

# YSM60 SERIES 45W



YSM60 series is a 45W Smaller(87\*52\*30mm) AC-DC module power supply adopting the full range:90-264VAC input The series has extremely low no-load power consumption below 0.15W.High efficiency up to 90.5% to reduce power loss:

The series cost-effective,, high reliability,operates from-30 ~ 85°C.A variety of appearance sizes are available for easy installation and use.

These converters offer excellent EMC performance and meet international standards , ready to be soldered onto the PCB boards of Industrial design,household appliances, communication equipment, testing instruments and other electronic instruments

## Features



Universal Input: 90~264VAC



Compact Size Design



Low no-load power consumption



Low Ripple & Noise, high efficiency



Protection:Short Circuit/Over Current/  
Over Voltage

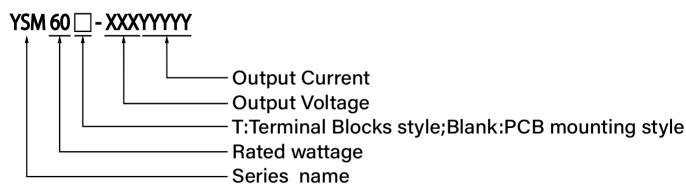


Three Years Warranty

### Model Information

Yingjiao Part Number	DC Voltage	Rated Current	Rated Power	Max.Capacitive Load
YSM60□-05008000	5V	8A	40W	6000uF
YSM60□-12003800	12V	3.8A	45.6W	4400uF
YSM60□-15003000	15V	3A	45W	3300uF
YSM60□-24001900	24V	1.9A	45.6W	1500uF
YSM60□-48000940	48V	0.94A	45.12W	470uF

### Model Encoding



### Input

VOLTAGE RANGE	90~264VAC	
FREQUENCY RANGE	47-63Hz	
NO LOAD POWER CONSUMPTION	0.15W MAX	
AVERAGE EFFICIENCY(Typ.)	83.5%	YSM60□-05008000
	87.5%	YSM60□-12003800
	88.5%	YSM60□-15003000
	89.5%	YSM60□-24001900
	90.5%	YSM60□-48000940
AC CURRENT(Typ.)	1.5A/115VAC	
	0.9A/230VAC	
INRUSH CURRENT(Typ.)	Cold Start 30A/115VAC	
	Cold Start 60A/230VAC	
LEAKAGE CURRENT	<0.25mA/264VAC,50Hz	

## Output

RIPPLE & NOISE(max.)	80mVp-p	YSM60□-05008000
	120mVp-p	YSM60□-12003800
	120mVp-p	YSM60□-15003000
	150mVp-p	YSM60□-24001900
	240mVp-p	YSM60□-48000940
VOLTAGE TOLERANCE	±2.5%	
LINE REGULATION	±0.5%	
LOAD REGULATION	±1.0%	YSM60□-05008000
	±1.0%	YSM60□-12003800
	±0.5%	YSM60□-15003000
	±0.5%	YSM60□-24001900
	±0.5%	YSM60□-48000940
SETUP,RISE TIME	200ms, 35ms/230VAC at full load	
	300ms, 35ms/115VAC at full load	
HOLD UP TIME (Typ.)	50ms/230VAC at full load	
	5ms/115VAC at full load	

## Protection

OVER CURRENT	115%-160% Rated Output current	
	Protection type: Hiccup mode, recovers automatically after current goes down	
SHORT CIRCUIT	Protection type: Hiccup mode, recovers automatically after fault condition is removed	
OVER VOLTAGE	YSM60□-05008000: 5.25 ~ 7.5V	
	YSM60□-12003800: 12.6 ~ 16.5V	
	YSM60□-15003000: 15.75 ~ 24V	
	YSM60□-24001900: 25.2 ~ 34V	
	YSM60□-48000940: 50.4 ~ 65V	
	Protection type: Shut off o/p voltage, clamping by zener diode	

## Environment

WORKING TEMP.	-30 °C to +85 °C (Refer to "Derating Curve")
WORKING HUMIDITY	20 ~ 90% RH Non-Condensing
STORAGE TEMP, HUMIDITY	- 40°C ~ +85°C, 10 ~ 95% RH non-condensing
TEMP. COEFFICIENT	± 0.03%/°C(0~50°C)
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
SOLDERING TEMPERATURE	Wave soldering:265°C,5s(max.); Manual soldering:390°C,3s(max.)
OVER VOLTAGE CATEGORY	III; According to EN62368-1; altitude up to 2000 meters
SAFETY PROTECTION	CLASS II
ALTITUDE APPLICATION	2000m
MTBF	> 800K hrs min. MIL-HDBK-217F (25°C)

## SAFETY

SAFETY STANDARDS	IEC/UL62368-1, EN62368-1 safety approval
WITHSTAND VOLTAGE	I/P-O/P:4.00KVAC/1min
ISOLATION RESISTANCE	I/P-O/P:100M Ohms/ 500VDC/25 °C/70% RH

## EMC

	Parameter	Standard	Test Level/Note
EMC EMISSION	Conducted	BS EN/EN55032(CISPR32)	CLASS B
	Radiated	BS EN/EN55032(CISPR32)	CLASS B
	Harmonic Current/Note5	BS EN/EN61000-3-2	CLASS A
	Voltage Flicker	BS EN/EN61000-3-3	.....
EMC IMMUNITY	BS EN/EN55035, BS EN/EN61000-6-2		
	Parameter	Standard	Test Level/Note
	ESD	BS EN/EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact, criteria A
	Radiated Susceptibility	BS EN/EN61000-4-3	Level 3, criteria A
	EFT/Burest	BS EN/EN61000-4-4	Level 3, criteria A
	Surge	BS EN/EN61000-4-5	Level 4, 2KV/L-N, criteria A
	Conducted	BS EN/EN61000-4-6	Level 3, criteria A
	Magnetic Field	BS EN/EN61000-4-8	Level 4, criteria A
Voltage Dips and interruptions	BS EN/EN61000-4-11	> 95% dip 0.5 periods, 30% dip 25 periods, > 95% interruptions 250	

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**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 0.1μF & 47μF parallel capacitor.
  3. Tolerance : includes set up tolerance, line regulation and load regulation.
  4. The ambient temperature derating of 3.5°C /1000m with fanless models and of 5 °C/1000m with fan models for operating altitude higher than 2000m(6500ft).
  5. The power supply is considered as an independent unit ,but the final equipment still need to re-confirm that the whole system complies with the EMC directives.
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**PHYSICAL PROPERTY**


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LENGTH*WIDTH*HEIGHT:	87mm*52mm*30mm/3.43in*2.05in*1.18in;PCB mounting style
	109mm*52.5mm*33.9mm/4.29in*2.07in*1.33in;Terminal Blocks styl
WEIGHT:	195g(PCB mounting style)
	260g(Terminal Blocks style)
COOLING METHOD:	Natural Air Cooling
TEXTURE:	Black flame retardant and heat resistant plastic

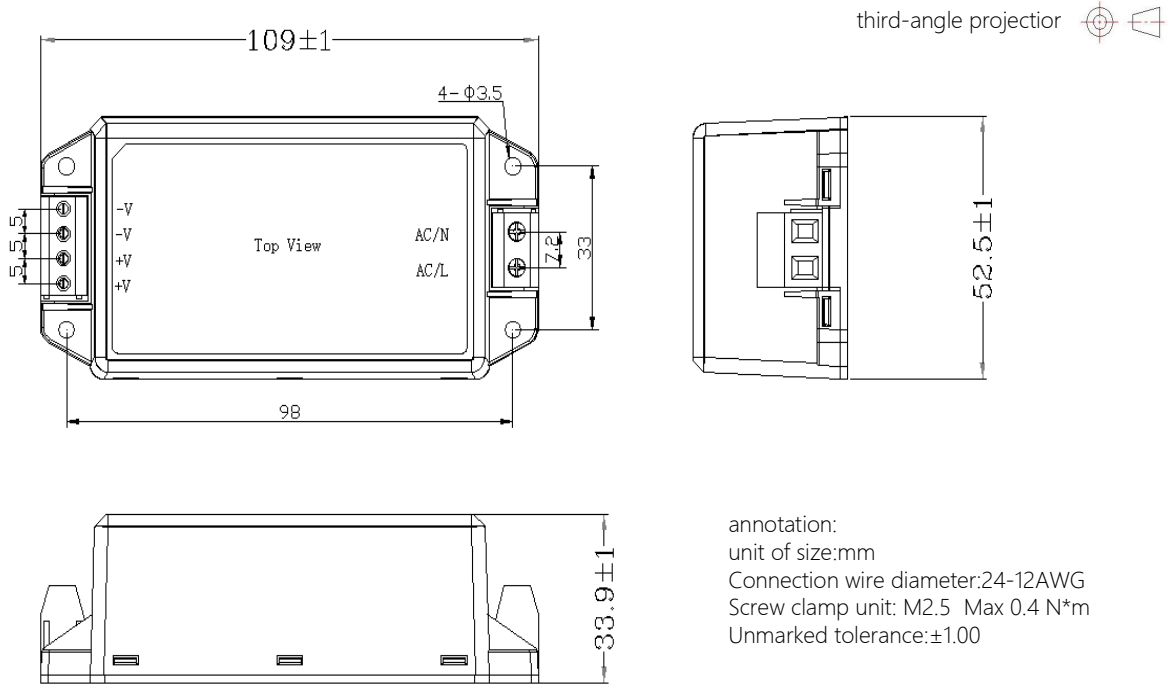
**Packing**


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Carton Size:	48 × 27.5 × 16 cm/18.9 × 10.83 × 6.3 in; PCB mounting style
	31.5 × 24.5 × 22 cm/ 12.4 × 9.65 × 8.66 in; Terminal Blocks style
Master Carton Quantities:	50pcs/Carton(PCB mounting and Terminal Blocks style)



**YSM60T external dimension**



**Functional Diagram**

