AC – DC

Features

- Ultra-wide Voltage Input Range 85~305V AC
- Compact Size Design
- Operating Temperature: 30°C~+85°C
- Low no-load Power Consumption
- Low Ripple & Noise, High Efficiency
- Protection: SCP, OCP, OVP
- Three Years Warranty

Certified to UKCA, CE, CB, cURus. RoHS,& REACH Standards and complies with Efficiency Regulations. These are primarily used in ITE, Audio & Video Industries and customised solutions are available upon request

Model Number Information

56YMR	15	xx	□
Series Name	Rated Wattage	Output Voltage	: PCB Mounting Style T: Terminal Block

Models

Model Number	DC Voltage (V)	Rated Current (A)	Rated Power (W)	Efficiency (%)	Max. Capacitive Load (uF)	Ripple & Noise (mVp-p)
56YMR90-12□	12	6.7	80.4	92.0	6800	120
56YMR90-15□	15	5.67	85.05	92.5	4500	150
56YMR90-24□	24	3.75	90	93.0	3000	200
56YMR90-48□	48	1.88	90.2	93.0	470	240

Input Specifications

Input Voltage	85~305V AC
Rated Voltage Range	100~277V AC
Frequency Range	47-63Hz
No Load Power Consumption	0.3W MAX
AC Current	1.9A at 115VAC / 1.1A at 230VAC
Inrush Current	Cold Start 30A at 115V AC / 65A at 230V AC
Leakage Current	< 0.25mA / 264V AC, 50Hz

Output Specifications

Voltage Tolerance	±2.0%	All Models
Line Regulation	±0.5%	All Models
Load Regulation	±1.0%	12V
	±0.5%	Others
Set up	1000ms, 30ms at 230V AC at full load	
Rise Time	1000ms, 30ms at 115V AC at full load	
Hold up Time	50ms at 230V AC at full load / 12ms at 115V AC at full load	

Protection

Over Current	115%-160% Rated Output current, Protection type: Hiccup mode, recovers automatically after current goes down	
Short Circuit	Hiccup mode, recovers automatically after fault condition is removed	
Over Voltage	12.6-16.5v	12v
	15.75-24v	15v
	25.2-34v	24v
	50.4-65v	48v
	Protection type: Shut off o/p voltage, clamping by zener diode	

Environmental Characteristics

Working Temp	-30 ℃ 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% / ℃(0~50℃)
Vibration	PCB mounting 10~ 500Hz, 2G 10min./1cycle, period for 60min. Terminal Blocks:10~500Hz, 5G 10min./1cycle, period for 60min. Each along X, Y, Z axes.
Soldering Temperature	Wave soldering:265℃,5s(max.); Manual soldering:390'℃,3s(max.)
Over Voltage Category	III; According to EN62368-1; Altitude Up To 2000 Meters
Safety Protection	Class III
MTBF	3200K hrs min. MIL-HDBK-217F (25℃)
Altitude Application	2000m
Cooing Method	Natural Air Cooling

Safety

Safety Standards	IEC/UL62368-1, EN62368-1 IEC60335-1 safety approval
Withstand Voltage	I/P-O/P:4.00KV AC
Isolation Resistance	I/P-O/P:100M Ohms/ 500VDC/25 ℃/70% RH

EMC

	Parameter	Standard	Test Level
EMC Emission	Conducted	S EN/EN55032(CISPR32), BS EN/EN55014	CLASS B
	Radiated	S EN/EN55032(CISPR32), BS EN/EN55014	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, BS EN/EN55014-2		
	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	

Notes:

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 0.1μF & 47μF 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.
6. 33% Duty cycle maximum within every 30 seconds. Average output power should not exceed the rated power.
7. Leakage current was measured from primary input to DC output.

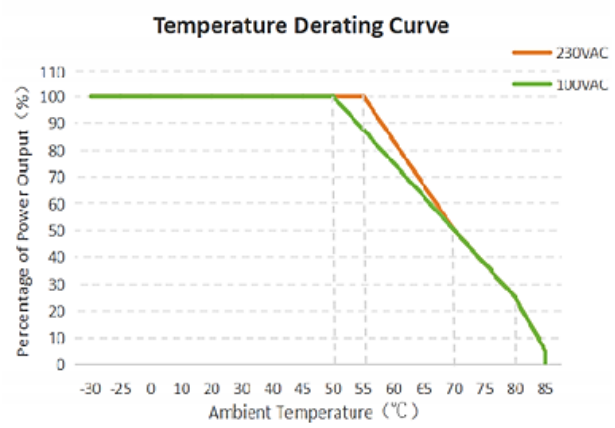
Dimensions & Weight

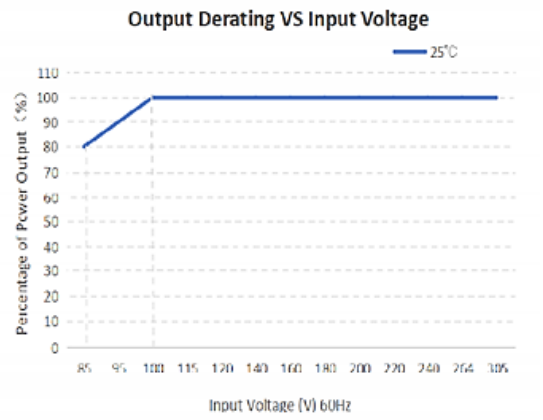
	Measurements	Weight
56YMR90	87x52x29.5mm	195g
56YMR90T	109x52x33.5mm	260g
Material	Black flame retardant and heat-resistant plastic	

Packaging

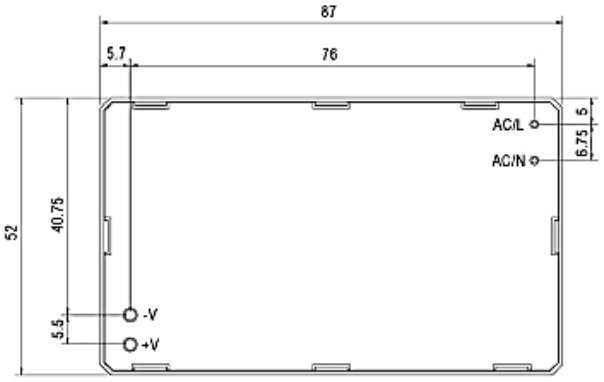
Carton Size	48x27.5x16cm / 18.9x10.83x.3in	56YMR90
	31.5x24.5x22cm / 12.4x9.65x866in	56YMR90T
Master Carton Quantities	50pcs/Carton	

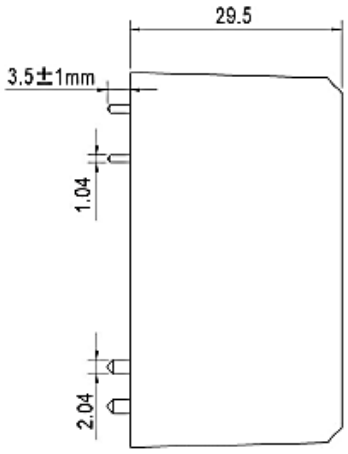
Derating Curves



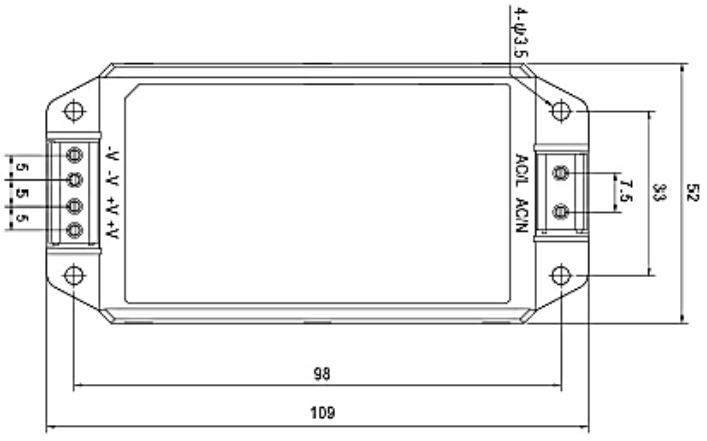


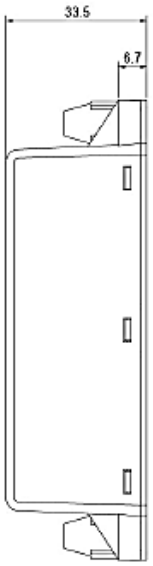
56YMR90 Dimensions and Recommended Layout





56YMR90T Dimensions and Recommended Layout





Functional Diagram

Figure 1: Typical application circuit