Features

- Input Voltage Range 85-305VAC
- No load power consumption<0.1W
- Isolation Class II
- UL/EN62368-1 Safety Approved
- 91.5% Efficiency
- Single Output 12-48V DC
- Protections: SCP, OLP, OVP
- Three years warranty

56YMR90-xx□ Series

90W Encapsulated AC/DC PCB Mount Power Supply

The 56YMR90-xx Series is a high-efficiency and standards-compliant 90W Encapsulated AC/DC PCB Mount Power Supply. Designed for use in applications such as industrial control and automation systems. This series is supplied with a Pin Connection or Screw Terminal input connection and supports input voltages of 85~305V AC 47-63Hz.

Model Number Information

56YMR	90	xx	□
Series Name	Rated Wattage	Output Voltage	**T:** Terminal Block **Blank:** PCB Mounting Style

Models

Model Number	Rated Power (W)	DC Voltage (V)	Rated Current (A)	Efficiency (%)	Max. Capacitive Load (uF)
56YMR90-12□	80.4	12	6.7	89.5	6800
56YMR90-15□	85.05	15	5.67	90.5	4500
56YMR90-24□	90	24	3.75	91	3000
56YMR90-48□	90.24	48	1.88	91.5	470

Input Specifications

Input Voltage	85-305VAC
Frequency Range	47-63Hz
AC Current	1.9A/115VAC 1.1A/230VAC 0.9A/277VAC
Inrush Current	Cold Start 100A/800us at 230VAC 50Hz Cold Start 40A/800us at 115VAC 50Hz
Leakage Current	<0.25mA/264VAC

Output Specifications

Voltage Tolerance	+2.5%
Line Regulation	+0.5%
Load Regulation	±1.0% 56YMR60-12 models +0.5% Other models
Setup,Rise,Hold up Time	0.5s,50ms,50ms/230VAC(at full load) 0.5s,50ms,12ms/115VAC(at full load)

Protection

Over Load	115~160%
	Hiccup mode, recovers automatically after fault condition is removed
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed.
Over Voltage	12.6 ~ 16.5V 15.75 ~ 24V 25.2 ~ 34V 50.4 ~ 65V
	Hiccup mode, recovers automatically after fault condition is removed.

Environmental Characteristics

Working Temp	-30 ~ +85℃(Full load can be operated at -30℃ to 50℃, while load should be reduced at 50℃ to 85℃ Refer to"Derating Curve".)
Working Humidity	20 ~ 90%RH Non-condensing
Storage Temp., Humidity	-40 ~ +85℃,10 ~ 95%RH Non-condensing
Temp. Coefficient	± 0.03%/(0 ~ 40℃)
Soldering Temperature	Wave soldering:265℃,5s(max.); Manual soldering:390℃,3s(max.)
Vibration	PCB Mounting: 10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes Terminal Blocks: 10 ~ 500Hz, 5G 10min./1cycle, period for 60min. each along X, Y, Z axes
MTBF	755.4Khrs min. MIL-HDBK-217F(25℃)
Over Voltage Category	OVC II; According to EN62368-1; altitude up to 2000 meters

Safety & EMC

Safety Standards	EN 62368-1, UL 62368-1		
Withstand Voltage	I/P-O/P: 3KVAC/1min		
Isolation Resistance	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH		
EMC Emission	Parameter	Standard	Test Level
	Conducted	BS EN/EN55032(CISPR32)	CLASS B
	Radiated	BS EN/EN55032(CISPR32)	CLASS B
	Harmonic Current	EN61000-3-2	CLASS A
	Voltage flicker	EN61000-3-3	.....
EMC Immunity	BS EN/EN55035, BS EN/EN61000-6-2		
	Parameter	Standard	Test Level
	ESD	EN61000-4-2	Level 3, 8KV air,Level 2, 4KV contact criteria B
	Radiated Susceptibility	EN61000-4-3	Level 3, criteria A
	EFT/Burest	EN61000-4-4	Level 3, criteria B
	Surge	EN61000-4-5	Level 3, 1KV/L-N, criteria B
	Conducted	EN61000-4-6	Level 3, criteria A
	Magnetic Field	EN61000-4-8	Level 4, criteria A
	Voltage Dips and interruptions	EN61000-4-11	＞ 95% dip 0.5 periods, 30% dip 25 periods＞95% interruptions 250 periods

Notes:

1. All parameters without special description are measured under the conditions of input 230VAC, rated load, ambient temperature 25 ° C, and ambient humidity less than 75%.
2. Ripple & noise are measured from peak to peak with a bandwidth limit of 20MHz(0.1uf and 47uf /50V parallel capacitor under DC output full load, AC nominal input 25 ℃ ambient temperature).
3. Tolerance: includes set up tolerance, line and load regulation.
4. Derating may be needed under low input voltages. Please check the derating curve for more details.
5. The power supply is considered a component which will be installed into the final equipment. The final equipment must be confirmed to meet EMC directives. For guidance on performing these EMC tests, please refer to “EMI testing of component power supplies."
6. The ambient temperature derating of 3.5℃/1000m is needed for operating altitude greater than 2000m(6500ft).

Dimensions & Weight

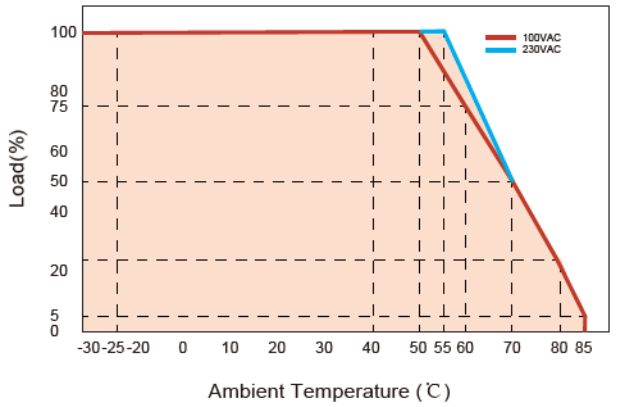
	Measurements
56YMR90-xx	87 × 52 x 30 mm
56YMR90-xxT	109.3 × 52.7 x 33.9 mm

Packaging

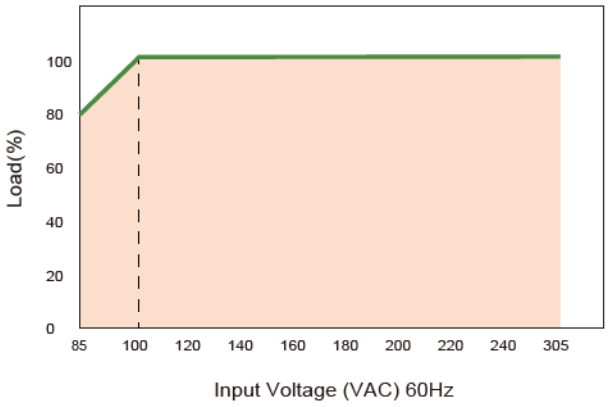
Carton Size	48×27.5x16cm 50pcs/Carton- 56YMR90-xx 31.5×24.5x22cm 50pcs/Carton- 56YMR90-xxT

Derating Curves

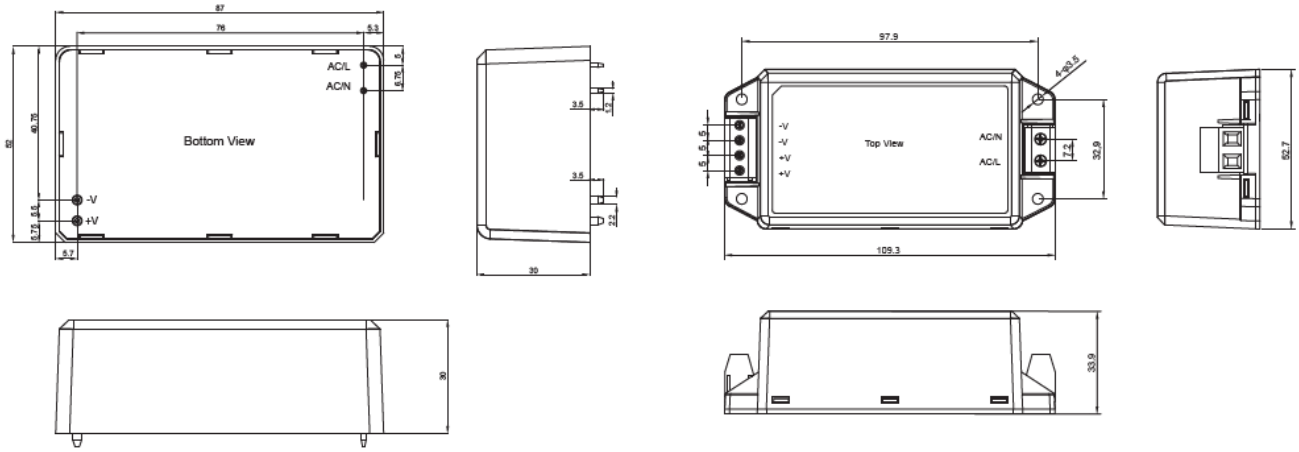
Derating Curve



Static Characteristics



Dimensions and Recommended Layout



Block Diagram