

Wall Industries, Inc.

## PSM360 SERIES

**90~264VAC Input Voltage Range**  
**360 Watts with 30CFM Forced Airflow**  
**Active PFC, Single Output**  
**Medical AC/DC Switching Power Supplies**



Type U



Type E



Type F

### FEATURES

- Active PFC
- Single Output
- Remote Inhibit Function
- 5V / 1A Standby Output
- 12V / 1A Output for Fan
- 90~264Vac Input Voltage Range
- 360W with 30CFM Forced Airflow
- Current Sharing Option (Single Wire)
- Short Circuit, Over Load, and Over Voltage Protection
- UL60601-1, CSA-C22.2 No. 60601-1, IEC EN60601-1, EN60601-1 (3<sup>rd</sup> Edition) Safety Approvals
- 3 Mechanical Options Available: U-Chassis, Enclosed with Rear Side Fan, Enclosed with Top Fan

### DESCRIPTION

The PSM360 series of medical AC/DC switching power supplies offers 360 watts of output power with 30CFM forced airflow. All models have a single output, 90~264VAC full range input, and active PFC. These supplies also have UL60601-1, TUV EN60601-1, CB IEC60601-1, and CE safety approvals. All models are protected against short circuit, over load, and over voltage 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”).

**SPECIFICATIONS: PSM360 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.

**INPUT SPECIFICATIONS**

Input Voltage Range	90 ~ 264Vac (Full Range)
Input Frequency	47 ~ 63Hz
Input Current (rms)	4.5A max. at 115Vac 2.25A max. at 230Vac
Inrush Current	< 25A peak at 115Vac cold start and 25°C < 50A peak at 230Vac cold start and 25°C
Power Factor	> 0.95 at 115Vac > 0.90 at 230Vac

**OUTPUT SPECIFICATIONS**

Output Current	See Table
Output Voltage	See Table
Output Regulation (See Note 4)	±1%
Output Power	360W max. with 30CFM forced air cooling (U-Chassis Type)
Ripple & Noise (20MHz BW) (See Note 5)	See Table
Hold Up Time	20ms typical at 360 Watt Load, 115Vac input

**PROTECTION**

Short Circuit Protection	Auto-recovery
Over Voltage Protection	130% max. above nominal output. Shut down and latch off
Over Load Protection	110% to 150% maximum rating. Auto-recovery

**GENERAL SPECIFICATIONS**

Efficiency	83% typical at 115Vac and full load
Leakage Current	< 300µA at 264Vac
Current Share Option	Single wire (add the suffix "D" to the part number) Up to 4 units can be paralleled (Optional) within 10% accuracy at full load.

**ENVIRONMENTAL SPECIFICATIONS**

Operating Temperature	0°C to +70°C ambient; each output derates at 2.5% per degree from +50°C to +70°C
Storage Temperature	-20°C to +85°C
Humidity (non-condensing)	0% to 90%
MTBF	>100,000 hours at full load and 25°C ambient temperature

**PHYSICAL SPECIFICATIONS**

Dimensions (L x W x H)	U Type: 8.00 x 4.66 x 1.65 inches (203.2 x 118.5 x 42 mm) E Type: 9.03 x 4.66 x 1.69 inches (229.4 x 118.5 x 43 mm) F Type: 8.00 x 4.66 x 2.60 inches (203.2 x 118.5 x 66 mm)
Weight	U Type: 1.90lbs (0.86kgs) E Type: 2.16lbs (0.98kgs) F Type: 2.18lbs (0.99kgs)
DC Fan	End Fan Type: 40mm x 40mm x 20mm Top Fan Type: 60mm x 60mm x 15mm

**SAFETY & EMI**

Safety Standards	UL 60601-1 <sup>(6)</sup> , CSA-C22.2 NO.60601-1, EN60601-1, IEC EN60601-1
EMI Standards	EN60601-1-2, FCC Part 18 Class B, EN55011 Class B, CE

**MODEL SELECTION TABLE**

Model <sup>(1)</sup>	Input Voltage	Output Voltage	Output Current		Maximum Output Power <sup>(3)</sup>	Ripple & Noise <sup>(5)</sup>
			Convection <sup>(2)</sup>	30CFM forced air		
PSM360B-1Y12-X (D)	90 ~ 264 VAC	12 VDC	22.5A	30A	360W	120mV
PSM360B-1Y24-X (D)		24 VDC	11.25A	15A	360W	240mV
PSM360B-1Y30-X (D)		30 VDC	9A	12A	360W	300mV
PSM360B-1Y36-X (D)		36 VDC	7.5A	10A	360W	360mV
PSM360B-1Y48-X (D)		48 VDC	5.63A	7.5A	360W	480mV
PSM360B-1Y54-X (D)		54 VDC	5.01A	6.67A	360W	540mV
PSM360B-1Y57-X (D)		57 VDC	4.74A	6.32A	360W	570mV

**NOTES**

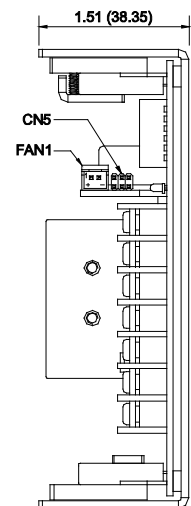
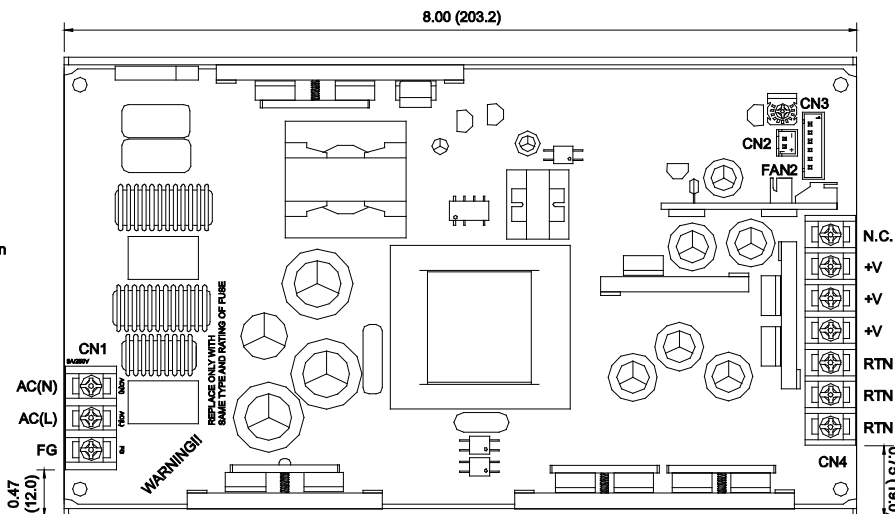
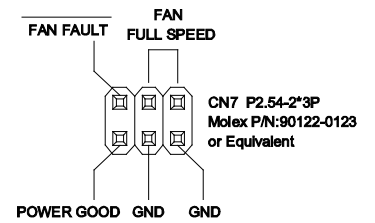
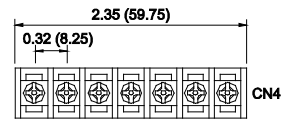
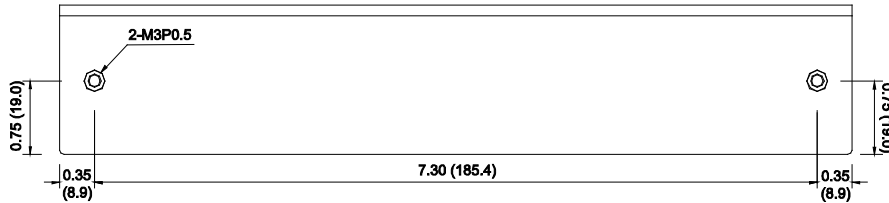
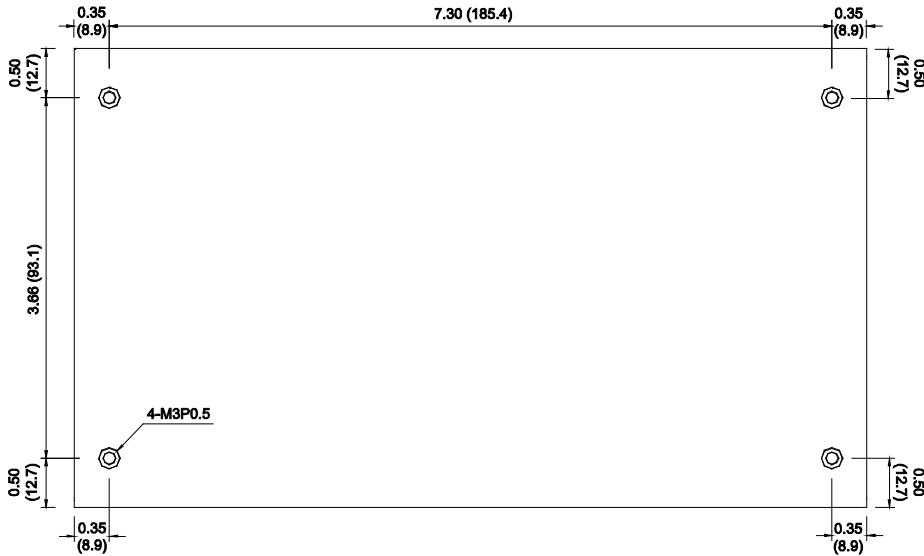
1. Mechanical Options: The “x” in the part number can be “U” for U-chassis type, “E” for enclosed type with rear side built-in fan, or “F” for enclosed type with top side built-in fan. The “D” is for current sharing option.
2. **U Type:** 270W at +40°C ambient max.
3. **U Type:** 360W max. with 30CFM forced air at +50°C ambient temperature.  
**E Type:** 360W max. at +50°C ambient temperature.  
**F Type:** 360W max. at +50°C ambient temperature.
4. At 25°C including initial tolerance, line voltage, load currents, and output voltages adjusted to factory settings.
5. Ripple & Noise is measured at 20MHz bandwidth with a tantalum 10µF in parallel with a 0.1µF ceramic capacitor.
6. This product is Listed to applicable standards and requirements by UL.

*\*Due to advances in technology, specifications are subject to change without notice.*

**MECHANICAL DRAWINGS**

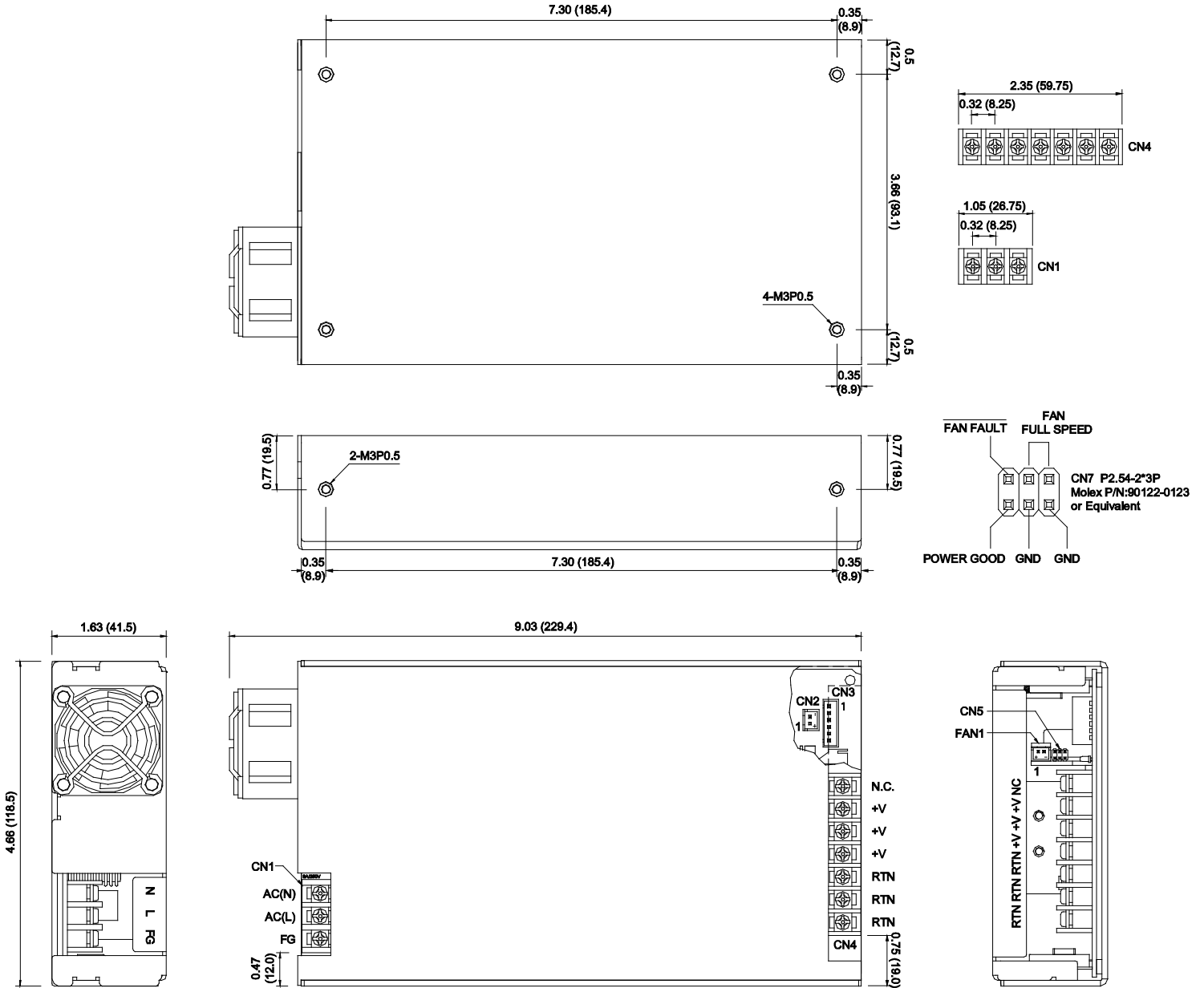
**Type "U" Models (U-Chassis Type): 8.00 x 4.66 x 1.51 inches**

Unit: inches (mm)



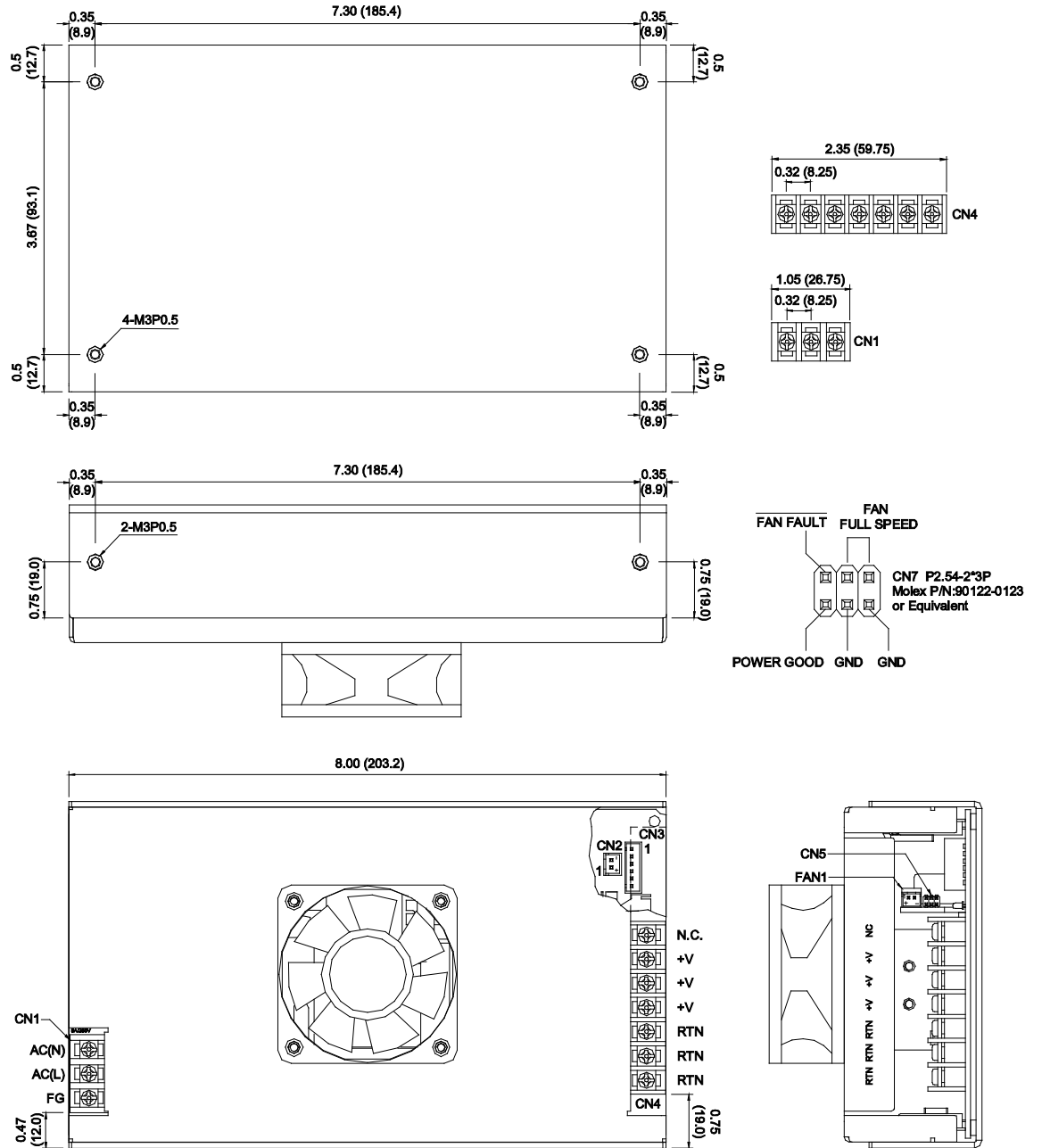
**Type "E" Models (Enclosed with Rear Side Built-in Fan Type): 9.03 x 4.66 x 1.63 inches**

Unit: inches (mm)



**Type "F" Models (Enclosed with Top Side Built-in Fan Type): 8.00 x 4.66 x 2.85 inches**

Unit: inches (mm)



**MATCHING CONNECTORS**

**CN1: Input Connector**

3-Pole Terminal block pitch; 8.25mm rate 20A/300V

Pin #	Signal
1	AC Neutral
2	AC Line
3	F.G.

**CN2: +5VSB Output Connector**

JST B2B-XH-A pitch:2.5mm or equivalent, mates with female housing JST XHP-2 or equivalent

Pin #	Signal
1	+5VSB
2	GND

**CN3: Remote Sense Connector**

JST B6B-XH-A pitch: 2.5mm or equivalent, mates with female housing JST XHP-6 or equivalent

Pin #	Signal
1	Sense +
2	Sense -
3	+5VSB
4	GND
5	INHIBIT (Remote Control)
6	Current Share

INHIBIT: Logic level HIGH (+5V): Enable, Logic level LOW: Disable(0V)

**CN4: Main Output Connector**

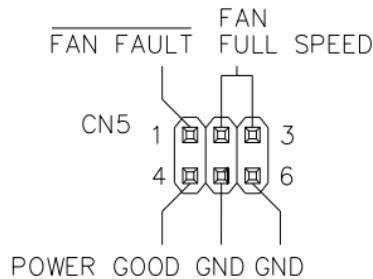
6-Pole Terminal block pitch: 8.25mm rate 20A/300V

Pin #	Signal
1	+Vo
2	+Vo
3	+Vo
4	RTN
5	RTN
6	RTN

**CN5: Fan Control & Power Good Signal Connector**

JST RF-H062TD-1130 pitch: 2.54mm or equivalent, mates with female housing JST RF-06 or equivalent

Pin #	Signal
1	FAN FAULT
2, 3	FAN FULL SPEED
4	POWER GOOD
5	GND
6	GND



FAN FAULT: Fan status indication, Fan Good: Logic level HIGH (+5V),  
 Fan Fault: Logic Level LOW (0V)  
 FAN FULL SPEED: Short these 2 pins (#2 & #3) with mini-jumper to get highest fan speed  
 POWER GOOD: Power Good: Logic level HIGH (+5V), Power Fault: Logic LOW (0V)

**FAN1: Fan Output Connector**

JST S2B-XH-A pitch: 2.5mm or equivalent, mates with female house JST XHP-2 or equivalent

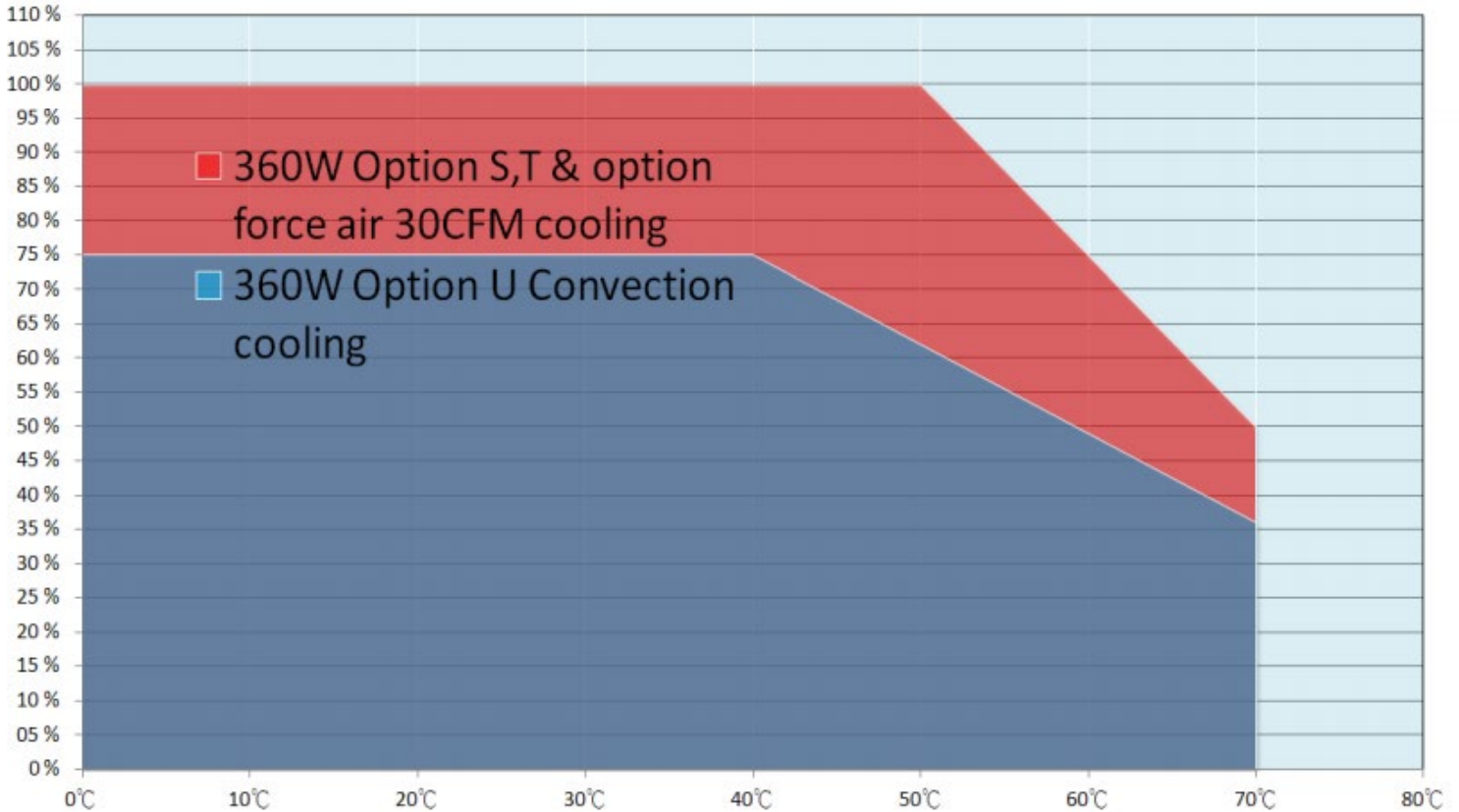
Pin #	Signal
1	+12VDC FAN+
2	+12VDC FAN-

**FAN2: Fan Output Connector**

JST B2B-XH-A pitch: 2.5mm or equivalent, mates with female housing JST XHP-2 or equivalent

Pin #	Signal
1	+12VDC FAN+
2	+12VDC FAN-

## DERATING CURVE



## 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.

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