

YSM30 SERIES 30W



YSM30 series is a 30W Smaller(69.5*39*24mm) AC-DC modul power supply adopting the full range:90-264VAC input The series has extremely low no-load power consumption below 0.1W.High efficiency up to 90% 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 converfers offer excellent EMC performance and meet internation 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

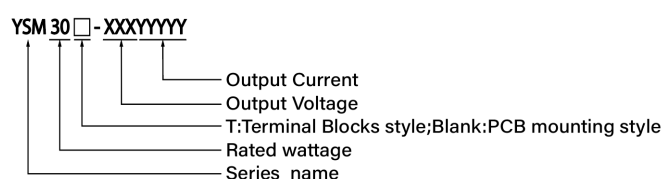


Three Years Warranty

Model Information

| Yingjiao Part Number | DC Voltage | Rated Current | Rated Power | Max.Capaciti ve Load |
|-------------------------|---------------|------------------|----------------|-------------------------|
| YISM30□-0506000 | 5V | 6A | 30W | 6000uF |
| YISM30□-1202500 | 12V | 2.5A | 30W | 4400uF |
| YISM30□-1502000 | 15V | 2A | 30W | 3300uF |
| YISM30□-2401250 | 24V | 1.25A | 30W | 700uF |
| YISM30□-4800625 | 48V | 0.625A | 30W | 470uF |

Model Encoding



Input

| | |
|---------------------------|-----------------------|
| VOLTAGE RANGE | 90~264VAC |
| FREQUENCY RANGE | 47-63Hz |
| NO LOAD POWER CONSUMPTION | 0.1W MAX |
| AVERAGE EFFICIENCY(Typ.) | 83.0% YISM30□-0506000 |
| | 88.0% YISM30□-1202500 |
| | 88.0% YISM30□-1502000 |
| | 88.0% YISM30□-2401250 |
| | 90.0% YISM30□-4800625 |
| AC CURRENT(Typ.) | 0.75A/115VAC |
| | 0.5A/230VAC |
| INRUSH CURRENT(Typ.) | Cold Start 25A/115VAC |
| | Cold Start 45A/230VAC |
| LEAKAGE CURRENT | <0.25mA/264VAC,50Hz |

Output

| | | |
|----------------------|----------------------------------|----------------|
| RIPPLE & NOISE(max.) | 120mVp-p | YSM30□-0506000 |
| | 150mVp-p | YSM30□-1202500 |
| | 200mVp-p | YSM30□-1502000 |
| | 240mVp-p | YSM30□-2401250 |
| | 300mVp-p | YSM30□-4800625 |
| VOLTAGE TOLERANCE | ±2.0% | |
| LINE REGULATION | ±0.5% | ALL SERIES |
| LOAD REGULATION | ±1.0% | YSM30□-0506000 |
| | ±0.5% | YSM30□-1202500 |
| | ±0.5% | YSM30□-1502000 |
| | ±0.5% | YSM30□-2401250 |
| | ±0.5% | YSM30□-4800625 |
| SETUP,RISE TIME | 1500ms, 30ms/230VAC at full load | |
| | 1900ms, 30ms/115VAC at full load | |
| HOLD UP TIME (Typ.) | 40ms/230VAC at full load | |
| | 10ms/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 | YSM30□-0506000: 5.25 ~ 7.5V | |
| | YSM30□-1202500: 12.6 ~ 16.5V | |
| | YSM30□-1502000: 15.75 ~ 24V | |
| | YSM30□-2401250: 25.2 ~ 34V | |
| | YSM30□-4800625: 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 | > 600K 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

| EMC EMISSION | Parameter | Standard | Test Level/Note |
|-----------------|----------------------------------|------------------------|--|
| | 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 |

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.

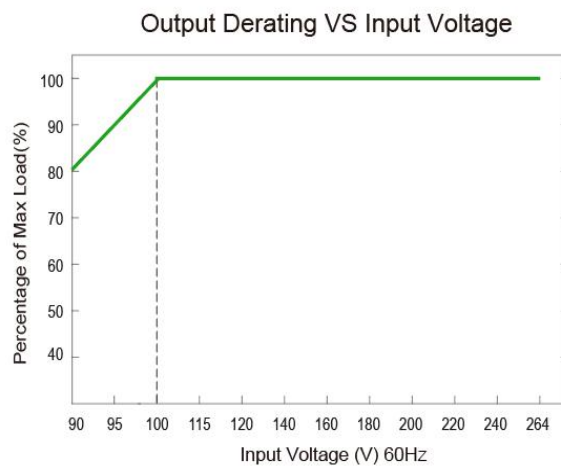
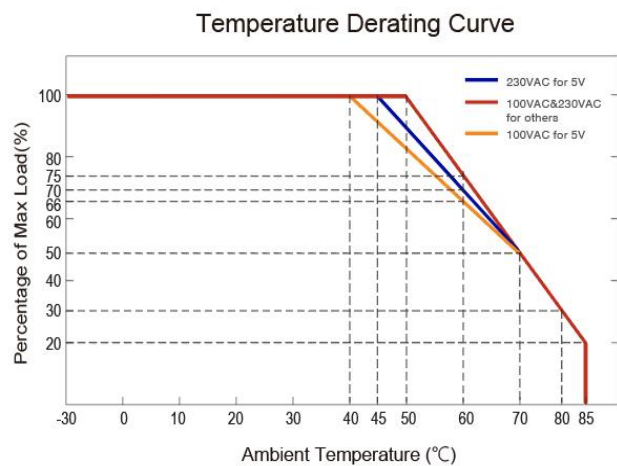
PHYSICAL PROPERTY

| | |
|----------------------|---|
| LENGTH*WIDTH*HEIGHT: | 69.5mm*39mm*24mm/2.74in*1.54in*0.94in;PCB mounting style |
| | 91mm*39.5mm*28.5mm/1.56in*1.24in*1.12in;Terminal Blocks style |
| WEIGHT: | 94g(PCB mounting style) |
| | 113.0g(Terminal Blocks style) |
| COOLING METHOD: | Natural Air Cooling |
| TEXTURE: | Black flame retardant and heat resistant plastic |

Packing

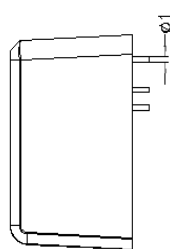
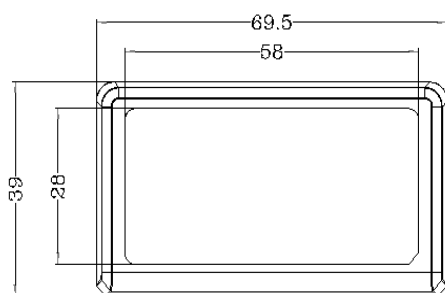
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| Carton Size: | 32.5 × 17.5 x 25 cm/12.8 x 6.89 x 9.84 in; PCB mounting style |
| | 41.5 × 25 x 17 cm/ 16.34 x 9.84 x 6.69 in; Terminal Blocks style |
| Master Carton Quantities: | 100pcs/Carton(PCB mounting and Terminal Blocks style) |

Curve

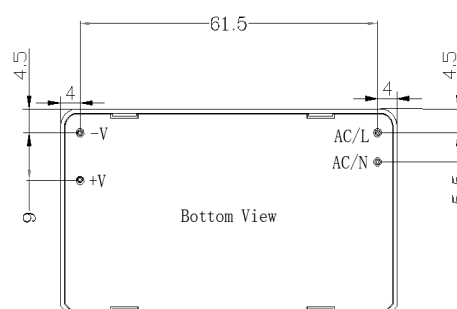
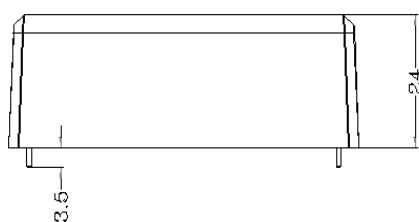


Dimensions and Installation

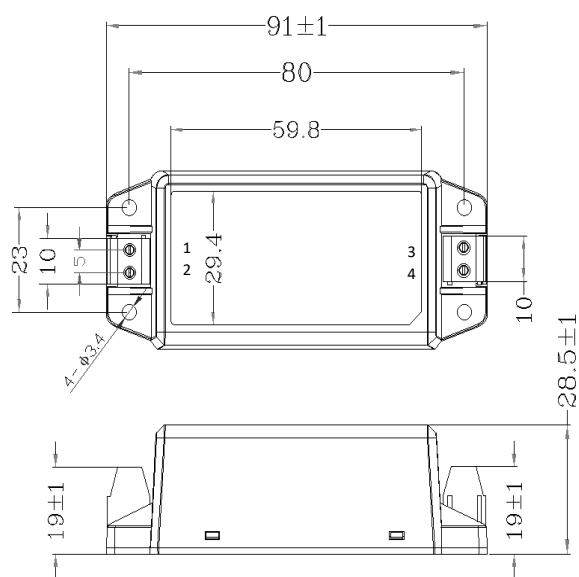
third-angle projectio 



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

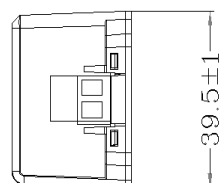


YSM30T external dimension



annotation:
unit of size:mm
Connection wire diameter:24-12AWG
Screw clamp unit: M2.5 Max 0.4 N*m
Unmarked tolerance:±1.00

third-angle projection 



| Pin Mode | |
|----------|----------|
| Pin | Function |
| 1 | AC/N |
| 2 | AC/L |
| 3 | -VO |
| 4 | +VO |

Functional Diagram

