

# YSM10 SERIES 10W



YSM10 series is a 10W Smaller(46.08\*25.78\*21.7mm) AC-DC module power supply adopting range:90-264VAC. The series has extremely low no-load power consumption below 0.1W. High efficiency up to 83% 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

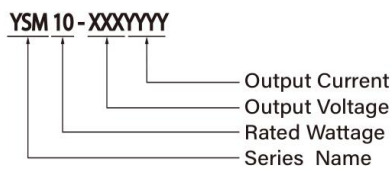


Three Years Warranty

### Model Information

Yingjiao Part Number	DC Voltage	Rated Current	Rated Power	Max.Capacitive Load
YSM10-0332500	3.3V	2.5A	8.25W	6600uF
YSM10-0502000	5V	2A	10W	5000uF
YSM10-1200850	12V	0.85A	10.2W	2000uF
YSM10-1500670	15V	0.67A	10.05W	820uF
YSM10-2400420	24V	0.42A	10.08W	680uF

### Model Encoding



### Input

VOLTAGE RANGE	90~264VAC
FREQUENCY RANGE	47-63Hz
NO LOAD POWER CONSUMPTION	0.1W MAX
AVERAGE EFFICIENCY(Typ.)	74.0% YSM10-0332500
	77.0% YSM10-0502000
	82.0% YSM10-1200850
	82.0% YSM10-1500670
	83.0% YSM10-2400420
AC CURRENT(Typ.)	0.3A/115VAC
	0.15A/230VAC
INRUSH CURRENT(Typ.)	Cold Start 20A/115VAC
	Cold Start 40A/230VAC
LEAKAGE CURRENT	<0.707mA/264VAC,50Hz

## Output

RIPPLE & NOISE(max.)	200mVp-p
VOLTAGE TOLERANCE	±2.5%
LINE REGULATION	±0.3%
LOAD REGULATION	±0.5%
SETUP,RISE TIME	1000ms, 30ms/230VAC at full load 1500ms, 30ms/115VAC at full load
HOLD UP TIME (Typ.)	30ms/230VAC at full load
	8ms/115VAC at full load

## Protection

OVER CURRENT	110%-200% 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	YSM10-0332500: 3.8 ~ 6V
	YSM10-0502000: 5.25 ~ 7.5V
	YSM10-1200850: 12.6 ~ 16.5V
	YSM10-1500670: 15.75 ~ 24V
	YSM10-2400420: 25.2 ~ 34V
	Protection Type: Hiccup mode, recovers automatically after fault condition is removed

## Environment

WORKING TEMP.	-30°C to +85°C (Full load can be operated at -30°C to 50°C, while load should be reduced at 50°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	10~ 500Hz, 2G 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	II; According to EN62368-1; altitude up to 2000 meters
SAFETY PROTECTION	CLASS II
ALTITUDE APPLICATION	2000m
MTBF	> 1400K hrs min. MIL-HDBK-217F (25°C)

## SAFETY

SAFETY STANDARDS	IEC/UL62368-1, EN62368-1 safety approval
WITHSTAND VOLTAGE	I/P-O/P:3.00KVAC/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	.....
		BS EN/EN55035, BS EN/EN61000-6-2	
EMC IMMUNITY	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 3, 1KV/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 periods

## Note

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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:	46.08mm*25.78mm*21.7mm/1.81in*1.01in*0.85in;
WEIGHT:	40g
COOLING METHOD:	Natural Air Cooling
TEXTURE:	Black flame retardant and heat resistant plastic

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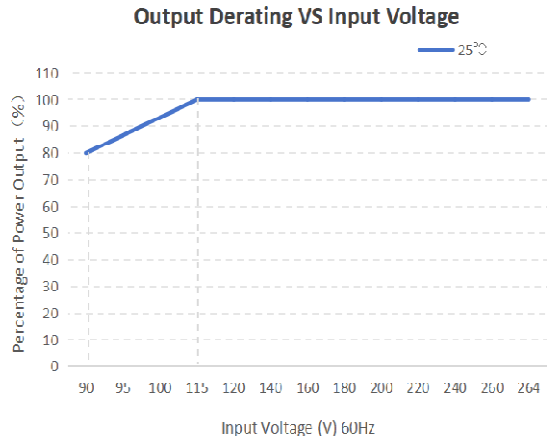
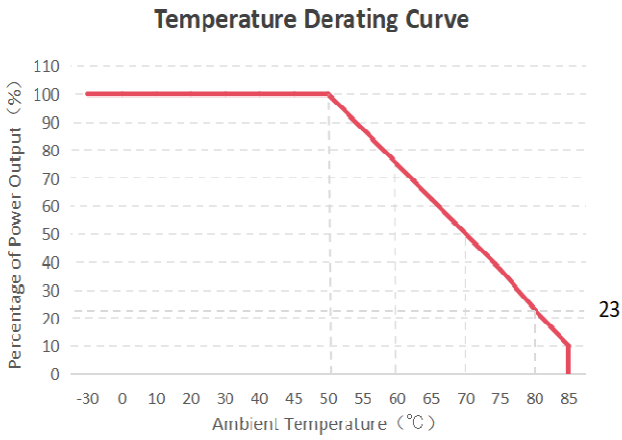
## Packing

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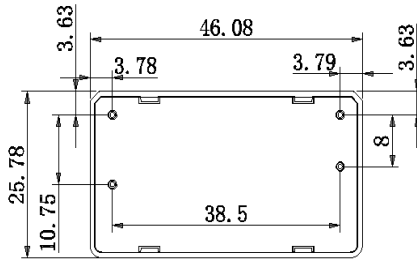
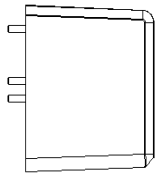
Carton Size:	41 × 37 x 19.5 cm/16.14 x 14.57 x 7.68 in;
Master Carton Quantities:	250pcs/Carton

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**Curve**

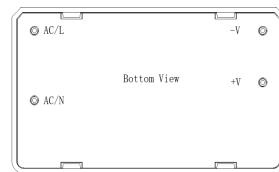
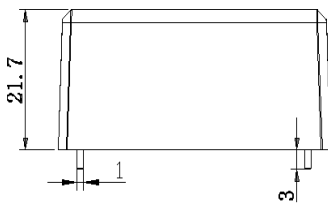


**Dimensions and Installation**



third-angle projectio

annotation:  
 unit of size:mm  
 Pin diameter tolerances:±0.10  
 General tolerances:±0.50



### Functional Diagram

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