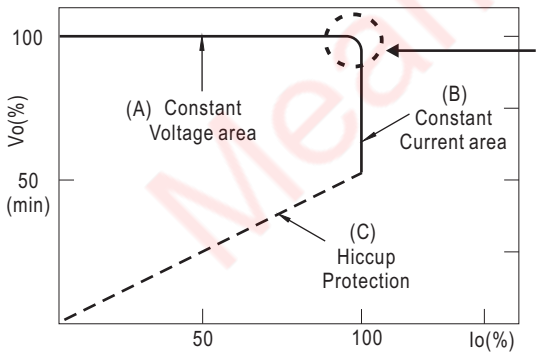
■ EFFICIENCY vs LOAD (48V Model)

OWA-60U series possess superior working efficiency that up to 91% can be reached in field applications.



■ DRIVING METHODS OF LED MODULE

There are two major kinds of LED drive method, "direct drive" and "with LED driver".
A typical LED power supply may either work in "constant voltage mode (CV)" or "constant current mode (CC)" to drive the LEDs.
Mean Well's LED power supply with CV+ CC characteristic can be operated at both CV mode (with LED driver, at area (A) and CC mode (direct drive, at area (B).



Typical LED power supply I-V curve

In the constant current region, the highest voltage at the output of the driver depends on the configuration of the end systems.
Should there be any compatibility issues, please contact MEAN WELL.

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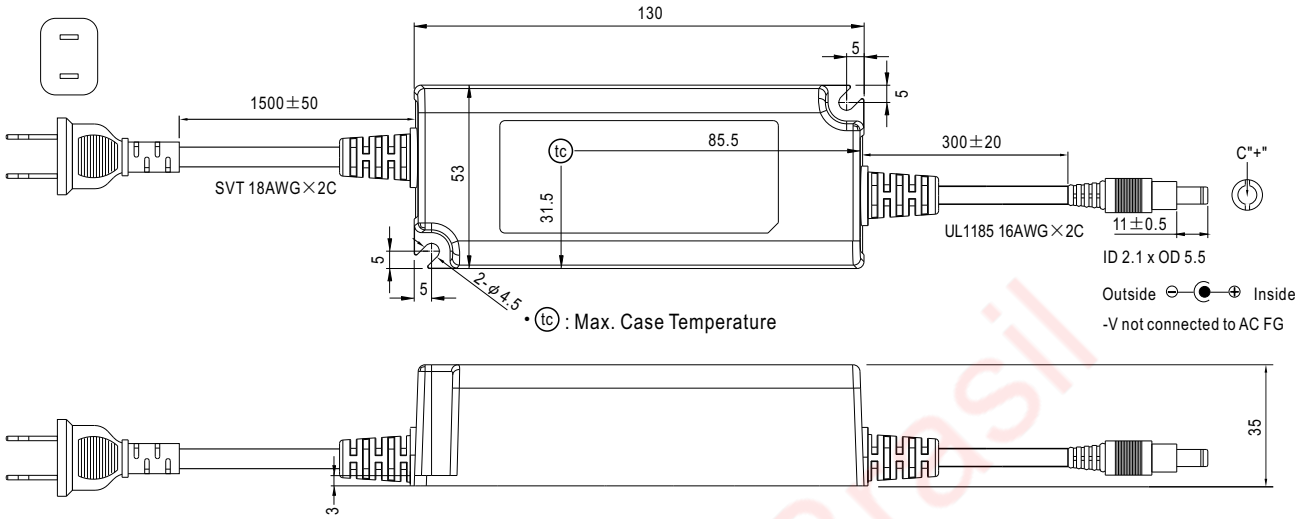
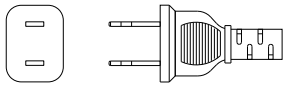
■ Mechanical Specification

CASE NO.: OWA-60 Unit:mm



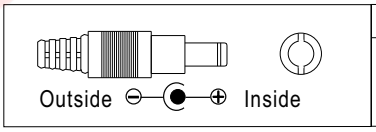
■ Input Plug Type

All models : NEMA 1-15p male plug



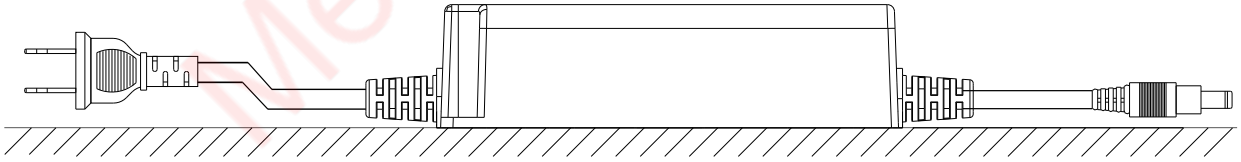
■ Output Plug Assignment

All models : 2.1φ x 5.5φ x 11 mm, center +, tuning fork type



PIN NO.	OUTPUT
CENTER	+V

■ Recommend Mounting Direction



■ Installation Manual

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

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