

Features

90–264V AC / 120–370V DC input
 Active PFC, PF >0.95
 Conduction-cooled design
 LED power-on indicator
 Remote voltage compensation
 Output on/off control (optional)
 SCP, OVP, OCP, OTP
 -30°C to +70°C operating temperature
 3 years warranty

64CHA-750-xP Series

750W Enclosed AC/DC Power Supply (PSU)



Image for illustration purposes only.



Description

The 64CHA-750-xP Series is a 750W enclosed AC/DC power supply offered in five output voltages, cooling by conduction, so the unit has no fan and must be mounted on an aluminium plate or metal housing to deliver its rated output. Active PFC, remote voltage compensation and a DC OK signal are built in, and an optional remote on/off input lets the host system control the output.

Certified to CE, cULus, FCC, CCC and CB, and built to IEC 62368-1, EN 62368-1, UL 62368-1, CAN/CSA C22.2 No. 62368-1:19 and GB 4943.1, with EMC to EN 55032, FCC Part 15, GB/T 9254.1, EN 61000-3-2, EN 61000-3-3 and GB/T 17625.1. The unit meets RoHS requirements. These are primarily used in industrial control systems, mechanical and electrical equipment, electronic instruments and industrial automation, and customised solutions are available upon request.

Part Number Breakdown

64CHA	750	x	P
Series Name	Output Power	Output Voltage	Power Factor Correction

Models

Part Number	Output Power (W)	Output Voltage (V DC)	Voltage Adj. Range (V DC)	Output Current (A)	Ripple and Noise (mVp-p)	Efficiency @ 230V AC (% typ.)	Max. Capacitive Load (µF)
64CHA-750-12P	720.0	12	10.8–13.2	0–60.0	200	93.0	8000
64CHA-750-24P	751.2	24	24.0–28.8	0–31.3	250	93.5	5000
64CHA-750-36P	752.4	36	36.0–43.2	0–20.9	250	94.0	3000
64CHA-750-48P	753.6	48	44.0–52.8	0–15.7	250	95.0	2000
64CHA-750-55P	759.0	55	53.0–58.0	0–13.8	250	95.0	1000

Input Specifications

Parameter	Specification
Input AC Voltage	90–264V AC
Rated Input AC Voltage	100–240V AC
Input DC Voltage	120–370V DC
Input Frequency	47–63Hz
Maximum Input Current (full load)	115V AC: 10A max. 230V AC: 5A max.
Power Factor (full load)	115V AC: 0.96 typ. 230V AC: 0.95 typ.
Leakage Current	1mA max. @ 240V AC / 50Hz
Standby Power	2W max., output switched off through the ON/OFF interface
Inrush Current (cold start)	115V AC: 30A typ. 230V AC: 60A typ.

Output Specifications

Parameter	Specification
Output Voltage Accuracy	12V: ±2.5% 24V: ±1.5% 36V: ±1.5% 48V: ±1.5% 55V: ±1.5%
Line Regulation	±0.5%
Load Regulation	12V: ±2.0% 24V: ±1.0% 36V: ±1.0% 48V: ±1.0% 55V: ±1.0%
Turn On Delay Time	2000mS max. @ 115V AC / 230V AC, full load
Rise Time	50mS max. @ 115V AC / 230V AC, full load
Hold Up Time	10mS min. @ 115V AC / 230V AC, full load
Temperature Coefficient	±0.03%/°C (0–50°C)
Remote Voltage Compensation	S+ / S- connected to the positive and negative load terminals; compensates up to 0.2V load line voltage drop
Output ON/OFF Control (optional)	RC+ / RC- High level 4–10V: output off Low level 0–1.2V, short circuit or open circuit: output on
DC OK Signal	Low level (<0.5V) when the output is normal At 80% of the rated output voltage, the DC OK signal equals the external voltage 60mA max. through current

Protection

Parameter	Specification
Overcurrent Protection	105–150% I _o ; hiccup mode, recovers automatically once the fault is cleared
Overvoltage Protection	110–140% V _o ; output held at a constant voltage, recovers automatically once the fault is cleared
Overtemperature Protection (Ambient Temperature)	Output shuts down, recovers automatically once the fault is cleared. Measured at rated input voltage and rated load; values vary with the application
Short Circuit Protection	Output protected, recovers automatically once the fault is cleared

Environmental Characteristics

Parameter	Specification
Operating Temperature	-30°C to +70°C (refer to the derating curves)
Operating Humidity	20–95%RH, non-condensing
Storage Temperature	-40°C to +85°C
Storage Humidity	10–95%RH, non-condensing
Altitude	5000m max.; above 2000m, ambient temperature derates by 0.5°C per 100m
Vibration	10–500Hz, 2G, 10min per sweep cycle, 6 sweep cycles along the X, Y and Z axes
Impact	20G, 11mS, 3 impacts along the X, Y and Z axes
Cooling Method	Natural cooling, no fan (conduction-cooled)

Safety Standards

Parameter	Specification
Certifications	CE, cURus, FCC, CCC, CB, RoHS, REACH
Safety Standards	IEC 62368-1, EN 62368-1, UL 62368-1, CAN/CSA C22.2 No. 62368-1:19, GB 4943.1
Dielectric Strength	Input-Output: 4000V AC min. Input-PE: 1800V AC min. (60S, leakage current <10mA) Output-PE: 500V AC min.
Insulation Resistance	Input-Output: 100MΩ min. Input-PE: 100MΩ min. (500V DC test voltage) Output-PE: 100MΩ min.

Electromagnetic Compatibility (EMC)

Parameter	Specification
Conducted & Radiated Emission	EN 55032 Class B, FCC Part 15 (ANSI C63.4) Class B, GB/T 9254.1 Class B
Harmonic Current Emissions	EN 61000-3-2 Class A, GB/T 17625.1 Class A
Voltage Flicker	EN 61000-3-3
Electrostatic Discharge	EN 61000-4-2, air 8kV / contact 6kV, criteria A
Radiated Susceptibility	EN 61000-4-3, 80MHz–1GHz, 10V/m, criteria B
Electrical Fast Transient	EN 61000-4-4, ± 2 kV, criteria B
Surge Immunity	EN 61000-4-5, CM ± 4 kV / DM ± 2 kV, criteria A
Conducted Emission Immunity	EN 61000-4-6, 10V RMS, criteria B
Power Frequency Magnetic Field Interference	EN 61000-4-8, 30A/m continuous and 300A/m for 1S, criteria A
Voltage Dips, Sags and Short Interruptions	EN 61000-4-11 Drop 100%, 0.5 cycle: criteria B Drop 20%, 250 cycles: criteria B Drop 30%, 25 cycles: criteria B Interrupt 100%, 250 cycles: criteria C
Test Conditions	Tested as a component mounted on a 400 x 400 x 3mm metal plate. EMC compliance must be re-confirmed in the final equipment

Reliability

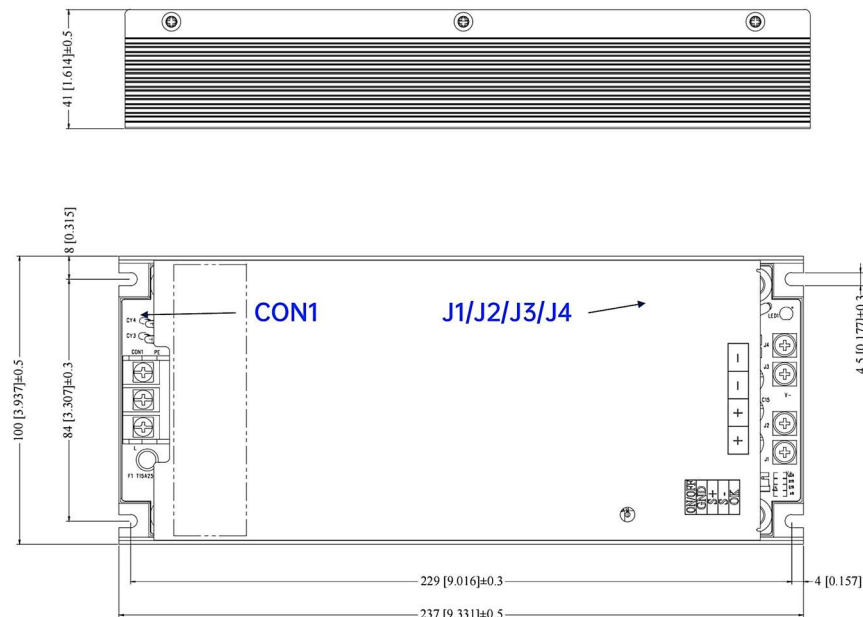
Parameter	Specification
MTBF	100000h @ 25°C (MIL-HDBK-217F)

General Specifications

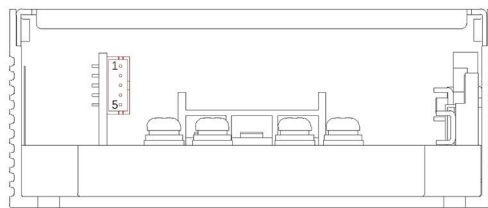
Parameter	Specification
Input Terminal (CON1)	M4x7 screw, 12Kgf·cm (1.2N·m) max. torque; wire #12–22 AWG (UL), 2.5mm ² max. (IEC)
Output Terminals (J1, J2)	2 x M4x7 screws, 10Kgf·cm (1.0N·m) max. torque; ring terminal d1 = 4.5mm, d2 = 4.3mm, d3 = 8 $\pm$ 0.2mm, other dimensions determined by the load current
Control Connector (J5)	YL028-048-004, 2.0mm pitch, 4-pin; mating housing JST PHR-4 or equivalent, terminal JST SPH-004T-P0.5S or equivalent
Status Indicator	LED power-on indicator
Warranty	3 years

Weight & Dimensions

Parameter	Specification
Weight	1250g net (typ.)
Dimensions	237 x 100 x 41mm (L x W x H)

Mechanical Drawing


J5



Dashed area on left side of the top view is the parameter label area.

CON1: AC input terminal block. J1/J2/J3/J4: DC output terminals. J5: control connector, shown in the end view.

8 x M4 mounting holes for fixing inside the customer system.

Mounting screw torque 8Kgf·cm (0.8N·m) max.; screw penetration depth L 3mm max.

Dimensions in millimetres [inches], unmarked tolerance of ±0.5mm [±0.020in].

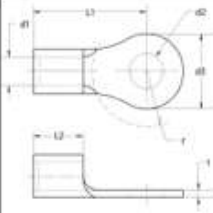
Pin	Definition	Pin	Definition
CON1 L	AC line	CON1 N	AC neutral
CON1 Earth	Earth	J1 V+	DC output +
J2 V-	DC output -	J5-1 ON/OFF	Output on/off control signal +
J5-2 GND	Signal ground	J5-3 S+	Remote sense signal +
J5-4 S-	Remote sense signal -		

Terminal Functions & Connections

Input Terminals Description:

No.	Mark	Function	Screw spec. & Torque(max)	Wire range	
CON1	L	AC LINE	Screw: M4×7 Torque: 12 Kg _f ·cm(1.2 N·m)	UL	IEC
	N	AC NEUTRAL		12~22 AWG	2.5 mm ² Max
	⊕	EARTH			

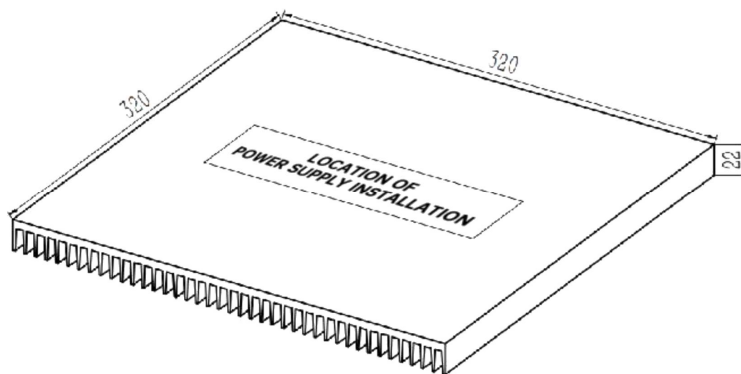
Output Terminals Description:

No.	Mark	Function	Screw spec. & Torque(max)	Customer Connector
J1	V+	DC output +	Screw: (M4×7) ×2 Torque: 10 Kg _f ·cm(1.0 N·m)	 d1=4.5mm d2=4.3mm d3=8±0.2mm Other parameters are determined by the load current
J2	V-	DC output -		

Control Terminal Description:

No.	Mark	Function	Connector	Customer Connector
J5	1	ON/OFF	YL028-048-004 2.0mm/4P	Housing: JST/PHR-4 or equivalent Terminal: JST SPH-004T-P0.5S or equivalent
	2	GND		
	3	S+		
	4	S-		
		Output ON/OFF control signal+		
		Signal GND		
		Remote sense signal+		
		Remote sense signal-		

Installation Requirements



The unit must be installed on an aluminium plate or metal housing to meet the electrical performance declared in this datasheet.

Recommended finned aluminium plate, dimensions as shown: 320 x 320 x 22.

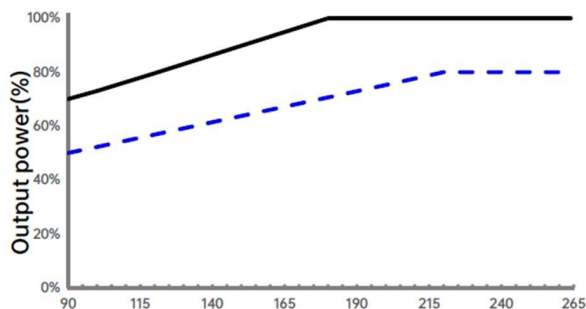
Fix the unit tightly with screws at the centre of the plate, with thermal grease applied to aid heat dissipation.

Packaging

Parameter	Specification
Quantity per Carton	8pcs
Carton Weight	11kg
Carton Dimensions	375 x 275 x 145mm (L x W x H)

Performance Graphs

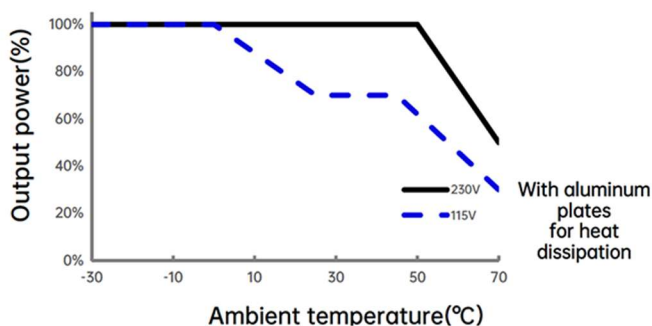
AC input voltage VS. Output power



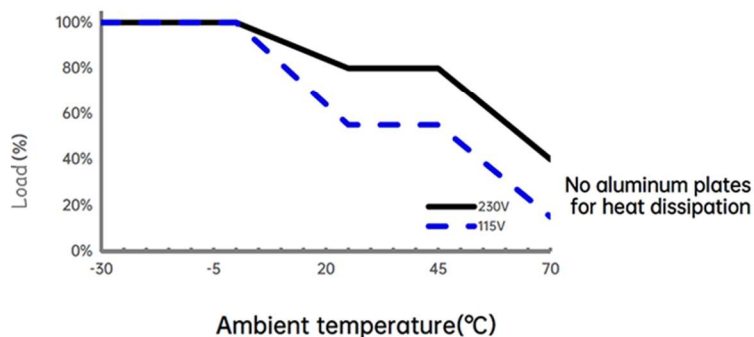
Input voltage (AC 50/60Hz)

— With aluminum plates
for heat dissipation
- - - No aluminum plates
for heat dissipation

Working ambient temperature VS. Output power



With aluminum
plates
for heat
dissipation



No aluminum plates
for heat dissipation

Notes

1. All parameters not specially mentioned are measured at rated input voltage, full load and 25°C ambient temperature.
2. Ripple and noise are measured at 20MHz oscilloscope bandwidth, with the probe cap and ground clamp removed, using a 20±2cm twisted pair terminated with a 47μF electrolytic capacitor and a 0.1μF high-frequency capacitor in parallel at the output.
3. Under any steady operating condition, the total output power must not exceed the rated output power. When the output voltage is raised, output power is limited to the rated power; when it is lowered, output current is limited to the rated current.
4. x in the series name is the output voltage code: 12, 24, 36, 48 or 55 (V DC).