



BS EN/EN60335-1
BS EN/EN61558-1,2-16

■ Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 91%
- No load power consumption<0.15W
- Energy efficiency Level VI
- Comply with EU ErP and meet CoC Version 5
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Class II power unit, no FG
- Fanless design, cooling by free air convection
- 5 years warranty

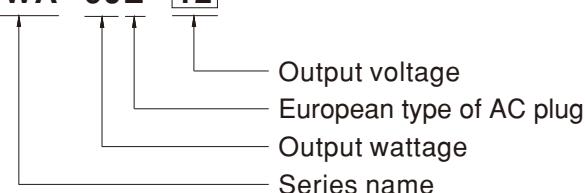
■ Description

OWA-90E is a 90W AC/DC, class II (without earth pin) external power supply series pinpointing the moistureproof feature. The fully-potted silicone inside the plastic enclosure enhances the heat dissipation; it also benefits that the OWA-90E is approved for IP67 level so that this series specializes the application in which the damp, humidity or dust resistance is needed for the external power supply. OWA-90E follows the latest energy efficiency demand, and is compliant with EU ErP and meets Code of Conduct(CoC) Version 5; the no load power consumption is less than 0.15W. It is certified with BS EN/EN 61558-2-16; moreover, the compliance to BS EN/EN 60335-1 for selected models can greatly simplify the system design such as household appliances.

OWA-90E adopts the universal input range from 90VAC to 264VAC, and incorporates a built-in PFC function. With the working efficiency up to 91%, OWA-90E is cooled by free air convection; the working temperature ranges from -40°C to +70°C.

■ Model Encoding

OWA - 90E - 12



■ Applications

- Robotic lawn mower
- Household appliance
- Battery charging
- General electronic products in dusty or humid environment



90W Single Output Moistureproof Adaptor

OWA-90E series

SPECIFICATION

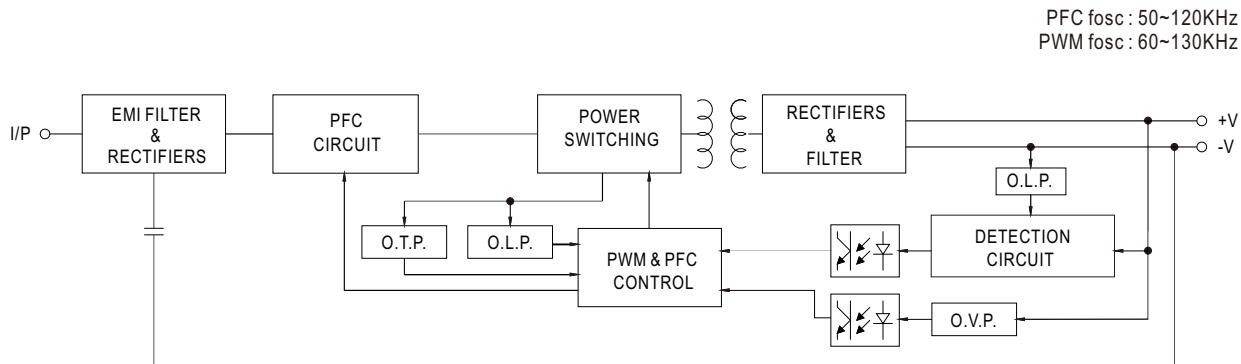
MODEL	OWA-90E-12	OWA-90E-15	OWA-90E-20	OWA-90E-24	OWA-90E-30	OWA-90E-36	OWA-90E-42	OWA-90E-48	OWA-90E-54
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V
	RATED CURRENT	7.5A	6A	4.5A	3.75A	3A	2.5A	2.15A	1.88A
	RATED POWER	90W	90W	90W	90W	90W	90.3W	90.24W	90.18W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p	150mVp-p	150mVp-p	200mVp-p	200mVp-p	250mVp-p	250mVp-p
	VOLTAGE TOLERANCE Note.3	±4.0%	±4.0%	±4.0%	±3.0%	±3.0%	±2.0%	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	LOAD REGULATION	±1.5%	±1.0%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%
	SETUP, RISE TIME Note.4	500ms, 80ms at 95% load		115VAC / 230VAC					
INPUT	HOLD UP TIME (Typ.)	16ms at full load		115VAC / 230VAC					
	VOLTAGE RANGE	90 ~ 264VAC		127 ~ 370VDC					
	FREQUENCY RANGE	47 ~ 63Hz							
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.96/230VAC at full load							
	EFFICIENCY (Typ.)	89%	90%	90%	90%	90%	91%	91%	91%
	AC CURRENT (Typ.)	0.95A / 115VAC		0.5A / 230VAC					
	INRUSH CURRENT (Typ.)	COLD START 60A(twidth=550μs measured at 50% Ipeak) at 230VAC							
PROTECTION	LEAKAGE CURRENT	<0.25mA / 240VAC							
	OVERLOAD	105 ~ 115%							
		Protection type : Hiccup mode, recovers automatically after fault condition is removed							
	SHORT CIRCUIT	Hiccup mode, recovers automatically after fault condition is removed							
	OVER VOLTAGE	15 ~ 17V	17.5 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 40V	41 ~ 46V	46 ~ 54V	54 ~ 60V
ENVIRONMENT	OVER TEMPERATURE	Protection type : Shut down o/p voltage, re-power on to recover							
	WORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")							
	WORKING HUMIDITY	20 ~ 95% RH non-condensing							
	STORAGE TEMP., HUMIDITY	-40 ~ +80°C, 10 ~ 95% RH							
	TEMP. COEFFICIENT	±0.03%/°C (0 ~ 50°C)							
SAFETY & EMC	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes							
	SAFETY STANDARDS	BS EN/EN61558-1,-2-16 listed; BS EN/EN60335-1 listed(except for OWA-90E-42,48,54); EAC TP TC 004,IP67 approved							
	WITHSTAND VOLTAGE	I/P-O/P:3.75KVAC							
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH							
	EMC EMISSION	Compliance to BS EN/EN55032 (CISPR32) Class B, BS EN/EN55014-1, BS EN/EN61000-3-2,-3;EAC TP TC 020							
OTHERS	EMC IMMUNITY	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN55014-2, light industry level (surge L- N : 2KV), criteria A;EAC TP TC 020							
	MTBF	292.8K hrs min. MIL-HDBK-217F (25°C)							
	DIMENSION	171*63*37.5mm							
NOTE	PACKING	0.92Kg; 16pcs/15.7Kg/1.01CUFT							
	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C 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								



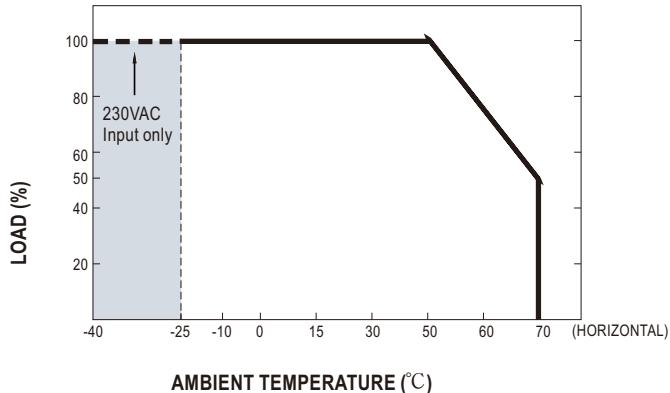
90W Single Output Moistureproof Adaptor

OWA-90E series

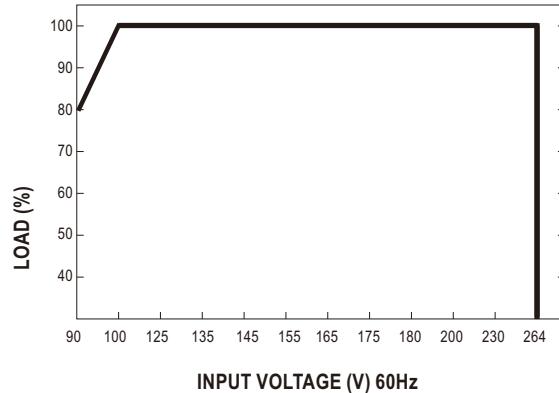
■ Block Diagram



■ Derating Curve

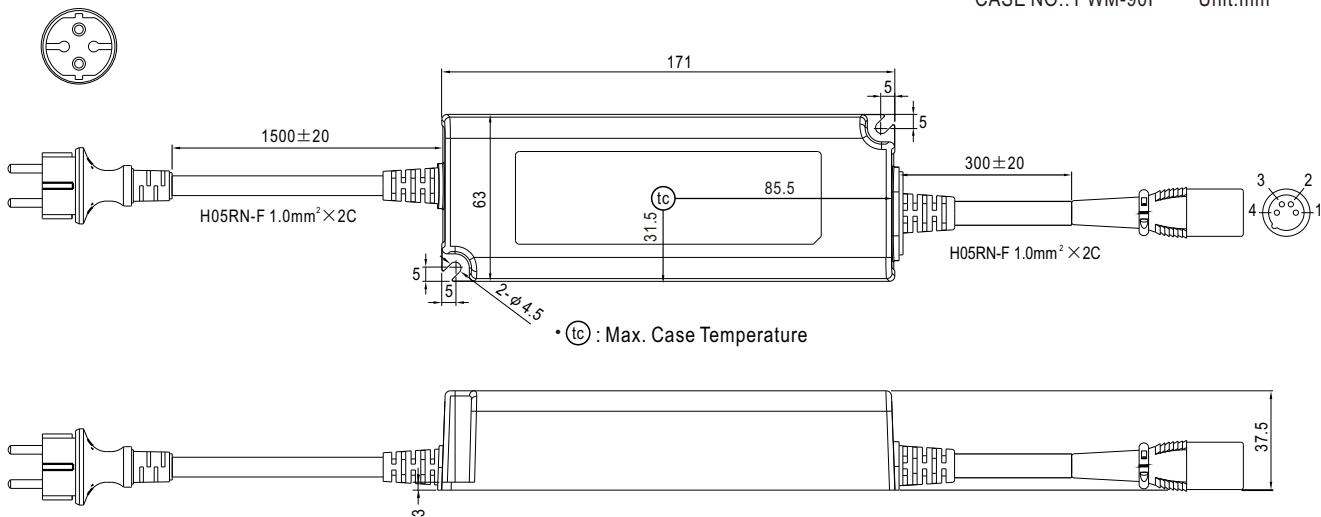


■ Static Characteristics

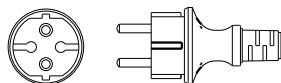


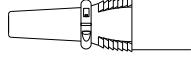
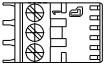
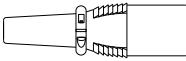
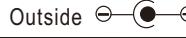
■ Mechanical Specification

CASE NO.: PWM-90P Unit:mm


■ Input Plug Type

All standard models : CEE 7/7


■ Output Plug Assignment

Model Category	Plug Description	Plug Picture	PIN NO.	OUTPUT
For standard model	XLR 4P, NEUTRIK NC4MX, or equivalent		1,2	+V
			3,4	-V
For optional model	Lumberg 3611 03, or equivalent		1	+V
			2	floated
			3	-V
For optional model	XLR 3P, NEUTRIK NC3MX, or equivalent		1	+V
			2,3	-V
For optional model	CHOGORI 22002411-01 or equivalent		1	+V
			2	-V
For optional model	Unicable UT-D170F4-2P or equivalent		1	+V
			2	-V
For optional model	Unicable UT-D224-2P or equivalent		1	+V
			2	-V
For optional model	2.1φ x 5.5φ x 11 mm, center +, tuning fork type		CENTER	+V
		Outside  Inside		

※ For details, please contact MEAN WELL.

■ Installation Manual

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