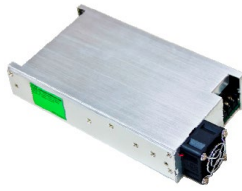


U-Chassis (Suffix "U")



Size: 8.00 x 4.66 x 1.51 inches

Enclosed with Rear-Side Fan (Suffix "E")



Size: 9.03 x 4.66 x 1.63 inches

Enclosed with Top Fan (Suffix "F")



Size: 8.00 x 4.66 x 2.85 inches

FEATURES

- Active PFC
- Remote Inhibit Function
- Power Good Output
- 5V/1A Standby Output
- 12V/1A Output for Fan
- Single Outputs
- 270W with Convection Cooling
- 360W with 30CFM Forced Airflow
- 90~264VAC Input Voltage Range
- Up to 86% High Efficiency
- Current Sharing Option (Single Wire)
- Short Circuit, Over Load, Over Voltage, & Over Temp. Protection
- UL60950-1, CB IEC60950-1, & TUV EN60950-1 Safety Approvals
- 3 Mechanical Options Available: U-Chassis, Enclosed w/ Rear-Side Fan, and Enclosed w/ Top Fan

DESCRIPTION

The PSPW360 series of AC/DC switching power supplies provides 360 Watts of output power with 30CFM forced airflow and 270W with convection cooling. This series consists of single output models ranging from 12VDC to 57VDC with a 90~264VAC input voltage range and active PFC. This series has UL60950-1, TUV EN60950-1, CB IEC60950-1, and CE safety approvals. All models are protected against short circuit, over load, over voltage, and over temperature conditions. Models are available in U-Chassis (Type U), enclosed with rear-side built-in fan (Type E), and enclosed with top built-in fan (Type F) designs. This series also has a current sharing option (suffix "D").

MODEL SELECTION TABLE

Model Number	Input Voltage	Output Voltage	Output Current			Ripple & Noise	Output Power		Package Type
			Min Load	Max Load Convection	Max Load 30CFM Forced Air		Convection	30CFM Forced Air	
PSPW360B-1Y12-U (D)	90 ~ 264 VAC	12 VDC	0mA	22.5A	30A	120mVp-p	270W	360W	U-Chassis
PSPW360B-1Y24-U (D)		24 VDC	0mA	11.25A	15A	240mVp-p	270W	360W	
PSPW360B-1Y30-U (D)		30 VDC	0mA	9.0A	12A	300mVp-p	270W	360W	
PSPW360B-1Y36-U (D)		36 VDC	0mA	7.5A	10A	360mVp-p	270W	360W	
PSPW360B-1Y48-U (D)		48 VDC	0mA	5.63A	7.5A	480mVp-p	270W	360W	
PSPW360B-1Y54-U (D)		54 VDC	0mA	5.01A	6.67A	540mVp-p	270W	360W	
PSPW360B-1Y57-E (D)		57 VDC	0mA	4.74A	6.32A	570mVp-p	270W	360W	
PSPW360B-1Y12-E (D)	90 ~ 264 VAC	12 VDC	0mA	-	30A	120mVp-p	270W	360W	Enclosed w/ Rear-side Fan
PSPW360B-1Y24-E (D)		24 VDC	0mA	-	15A	240mVp-p	270W	360W	
PSPW360B-1Y30-E (D)		30 VDC	0mA	-	12A	300mVp-p	270W	360W	
PSPW360B-1Y36-E (D)		36 VDC	0mA	-	10A	360mVp-p	270W	360W	
PSPW360B-1Y48-E (D)		48 VDC	0mA	-	7.5A	480mVp-p	270W	360W	
PSPW360B-1Y54-E (D)		54 VDC	0mA	-	6.67A	540mVp-p	270W	360W	
PSPW360B-1Y57-E (D)		57 VDC	0mA	-	6.32A	570mVp-p	270W	360W	
PSPW360B-1Y12-F (D)	90 ~ 264 VAC	12 VDC	0mA	-	30A	120mVp-p	270W	360W	Enclosed w/ Top-side Fan
PSPW360B-1Y24-F (D)		24 VDC	0mA	-	15A	240mVp-p	270W	360W	
PSPW360B-1Y30-F (D)		30 VDC	0mA	-	12A	300mVp-p	270W	360W	
PSPW360B-1Y36-F (D)		36 VDC	0mA	-	10A	360mVp-p	270W	360W	
PSPW360B-1Y48-F (D)		48 VDC	0mA	-	7.5A	480mVp-p	270W	360W	
PSPW360B-1Y54-F (D)		54 VDC	0mA	-	6.67A	540mVp-p	270W	360W	
PSPW360B-1Y57-F (D)		57 VDC	0mA	-	6.32A	570mVp-p	270W	360W	

NOTES

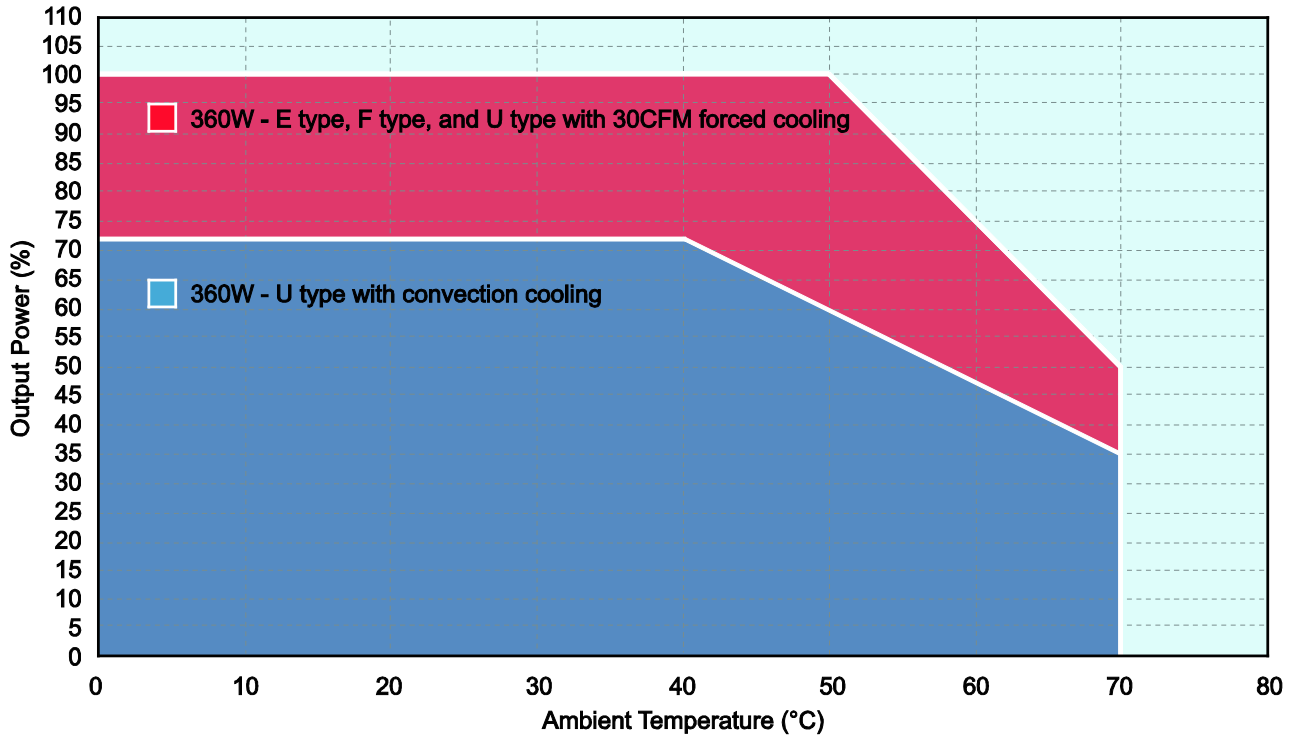
- Current share is optional. For current sharing function please add the suffix "D" to the model number (Ex: PSPW360B-1Y24-UD).
 - U Type: 270W max. with convection cooling at +40°C ambient temperature.
U Type: 360W max. with 30CFM forced air at +50°C ambient temperature.
E & F Types: 360W max. at +50°C ambient temperature.
 - Ripple & noise is measured at 20MHz limited bandwidth and with 0.1µF ceramic and 10µF/50V electrolytic capacitors bypassed at the output connector at 5% to 100% full load and nominal line.
 - The leakage current measurement is made in accordance with Safety Agency requirements.
 - This product is Listed to applicable standards and requirements by UL.
- *Due to advances in technology, specifications subject to change without notice.*

TECHNICAL SPECIFICATIONS: PSPW360 SERIES

All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
We reserve the right to change specifications based on technological advances.

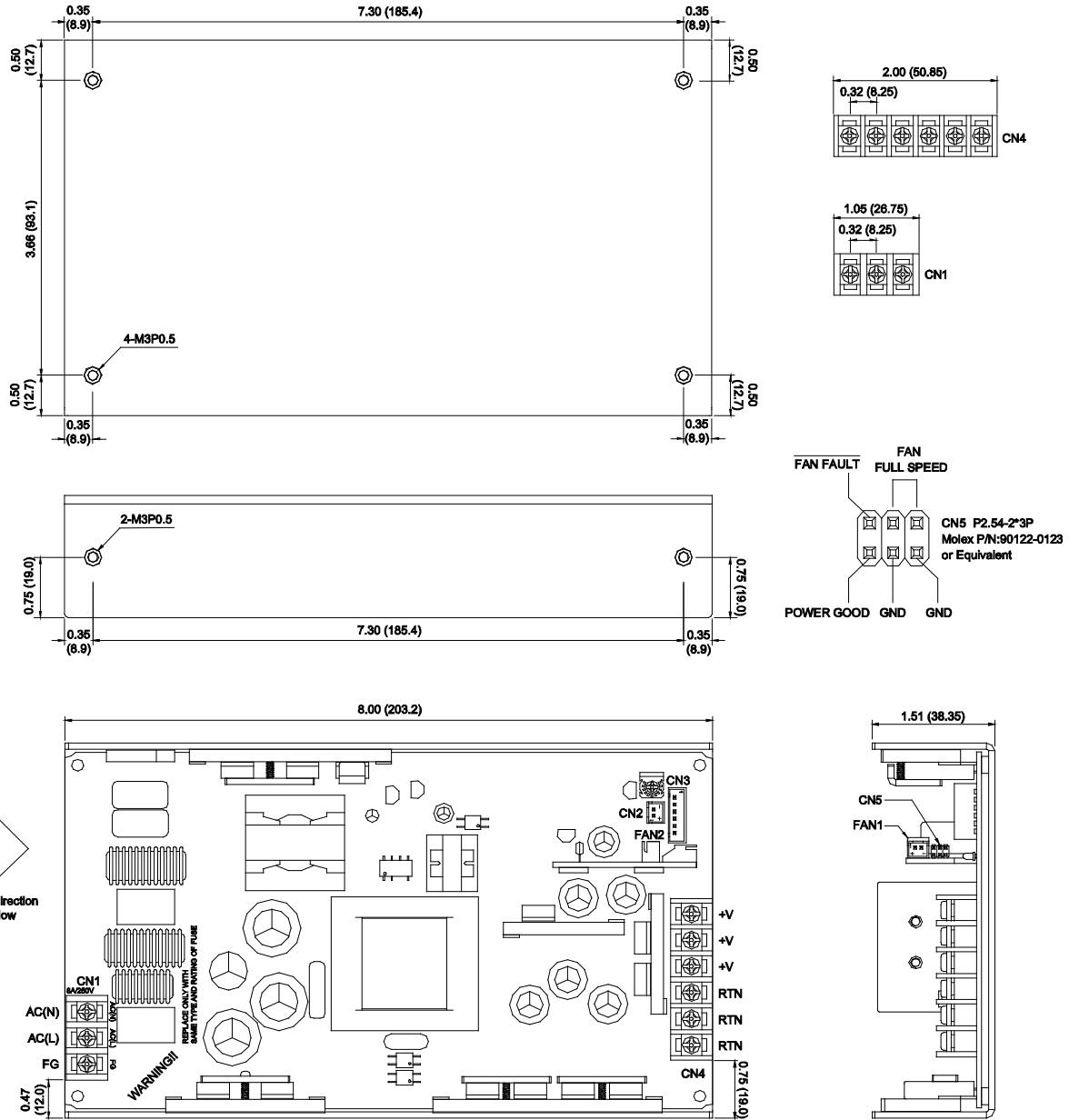
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit	
INPUT SPECIFICATIONS						
Input Voltage		90	115/230	264	VAC	
Input Frequency		47	50/60	63	Hz	
Input Current	At 115VAC and full load			6	A	
Inrush Current	At 230VAC cold start			50	A	
Power Factor	At 115/230VAC and full load	0.9				
OUTPUT SPECIFICATIONS						
Output Voltage			24		VDC	
Line Regulation		-0.5		+0.5	%	
Load Regulation		-1		+1	%	
Output Power	With convection cooling With 30CFM forced air			270 360	W	
Output Current	With convection cooling With 30CFM forced air			11.25 15.0	A	
Minimum Load		0			mA	
Ripple & Noise (See Note 2)			240		mVp-p	
Overshoot	Turn-on/turn-off	Less than ±10% over nominal voltage				
Hold-Up Time	at 115VAC and 70% load		20		ms	
Temperature Coefficient		-0.04		+0.04	°C	
Transient Response		10% max deviation recovery to within 10% in 10ms				
Standby Output		5V / 1A				
PROTECTION						
Over Voltage Protection	Manual power reset or INHIBIT pin reset is necessary	26.4		31.2	VDC	
Over Load Protection	Automatic recovery	110		150	% Io	
Short Circuit Protection		Automatic recovery				
Over Temperature Protection	INHIBIT pin reset is necessary	Thermal sensor shuts unit down				
GENERAL SPECIFICATIONS						
Efficiency	At 115VAC and full load At 230VAC and full load		83 86		%	
Dielectric Withstand Voltage	Primary to secondary	For 4 sec	4242		VDC	
	Primary to frame ground		2121			
	Secondary to frame ground		707			
Insulation	Primary to secondary	500 VDC	20		MΩ	
	Primary to frame ground		20			
Leakage Current (See Note 3)	Earth	At 264VAC		270	μA	
	Enclosure			50		
ENVIRONMENTAL SPECIFICATIONS						
Operating Temperature	See derating curve	0		+70	°C	
Storage Temperature		-10		+85	°C	
Operating Humidity	Non-condensing	5		95	% RH	
Storage Humidity	Non-condensing	10		95	% RH	
MTBF	Maximum load and 25°C ambient temperature	100,000			hours	
Burn-in Test		100% burn-in tested at max load and 40±5°C				
FUNCTIONS						
Remote Control (Inhibit)	Logic level LOW	Output is disabled	0		0.5	VDC
	Logic level HIGH or floating	Output is enabled	3.5		5.25	VDC
Power Good Output	Logic level LOW	Output voltage falls below its under voltage threshold				
	Logic level HIGH	Indicates DC output is good and within regulation				
Fan Speed Control	Logic level LOW	FAN fault				
	Logic level HIGH	FAN works in normal condition				
Current Share (See Note 1)	"D" suffix	4 supplies can share within 10%				
Remote Sense	Function not supported when current share is activated	Available when CN3's pin 5 and pin 6 are connected				
PHYSICAL SPECIFICATIONS						
Dimensions (L x W x H)	U-chassis model	8.00 x 4.66 x 1.51 inches (203.2 x 118.5 x 38.5 mm)				
Weight	U-chassis model	40oz (1134g)				
Connectors		See mechanical drawing				
SAFETY & EMI						
Safety Approvals		UL 60950-1 ⁽⁶⁾ , CSA-C22.2 NO.950-1, TUV EN60950-1, CB IEC60950-1				
EMI Standards		FCC Part 15 Class B, EN55022 Class B, CE				

DERATING CURVE



MECHANICAL DRAWING

Unit: Inches (mm)



PIN CONNECTIONS		
CONNECTOR	PIN NO.	FUNCTION
CN2 P2.5-2P Molex P/N: 48152-0210	PIN1	5Vsb
	PIN2	GND
CN3 P2.5-6P (OPTION) Molex P/N: 48152-0610 or equivalent	PIN1	Current Share (optional)
	PIN2	Inhibit
	PIN3	GND
	PIN4	5Vsb
	PIN5	-Sense
	PIN6	+Sense
FAN1 P2.5-2P Molex P/N: 48152-0610 or equivalent	PIN1	12V FAN +
	PIN2	12V FAN -
FAN2 P2.5-2P (with speed control) Molex P/N: 48152-0210 or equivalent	PIN1	12V FAN +
	PIN2	12V FAN -

DESIGN CONSIDERATIONS

Hold-Up Time

The power supply will maintain its proper output voltage within voltage specifications for at least 20 milliseconds after losing input power under typical input conditions with 70% loading.

Overshoot at Turn-On/Turn-Off

Any overshoots during turn-on/turn-off is less than $\pm 10\%$ of the nominal output voltage value. No voltage of opposite polarity will be present on the output during turn-on or turn-off.

Short Circuit Protection

Short circuiting the output will cause the power supply to shutdown without damage. The power supply will automatically recover after the short circuit is removed.

Over Voltage Protection

If over voltage occurs, the power supply will turn OFF when the output voltage is within +26.4VDC to +31.2VDC. The power supply will not automatically recover after the over voltage fault is removed. A manual power reset or INHIBIT pin reset is necessary.

Over Load Protection

An over load condition will occur when loading reaches 110%~150% of maximum load. The power supply will automatically recover after the over load condition is removed.

Over Temperature Protection

This power supply includes over temperature protection. An over temperature condition is typically the result of current over-loading or inadequate air circulation. When the thermistor senses a temperature inside the power supply that is above normal, the unit will automatically shutdown. The power supply will recover when the thermistor temperature returns to a normal value and after the INHIBIT pin is reset.

Fan Speed Control

This power supply includes a sophisticated fan controller that only turns the fan on as needed, sets the fan speed according to cooling requirements, and generates a fan fail alarm for a non-rotating fan.

FAN FAULT OUTPUT

Logic Level LOW: FAN Fault

Logic Level HIGH: FAN works in normal condition

Remote Sense

This power supply provides remote sensing function when CN3's pin 5 (-Sense) and pin 6 (+Sense) are connected. It doesn't support this function when current share function is activated.

Current Share (Optional)

Single wire current sharing function is available for this series (add suffix "D" to model number). Up to 4 units can be paralleled within 10% accuracy at full load. Each power module should have a minimum loading of 65 Watts (approx. 13% of rated load) in order to reach current sharing balance mode. In parallel operation, it is possible that only one unit will operate if the load is less than 65 Watts (13%) of the combined rated output load.

COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

Contact **Wall Industries** for further information:

Phone: ☎ (603)778-2300
Toll Free: ☎ (888)597-9255
Fax: ☎ (603)778-9797
E-mail: sales@wallindustries.com
Web: www.wallindustries.com
Address: 37 Industrial Drive
Exeter, NH 03833

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