



### ■ Features

- Universal AC input / Full range
- Built-in active PFC function
- High efficiency up to 91%
- Protections: Short circuit / Over current / Over voltage / Over temperature
- Fanless design, cooling by free air convection
- Cooling by free air convection
- No load power consumption <0.15W
- ErP step 2
- Optional Schuko EU plug with IP44
- 5 years warranty

### ■ Applications

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

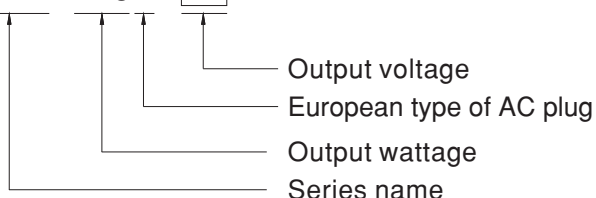
### ■ Description

OWA-120E is a 120W 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-120E achieves IP67 level so that this series specializes the application in which the damp, humidity or dust resistance is needed for the external power supply. The no load power consumption is less than 0.15W, following the major demand for adaptors concerning the energy efficiency in Europe. Moreover, OWA-120E fits the applications requiring EN60335 such as household appliances, greatly simplifying the system design.

OWA-120E adopts the universal input range from 90VAC to 264VAC and incorporates a built-in PFC function. With the working efficiency up to 91%, OWA-120E is cooled by free air convection; the working temperature ranges from -40°C to +70°C.

### ■ Model Encoding

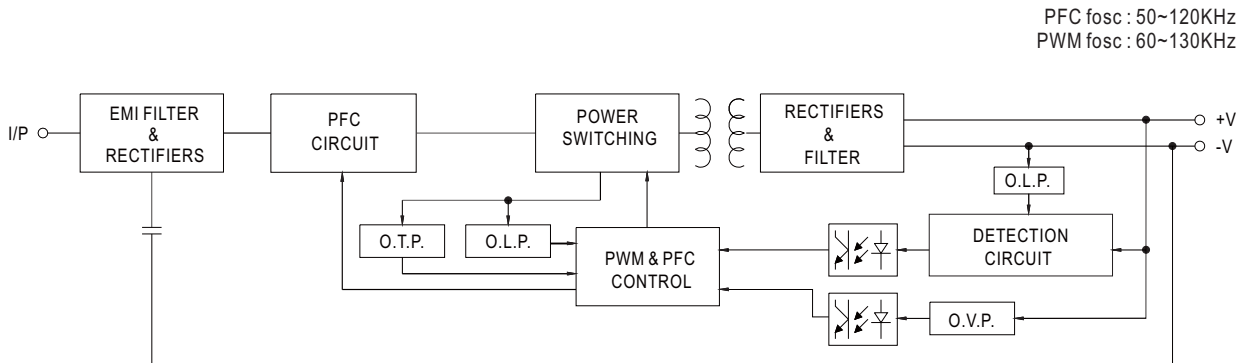
**OWA - 120E - 12**



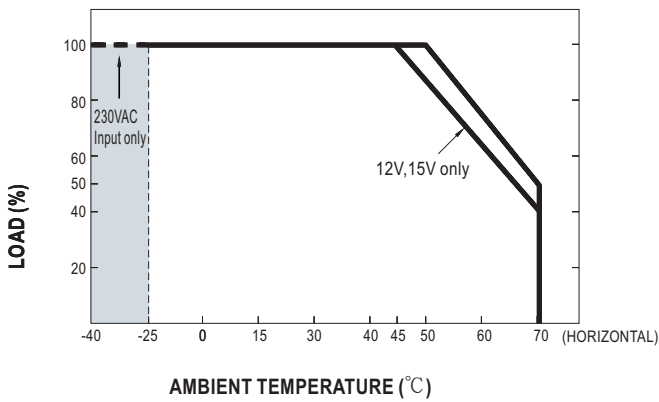
**SPECIFICATION**

MODEL		OWA-120E-12	OWA-120E-15	OWA-120E-20	OWA-120E-24	OWA-120E-30	OWA-120E-36	OWA-120E-42	OWA-120E-48	OWA-120E-54	
OUTPUT	DC VOLTAGE	12V	15V	20V	24V	30V	36V	42V	48V	54V	
	RATED CURRENT	10A	8A	6A	5A	4A	3.4A	2.9A	2.5A	2.3A	
	RATED POWER	120W	120W	120W	120W	120W	122.4W	121.8W	120W	124.2W	
	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%	±4.0%	±3.0%	±2.0%	±1.0%	±1.0%	±1.0%	
	LINE REGULATION	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	±0.5%	
	LOAD REGULATION	±2.0%	±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 230VAC / 115VAC									
	HOLD UP TIME (Typ.)	16ms at full load 230VAC / 115VAC									
INPUT	VOLTAGE RANGE	90 ~ 264VAC		127 ~ 370VDC							
	FREQUENCY RANGE	47 ~ 63Hz									
	POWER FACTOR (Typ.)	PF>0.97/115VAC, PF>0.96/230VAC at full load									
	EFFICIENCY (Typ.)	89%	89.5%	90%	90.5%	90%	90.5%	90.5%	91%	91%	
	AC CURRENT (Typ.)	1.3A / 115VAC		0.65A / 230VAC							
	INRUSH CURRENT (Typ.)	COLD START 60A(twidth=420µs measured at 50% Ipeak) at 230VAC									
	LEAKAGE CURRENT	<0.25mA / 240VAC									
PROTECTION	OVER CURRENT	105 ~ 115% 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	15 ~ 17V	17.5 ~ 21V	23 ~ 27V	28 ~ 34V	34 ~ 40V	41 ~ 46V	46 ~ 54V	54 ~ 60V	59 ~ 66V	
	OVER TEMPERATURE	Shut down o/p voltage, re-power on to recover									
ENVIRONMENT	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)									
	VIBRATION	10 ~ 500Hz, 5G 12min./1cycle, period for 72min. each along X, Y, Z axes									
SAFETY & EMC	SAFETY STANDARDS	EN61558-1,-2-16 listed, EN60335-1 listed, 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 EN55022 (CISPR22) Class B, EN55014-1, EN61000-3-2,-3									
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55014-2, EN55024, light industry level (surge L-N : 2KV), criteria A									
OTHERS	MTBF	294.3K hrs min. MIL-HDBK-217F (25°C)									
	DIMENSION	191*63*37.5mm									
	PACKING	1.15Kg; 12pcs/14.8Kg/0.82CUFT									
NOTE	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.										

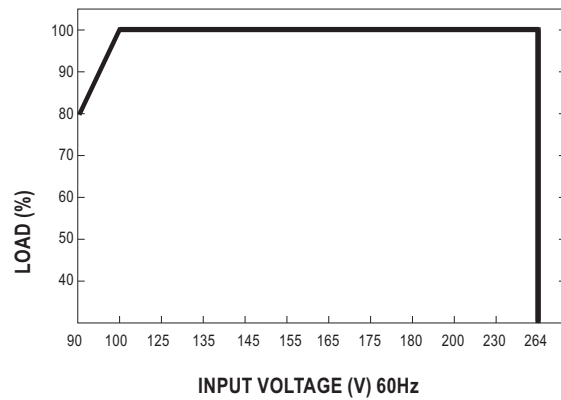
## Block Diagram



## Derating Curve

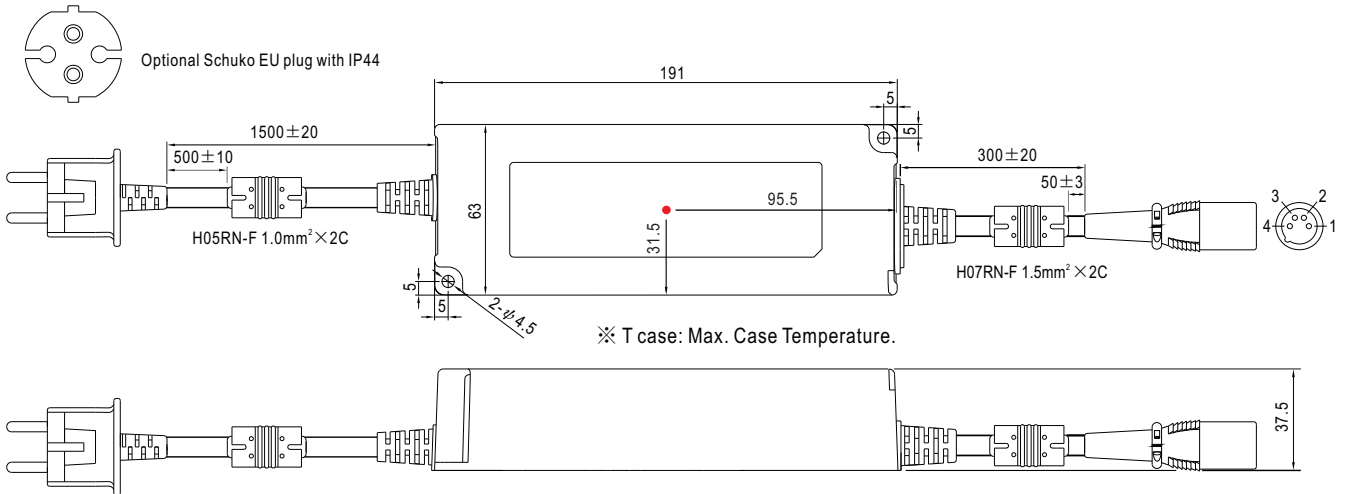


## Static Characteristics



■ Mechanical Specification

Case No. PWM-120 Unit:mm

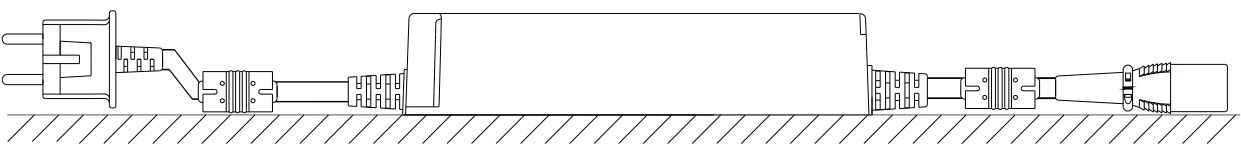


■ Plug Assignment

All models : Jingcheng GCA012-4P, or  
Neutrik NC4MX, or equivalent

	PIN NO.	OUTPUT
1,2	+V	
3,4	-V	

■ Recommend Mounting Direction



■ Installation Manual

Please refer to : <http://www.meanwell.com/webnet/search/InstallationSearch.html>