

AC/DC U-Channel

350 Watts JPS350 Series

XPiQ inc.

Intelligent Design Quality Product



- 300 W Convection Cooled
- Active PFC Meets EN61000-3-2, -3
- High Efficiency, >80%
- Meets 1U, Low Profile Requirements
- Current Sharing
- AC OK & DC OK Signals
- Zero Voltage Switching Technology

Specification

Input

- AC Input Voltage • 85-264 VAC
- Input Frequency • 47-63 Hz
- DC Input Voltage • 170-370 VDC
- Power Factor • 0.99 typical
- Inrush Current • 30 A max at 115 VAC, 60 A max at 230 VAC
- Input Current • 4 A max at 115 VAC, 2 A max at 230 VAC
- Remote On/Off • On = Logic LOW, or open circuit, Off = Logic HIGH, or +5 V

Output

- Output Voltage • 5-48 VDC
- Output Voltage Adjustment • $\pm 10\%$
- Output Power • 350 Watts
- Minimum Load • No minimum load required
- Line Regulation • $\pm 0.5\%$
- Load Regulation • $\pm 1\%$
- Tolerance • $\pm 1\%$
- Ripple & Noise • $\pm 1\%$ max (pk-pk)
- Transient Response • 4% max deviation, 2 ms recovery time for a 25% load change
- Temperature Coefficient • $\pm 0.05\%/^{\circ}\text{C}$
- Hold Up Time • 20 ms min at low line
- Remote Sense • Compensates for up to 0.5 V drop
- Overvoltage Protection • 115% to 140%, recycle input to reset
- Overcurrent Protection • 120% to 150%, trip & restart
- Overtemperature Protection • Shuts down at 110 $^{\circ}\text{C}$ measured internally, auto recovers

DC OK

AC OK

Current Share

Fan Output

- TTL HIGH for normal operation
- TTL HIGH for normal operation
- Single wire current sharing (optional) (4 supplies can be paralleled)
- 12 V at 300 mA (5 V at 400 mA for JPS350PS05)

General

Efficiency (Typical)

Power Density

MTBF

Withstand Voltage

Size

Weight

- >80%, nominal line full load
- 4.9 W/in³
- 100,000 hrs min to MIL-HDBK-217F
- 3000 VAC Input to Output, 1500 VAC Input to Ground, 500 VAC Output to Ground
- 5.0" x 9.0" x 1.6"
- 960 g

Environmental

Operating Temperature

Temperature

Cooling

Storage Temperature

Shock & Vibration

- 0 $^{\circ}\text{C}$ to +70 $^{\circ}\text{C}$ See Derating Curve, Full power to +50 $^{\circ}\text{C}$
- 350 W with 18 CFM airflow, 300 W Convection Cooling
- -20 $^{\circ}\text{C}$ to +85 $^{\circ}\text{C}$
- 10-500 Hz 2G 10 mins/cycle for 60 mins each axis

EMC & Safety

Safety Approvals

EMI/EMC

Immunity & Surge

- UL1950, CSA C22.2 No 234, EN60950
- Meets EN61000-3-2, -3, EN55022 Class B & FCC 20780 Level B conducted
- Meets EN50082-2, (EN61000-4-2, -3, -4, -5) Performance criteria A

OUTPUT VOLTAGE & CURRENT RATINGS

JPS350

Maximum Power	Output Voltage	Output Current		Ripple & Noise Pk-Pk ⁽²⁾	Model Number
		Convection Cooled	18 CFM		
315 W	+5 V	54.0 A	63.0 A	50 mV	JPS350PS05
	+12 V	25.0 A	30.0 A	120 mV	JPS350PS12
350 W	+15 V	20.0 A	24.0 A	120 mV	JPS350PS15
	+24 V	13.0 A	15.0 A	200 mV	JPS350PS24
	+48 V	6.5 A	7.3 A	200 mV	JPS350PS48

Notes

- For optional current sharing add suffix 'C' to model number. Current share models are build to order.
- Ripple and noise measured over 15 MHz bandwidth with a 47 μ F electrolytic capacitor and 0.47 μ F ceramic capacitor.

Mechanical Details

JPS350PS05

Dimensions: 9.0 (228.6) mm width, 4.5 (114.3) mm height. Terminal blocks TB1, TB2, TB3, TB4 are shown. Transformer is located in the center.

For #6-32 screw Mounting Holes, x8

TB2 CONNECTIONS		
Pin	JPS350PS05	All other Models
1	+5 V	V1
2	+5 V	V1
3	GND	V1
4	GND	GND
5	GND	GND
6	GND	GND
7	+5 V	
8	+5 V	

TB3 CONNECTIONS			
Pin	JPS350PS05C	JPS350PS05	All other Models
1	GND	GND	N/C
2	DC OK	DC OK	N/C
3	AC OK	AC OK	RS+
4	Current Share	Remote On/Off	DC OK
5	Remote On/Off	RS+	RS-
6	RS+	RS-	N/C
7	RS-	N/C	Current Share ^(A)
8	N/C	N/C	Remote On/Off
9	N/C	N/C	AC OK
10	N/C	N/C	GND

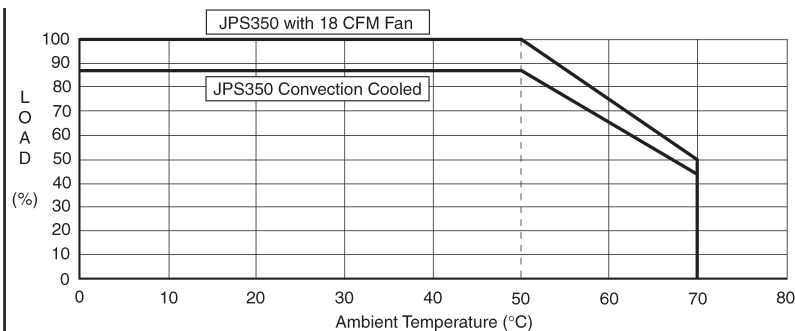
NOTE:
A. For non 'C' models pin 7 is not used.

All models (except JPS350PS05)

NOTES:

- Dimensions shown in inches (mm).
- Tolerance is ± 0.8 mm max.
- TB4 is for fan, 12 V/300 mA with Molex 5045-02A or equivalent (5 V/400 mA for JPS350PS05).
- TB1 (AC input) and TB2 (DC output) are terminal blocks.
- TB3 signal connector is Molex 70246-10 or equivalent.
- Maximum mounting screw penetration is 0.16 (4.0)
- Fan/Cover option available, order part number JPS350 COVER or alternatively add suffix '-E' to receive cover fitted to the unit. Option is build to order.

Derating Curve & Application Notes



Application Notes

- To turn off the output, apply 5 V to the remote ON/OFF.
- AC OK is a TTL signal which goes LOW when input falls below 60 VAC at rated load.
- DC OK is a TTL signal which goes LOW when PSU is in an overcurrent condition, overvoltage condition, disabled or when output falls out of regulation.
- For AC OK and DC OK signals, source current is 1 mA, sink current is 6 mA.

See XPiQ website for detailed specifications and application notes.