

Features

Universal AC input, full range
 Built-in active PFC
 High efficiency up to 90.5%
 Low-profile 30mm housing
 Forced air cooling by built-in DC fan
 Overvoltage category III
 3 years warranty
 OLP, SCP, OVP, OTP

56YEP320-xx

320W Enclosed AC/DC Power Supply (PSU)



Image for illustration purposes only.



Description

The 56YEP320-xx is a 320W enclosed AC/DC power supply series, with ten single-output models from 5V to 60V DC. Active PFC and a full-range universal AC input let one model serve mains supplies worldwide, and the low-profile housing with a built-in DC fan suits equipment where height is limited. Each model has an adjustable output and Class I construction with a protective earth terminal.

Certified to UKCA, CE, RoHS and REACH, and built to BS EN 62368-1 and EN 62368-1, with EMC to EN 55032 Class B, EN 61000-3-2, EN 61000-3-3 and the EN 61000-4 immunity series. These are primarily used in industrial automation and control systems, and customised solutions are available upon request.

Part Number Breakdown

56YEP	320	xx
Series Name	Output Power	Output Voltage

Models

Part Number	Output Voltage (V DC)	Rated Current (A max.)	Rated Power (W)	Average Efficiency (%)	Ripple & Noise (mVp-p)	Max. Capacitive Load (μF)	Voltage ADJ Range (V DC)	Load Regulation (%)
56YEP320-5	5.0	60.00	300.0	83.0	150	4,000	4.500–5.500	±1.0
56YEP320-7.5	7.5	40.00	300.0	85.0	150	3,600	6.750–8.250	±1.0
56YEP320-12	12.0	26.70	320.4	88.0	150	3,300	10.00–13.20	±1.0
56YEP320-13.5	13.5	23.80	321.3	88.0	150	2,500	12.15–14.85	±1.0
56YEP320-15	15.0	21.40	321.0	88.5	150	1,500	13.50–18.00	±1.0
56YEP320-24	24.0	13.40	321.6	89.0	150	1,000	20.00–26.40	±0.5
56YEP320-27	27.0	11.90	321.3	89.0	150	900	26.10–29.70	±0.5
56YEP320-36	36.0	8.90	320.4	89.5	180	700	32.40–39.60	±0.5
56YEP320-48	48.0	6.70	321.6	90.0	240	470	43.20–52.80	±0.5
56YEP320-60	60.0	5.34	320.4	90.5	300	230	54.00–66.00	±0.5

Input Specifications

Parameter	Specification
AC Voltage Range	90–305V AC / 127–430V DC
Rated Voltage Range	100–240V AC
Frequency Range	50–60Hz
AC Current	4A @ 115V AC 2A @ 230V AC
Inrush Current	Cold start: 40A/200μS @ 230V AC 50Hz Cold start: 20A/200μS @ 115V AC 50Hz
Leakage Current	<1mA @ 240V AC
Power Factor (Typ.)	>0.95 @ 230V AC, full load >0.98 @ 115V AC, full load

Output Specifications

Parameter	Specification
Voltage Tolerance	±2.0%
Line Regulation	±0.5%
Setup Time	1.5S @ 230V AC, full load 3.0S @ 115V AC, full load
Rise Time	50mS @ 230V AC and 115V AC, full load
Hold-up Time	8mS @ 230V AC and 115V AC, full load
Temperature Coefficient	±0.03%/°C (0–50°C) on load output

Protection

Parameter	Specification
Overload Protection	105–135% rated output power Hiccup mode; automatic recovery after the fault condition is removed
Short Circuit Protection	Hiccup mode; automatic recovery after the fault condition is removed
Overvoltage Protection	115–135% rated output voltage Output shuts down; re-power on to recover
Overtemperature Protection	Output shuts down; automatic recovery after the temperature goes down

Environmental Characteristics

Parameter	Specification
Operating Temperature	-30°C to +70°C (refer to the derating curve)
Operating Humidity	20–95%RH non-condensing
Storage Temperature/Humidity	-40°C to +85°C, 10–95%RH non-condensing
Vibration	Component: 10–500Hz, 2G 10min./1 cycle, 60min. each along X, Y, Z axes
Cooling Method	Forced air cooling by built-in DC fan
Operating Altitude	Up to 2,000m Above 2,000m (6,500ft): derate ambient temperature by 5°C/1000m

Safety Standards

Parameter	Specification
Safety Standards	BS EN 62368-1, EN 62368-1
Certifications	UKCA, CE, RoHS, REACH
Safety Protection	Class I
Overvoltage Category	OVC III according to EN 62368-1; altitude up to 2,000 metres
Dielectric Strength (Hi-pot)	Input to output: 3kV AC Input to FG: 2kV AC Output to FG: 0.5kV AC (1 minute)
Insulation Resistance	Input to output: 100MΩ @ 500V DC (25°C, 70%RH)

Electromagnetic Compatibility (EMC)

Parameter	Specification
EMC Emission	BS EN 55032, EN 55032 (CISPR 32) Class B BS EN 61000-3-2, EN 61000-3-2 Class A BS EN 61000-3-3, EN 61000-3-3
EMC Immunity	BS EN 61000-4-11, EN 61000-4-11: Criteria B BS EN 61000-4-2, 3, 4, 5, 6, 8, EN 61000-4-2, 3, 4, 5, 6, 8: Criteria A

Reliability

Parameter	Specification
MTBF	188.4k hours min. @ 25°C (MIL-HDBK-217F)

Parameter	Specification
Housing Material	Aluminium / steel
Connection Method	Input and output, screw connection
Terminal	Input: 3 pins Output: 6 pins
Stripping Length	Input: 5–6mm Output: 3–4mm
Tightening Torque	Input: 1.19Nm Output: 1.19Nm
Dimensions	215 x 115 x 30mm (L x W x H)
Warranty	3 years

[illegible]

Dimensions in millimetres, tolerance of $\pm 1\text{mm}$.

Pin	Definition	Pin	Definition
1	AC/L	4, 5, 6	DC Output -V
2	AC/N	7, 8, 9	DC Output +V
3	PE	—	—

Label Drawing

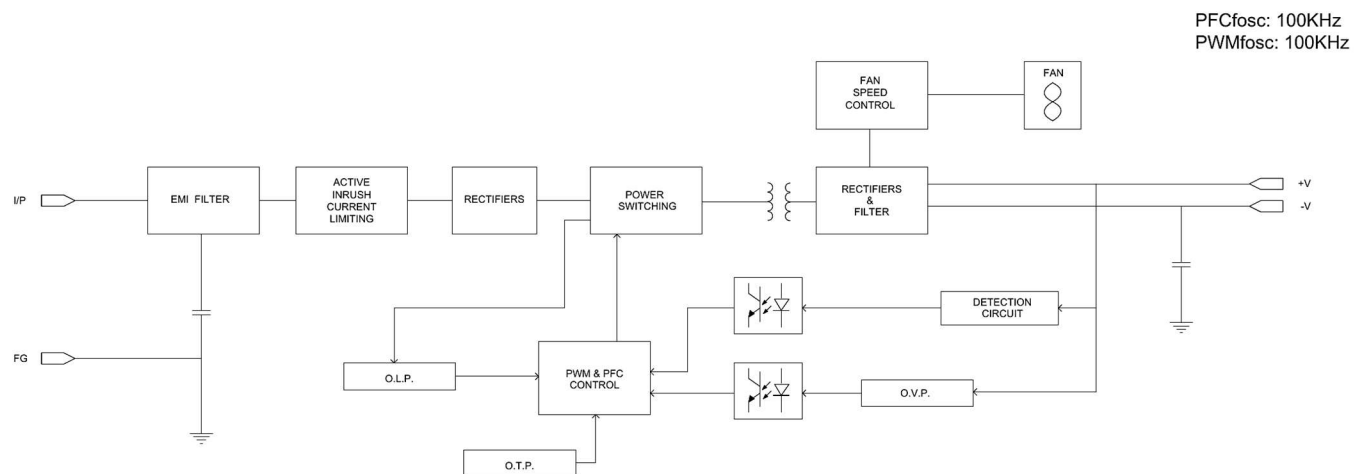
MODEL:YEP320-48 INPUT:100-277VAC 50/60Hz 4.0A OUTPUT:48.0VDC 6.7A 321.6W					
 MADE IN CHINA 2025.02					
+V ADJ 	+V	-V		N	L

Example label, 48V model.

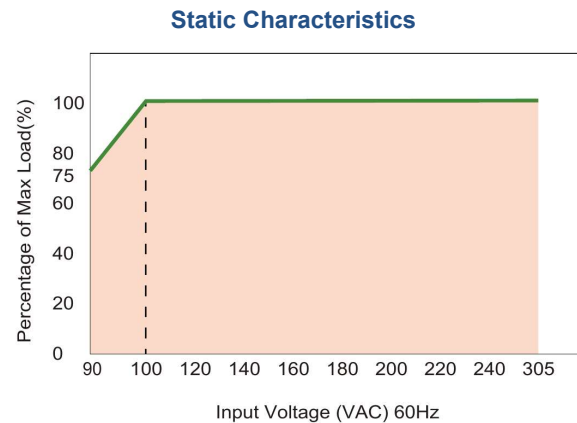
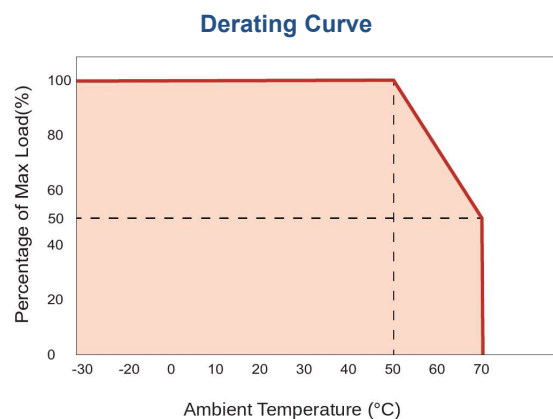
Packaging

Parameter	Specification
Weight	1kg/pcs
Carton Dimensions	38 x 19.5 x 26cm
Quantity per Carton	15pcs

Block Diagram



Performance Graphs



Notes

1. All parameters not specially mentioned are measured at 115/230V AC input, rated load and 25°C ambient temperature.
2. Ripple & noise are measured at 20MHz bandwidth using a 12" twisted pair-wire terminated with a 0.1μF and 47μF parallel capacitor.
3. The power supply is a component to be installed into final equipment. The final equipment must be re-confirmed as still meeting EMC directives.
4. Derating may be needed under low input voltages. See the static characteristics curve.