YMH20 SERIES 20W



PENDING

YMH20 series is adopting the full range:100-277VAC input
The series has extremely low no-load power consumption
High efficiency to reduce power loss.

The series cost-effective, high reliability, operates from -30 ~70℃.A variety of appearance sizes are available for easy installation and use.

These converfers offer excellent EMC performance and meet internation standards, they are widely used in areas of iIndustrial design, household appliances, communications, testing instruments.

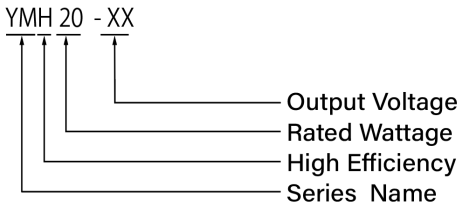
Features

- Ultra-wide voltage input range
- Super Small 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
YMH20-3.3	3.3V	4.5A	14.85W	8000uF
YMH20-5	5V	4A	20W	8000uF
YMH20-9	9V	2.3A	20.7W	5400uF
YMH20-12	12V	1.8A	21.6W	4000uF
YMH20-15	15V	1.4A	21W	3000uF
YMH20-24	24V	0.9A	21.6W	1000uF

Model Encoding



Input

VOLTAGE RANGE	100-277VAC	
FREQUENCY RANGE	50/60Hz	
NO LOAD POWER CONSUMPTION(Typ.)	0.1W/277VAC, 50Hz	
AVERAGE EFFICIENCY(Typ.)	83.0%	YMH20-3.3
	85.0%	YMH20-5
	85.0%	YMH20-9
	86.0%	YMH20-12
	87.0%	YMH20-15
	87.0%	YMH20-24
AC CURRENT(Typ.)	0.70A/115VAC	
	0.40A/230VAC	
	0.30A/277VAC	
INRUSH CURRENT(Typ.)	Cold Start 20A/115VAC	
	Cold Start 45A/230VAC	
LEAKAGE CURRENT	<0.1mA/277VAC,50Hz	

Output

RIPPLE & NOSE(max.)	150mVp-p	ALL SERIES
VOLTAGE TOLERANCE	±1.5%	ALL SERIES
LINE REGULATION	±0.5%	ALL SERIES
LOAD REGULATION	±0.5%	ALL SERIES
SETUP,RISE TIME	1500ms, 50ms/230VAC at full load	
	1500ms, 50ms/115VAC at full load	
HOLD UP TIME (Typ.)	50ms/230VAC at full load	
	8ms/115VAC at full load	

Protection

OVER CURRENT	≥110% Rated Output current
	Protection type: Hiccup mode,
	recovers automatically after current goes down
SHORT CIRCUIT	Protection type: Hiccup mode,
	recovers automatically after current goes down
OVER VOLTAGE	YMH20-3.3：3.8-9VDC
	YMH20-5：5.5-9VDC
	YMH20-9：10-16VDC
	YMH20-12：13-16.5VDC
	YMH20-15：17-24VDC
	YMH20-24：26-34VDC
	Protection type: Hiccup Mode,shut off o/p voltage,
	clamping by zener diode

Environment

WORKING TEMP.	-30 ℃ to +70 ℃ (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%/℃(0~50℃)
VIBRATION	10~ 500Hz, 2G 10min./1cycle, period for 60min.
	each along X, Y, Z axes
SOLDERING TEMPERATURE	Wave soldering:260℃,10s(max.); Manual soldering:360℃,5s(max.)
OVER VOLTAGE CATEGORY	III; According to EN61558-1
SAFETY PROTECTION	CLASS II
ALTITUDE APPLICATION	5000m
MTBF	＞1500K hrs min. MIL-HDBK-217F (25℃)

SAFETY & EMC

SAFETY STANDARDS	IEC62368-1, UL62368-1, TUV BS EN/EN62368-1 approved
	IEC/EN60335-1
WITHSTAND VOLTAGE	I/P-O/P:4.00KVAC/1 min
ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:100M Ohms/ 500VDC/25 ℃/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	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	10V/m, criteria A
	EFT/Burest	BS EN/EN61000-4-4	±2KV, criteria A
	Surge	BS EN/EN61000-4-5	1KV/L-L, criteria A
	Conducted	BS EN/EN61000-4-6	10Vr.m.s, criteria A
	Magnetic Field	BS EN/EN61000-4-8	10A/m, 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℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 1μF & 10μF parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The ambient temperature derating of 3.5℃ /1000m with fanless models and of 5 ℃/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.

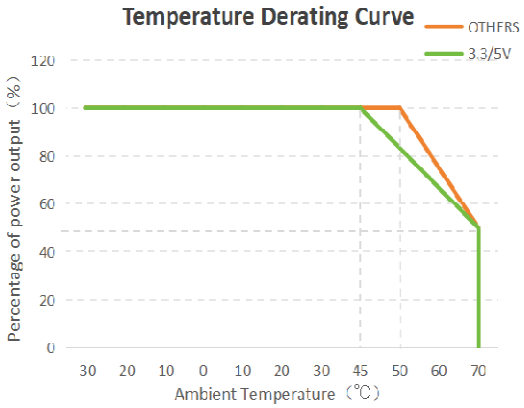
PHYSICAL PROPERTY

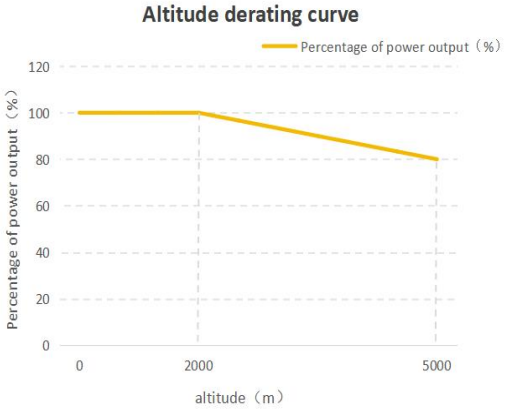
LENGTH*WIDTH*HEIGHT:	52.6*27.4*24.3mm PCB Mounting Style
WEIGHT:	55.0g(PCB Mounting Style)
COOLING METHOD:	Natural Air Cooling
TEXTURE:	Black flame retardant and heat resistant plastic

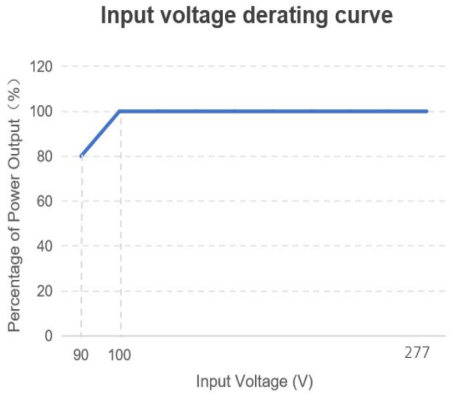
Packing

Carton Size:	58 × 28 x 19 cm
	22.83 x 11.02 x 7.48 in
Master Carton Quantities:	160pcs/Carton(PCB Mounting Style)
	100pcs/Carton(Terminal Blocks Style)

Curve

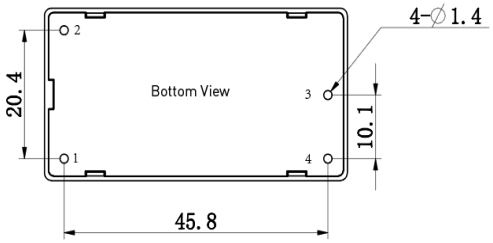


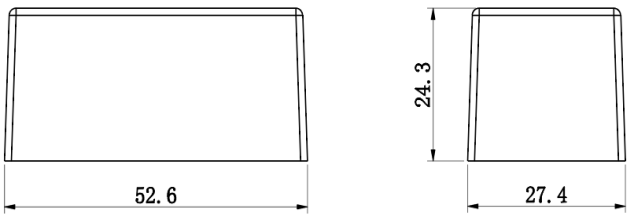




Dimensions and Installation

third-angle projection





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

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

Functional Diagram

