







- 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

Applications

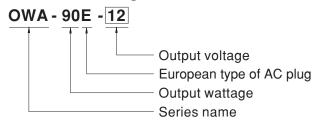
- · Robotic lawn mower
- · Household appliance
- · Battery charging
- General electronic products in dusty or humid environment

Description

OWA-90E is a 90W AC/DC, class II (without earth pin) external power supply series pinpointing the moisture proof 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 EN 61558-2-16; moreover, the compliance to 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 $^{\circ}$ C to +70 $^{\circ}$ C.

■ Model Encoding





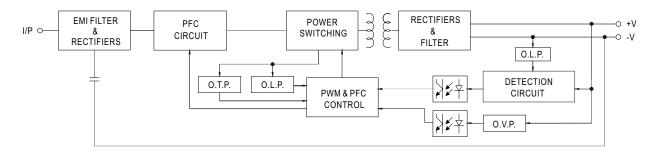
SPECIFICATION

C VOLTAGE ATED CURRENT ATED POWER PPLE & NOISE (max.) Note.2 DITAGE TOLERANCE Note.3 NE REGULATION DAD REGULATION ETUP, RISE TIME Note.4 OLD UP TIME (Typ.) DITAGE RANGE REQUENCY RANGE DWER FACTOR (Typ.) C CURRENT (Typ.) EXIST CURRENT VERLOAD HORT CIRCUIT	±4.0% ±0.5% ±1.5% 500ms, 80m 16ms at full I 90 ~ 264VAC 47 ~ 63Hz PF>0.98/115 89% 0.95A / 115\COLD STAR <0.25mA / 2 105 ~ 115% Protection ty Hiccup mode 15 ~ 17V	115V/AC 127 ~ 127	96/230VAC a 96/230VAC a 90% 6A / 230VAC =550µs measi mode, recove	t full load 90% ured at 50% ly	•	t condition is	2.15A 90.3W 250mVp-p ±1.0% ±0.5% ±0.5%	48V 1.88A 90.24W 250mVp-p ±1.0% ±0.5% ±0.5%	54V 1.67A 90.18W 350mVp-p ±1.0% ±0.5% ±0.5%								
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OLD UP TIME (Typ.) OLTAGE RANGE REQUENCY RANGE OWER FACTOR (Typ.) FFICIENCY (Typ.) C CURRENT (Typ.) RUSH CURRENT (Typ.) EAKAGE CURRENT VERLOAD HORT CIRCUIT	16ms at full I 90 ~ 264VAC 47 ~ 63Hz PF>0.98/115 89% 0.95A / 115V COLD STAR <0.25mA / 2 105 ~ 115% Protection ty Hiccup mode 15 ~ 17V	115 V/C 127 ~ 127	96/230VAC a 96/230VAC a 90% 6A / 230VAC =550µs measi mode, recove	t full load 90% ured at 50% ly	peak) at 230V	AC		91%	91%								
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REQUENCY RANGE OWER FACTOR (Typ.) FFICIENCY (Typ.) C CURRENT (Typ.) RUSH CURRENT (Typ.) EAKAGE CURRENT VERLOAD HORT CIRCUIT	47 ~ 63Hz PF>0.98/115 89% 0.95A / 115\ COLD STAR <0.25mA / 2 105 ~ 115% Protection ty Hiccup mode 15 ~ 17V	90% /AC 0.5 T 60A(twidth: 40VAC /pe : Hiccup i	96/230VAC a 90% 6A / 230VAC =550µs measi mode, recove	90% ured at 50% lp	peak) at 230V	AC		91%	91%								
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FFICIENCY (Typ.) C CURRENT (Typ.) RUSH CURRENT (Typ.) EAKAGE CURRENT VERLOAD HORT CIRCUIT	89% 0.95A / 115\ COLD STAR <0.25mA / 2 105 ~ 115% Protection ty Hiccup mode 15 ~ 17V	90% /AC 0.5 T 60A(twidth: 40VAC //Pe : Hiccup is e, recovers a	90% 6A / 230VAC =550µs measo mode, recove	90% ured at 50% lp	peak) at 230V	AC		91%	91%								
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VERLOAD HORT CIRCUIT	105 ~ 115% Protection ty Hiccup mode 15 ~ 17V	ype : Hiccup i	utomatically		•		removed										
HORT CIRCUIT	Protection ty Hiccup mode 15 ~ 17V	e, recovers a	utomatically		•		removed										
HORT CIRCUIT	Hiccup mode	e, recovers a	utomatically		•		removed										
	15 ~ 17V			after fault cor	ndition is rem	ovod			Protection type : Hiccup mode, recovers automatically after fault condition is removed								
VER VOLTAGE		17.5 ~ 21V	22 271/		Hiccup mode, recovers automatically after fault condition is removed												
VER VOLTAGE	D44:4		23~21V	28 ~ 34V	34 ~ 40V	41 ~ 46V	46 ~ 54V	54 ~ 60V	59 ~ 66V								
	Protection type : Shut down o/p voltage, re-power on to recover																
VER TEMPERATURE	Shut down o	/p voltage, re	e-power on to	recover													
ORKING TEMP.	-40 ~ +70°C (Refer to "Derating Curve")																
ORKING HUMIDITY	20 ~ 95% RH non-condensing																
TORAGE TEMP., HUMIDITY	-40 ~ +80°C	, 10 ~ 95% R	RH														
TEMP. COEFFICIENT $\pm 0.03\%$ °C $(0 \sim 50$ °C)																	
BRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes																
AFETY STANDARDS	EN61558-1,-2-16 listed; EN60335-1 listed(except for OWA-90E-42,48,54); IP67 approved																
ITHSTAND VOLTAGE	I/P-O/P:3.75KVAC																
ISOLATION RESISTANCE I/P-O/P:100M Ohms / 500VDC / 25°C/ 70% RH																	
MC EMISSION	Compliance to EN55022 (CISPR22) Class B, EN55014-1, EN61000-3-2,-3																
MC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014-2, light industry level (surge L- N : 2KV), criteria A																
TBF	292.8K hrs min. MIL-HDBK-217F (25°C)																
MENSION	171*63*37.5mm																
ACKING	0.92Kg; 16pcs/15.7Kg/1.01CUFT																
. Ripple & noise are mea	asured at 20	MHz of ban	ndwidth by u	sing a 12" tv	wisted pair-v												
VI	C EMISSION C IMMUNITY BF MENSION CKING All parameters NOT sp Ripple & noise are me capacitor.	C EMISSION Compliance C IMMUNITY Compliance BF 292.8K hrs in MENSION 171*63*37.5 CKING 0.92Kg; 16p All parameters NOT specially men Ripple & noise are measured at 20 capacitor.	C EMISSION C IMMUNITY C COMPliance to EN55022 C IMMUNITY C COMPliance to EN61000 C EMISSION C COMPLIANCE TO EN61000 C C IMMUNITY C COMPLIANCE TO EN61000 C C IMMUNITY C COMPLIANCE TO EN61000 C C IMMUNITY C C C IMMUNITY C C IMMUNITY C C C IMMUNITY C C IMMUNITY C C C IMMUNITY C C C IMMUNITY C	C EMISSION C IMMUNITY Compliance to EN61000-4-2,3,4,5,6,8 EF 292.8K hrs min. MIL-HDBK-217F (3000) MENSION CKING 0.92Kg; 16pcs/15.7Kg/1.01CUFT All parameters NOT specially mentioned are measured at Ripple & noise are measured at 20MHz of bandwidth by u capacitor.	C EMISSION C IMMUNITY C COMPLIANCE DENSION C COMPLIANCE TO EN61000-4-2,3,4,5,6,8,11, EN550 C IMMUNITY C COMPLIANCE TO EN61000-4-2,3,4,5,6,8,11, EN550 DENSION CKING 0.92Kg; 16pcs/15.7Kg/1.01CUFT All parameters NOT specially mentioned are measured at 230VAC inprince in the property of th	C EMISSION C COMPliance to EN55022 (CISPR22) Class B, EN55014-1, EN61 C IMMUNITY C COMPLIANCE TO EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014 BF 292.8K hrs min. MIL-HDBK-217F (25°C) MENSION 171*63*37.5mm CKING 0.92Kg; 16pcs/15.7Kg/1.01CUFT All parameters NOT specially mentioned are measured at 230VAC input, rated loa Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-w capacitor.	C EMISSION C COMPliance to EN55022 (CISPR22) Class B, EN55014-1, EN61000-3-2,-3 C IMMUNITY C COMPLIANCE to EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014-2, light industrial ind	C EMISSION C Compliance to EN55022 (CISPR22) Class B, EN55014-1, EN61000-3-2,-3 C IMMUNITY C Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014-2, light industry level (subset of the compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014-2, light industry level (subset of the compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014-2, light industry level (subset of the complex comple	C EMISSION C COMPliance to EN55022 (CISPR22) Class B, EN55014-1, EN61000-3-2,-3 C IMMUNITY C COMPliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN55014-2, light industry level (surge L- N : 2K') BF 292.8K hrs min. MIL-HDBK-217F (25°C) MENSION 171*63*37.5mm CKING 0.92Kg; 16pcs/15.7Kg/1.01CUFT All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf p								



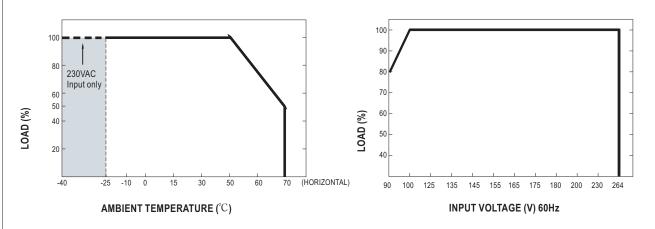
■ Block Diagram

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

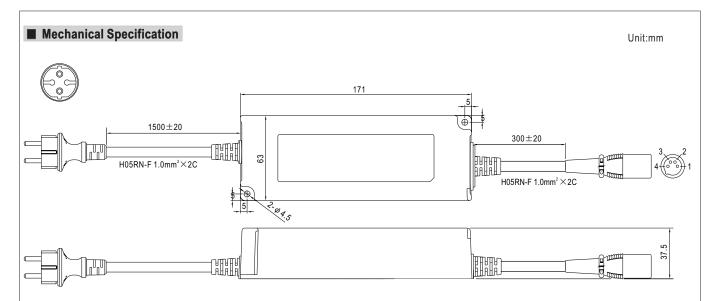


■ Derating Curve

■ Static Characteristics

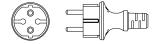






■ Input Plug Type

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,		3 2 4 ((0 0) 1	1,2	+V
	or equivalent	- Gunn		3,4	-V
For optional model	Lumberg 3611 03, or equivalent	Reyair	1 1 2 2 2 2 3 3 3 3 3 3 3 3 3 3 3 3 3 3	1	+V
				2	floated
				3	-V
For optional model	XLR 3P,NEUTRIK NC3MX, or equivalent		3 0 0 1	1	+V
				2,3	-V
For optional model	CHOGORI 22002411-01 or equivalent		00	1	+V
				2	-V
For optional model	Unicable UT-D170F4-2P		10	1	+V
	or equivalent			2	-V
For optional model	Unicable UT-D224-2P			1	+V
	or equivalent			2	-V
For optional model	2.1φ x 5.5φ x 11 mm, center +,				.,
	tuning fork type	Outside ⊖ ⊕ ⊕ In	side	CENTER	+V

[※] For details, please contact MEAN WELL.

■ Installation Manual

 $Please\ refer\ to: http://www.meanwell.com/webnet/search/InstallationSearch.html$

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Mean Well:

<u>OWA-90E-15</u> <u>OWA-90E-20</u> <u>OWA-90E-42</u> <u>OWA-90E-30</u> <u>OWA-90E-48</u> <u>OWA-90E-54</u> <u>OWA-90E-36</u> <u>OWA-90E-12</u> OWA-90E-24