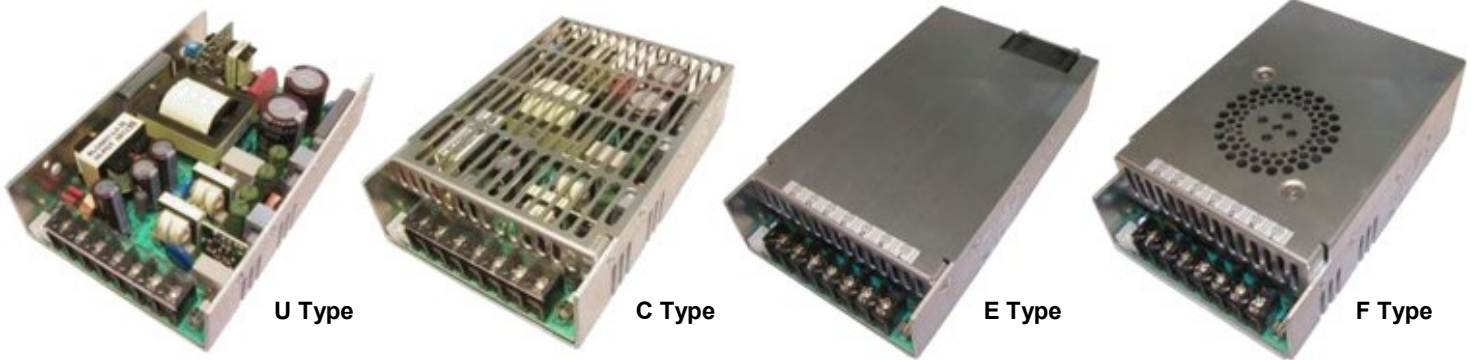


Wall Industries, Inc.

PSRL0601D SERIES

90~132 / 180~264VAC Auto-Selectable Input
125~300 Watts, Dual Outputs
Power Factor Corrected to EN61000-3-2 Class A
AC/DC Switching Power Supplies



FEATURES

- Dual Outputs
- RoHS Compliant
- High Quality & Reliable Component Usage
- Variable Fan Speed & Low Acoustical Noise
- MTBF: 100,000 Hours (MIL-HDBK-217F)
- Four Types of Mechanical Options
- Power Factor Corrected to EN61000-3-2 Class A
- Compact 300W with 1U Height Power Density: 8.3 Watts/cu in
- 90~132 / 180~264 VAC Auto-Selectable Input Range
- Low Leakage Current: 500 μ A at 240VAC and 300 μ A at 120VAC
- Short Circuit, Over Power, Over Voltage, and Over Temperature Protection
- UL60950-1, EN60950-1, IEC60950-1 Safety Approvals

DESCRIPTION

The PSRL0601D series of AC/DC switching power supplies offers up to 300 Watts of output power. This series consists of dual output models with power factor correction (PFC) and a 90~132 / 180~264 VAC auto-selectable input. These supplies also have short circuit, over voltage, over power, and over temperature protection. Models are available in U-Chassis (Type U), U-chassis with top cover (Type C), enclosed with side built-in fan (Type E), and enclosed with top built-in fan (Type F) designs. This series is RoHS compliant and has UL60950-1, EN60950-1, and IEC60950-1 safety approvals. For single output models see the PSRL0601 series.

SPECIFICATIONS: PSRL0601D 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	90-132 / 180-264 VAC auto-selectable	
Input Frequency	47-63Hz	
Input Current	8A at 100-120VAC; 4A at 200-240VAC	
Inrush Current	35A max. at 115VAC and cold start; 70A max. at 230VAC and cold start	
Power Factor Correction (PFC)	Pass EN61000-3-2 class A	
OUTPUT SPECIFICATIONS		
Output Voltage	See Table	
Output Power	See Table	
Output Adjustability	Output adjustable ±5% minimum	
Regulation	±5%	
Output Current	See Table	
Minimum Load	10% minimum load is required to maintain the ripple and regulation	
Ripple & Noise	1% (measured from 10KHz to 20MHz BW at output with 0.1µF ceramic and 22µF electrolytic capacitors in parallel).	
Transient Response	Returns to within 1% in less than 2.5ms for a 50% load change and the peak transient does not exceed 5%	
Overshoot	Turn-on & off < 5% over nominal voltage	
Hold-Up Time	20ms min. at 80% of full load	
Turn-on Delay	1 second maximum at 230VAC	
PROTECTION		
Input Fusing Protection	One T8A/250V fuse inserted in primary	
Over Power Protection	110-140% of I-max; automatic recovery	
Over Voltage Protection	Latching down will occur when output voltage exceeds 130%. Recycle AC input to reset	
Short Circuit Protection	Trip without damage and automatic recovery	
Over Temperature Protection	Protected in the event of excessive operating ambient 110°C; automatic recovery	
GENERAL SPECIFICATIONS		
Switching Frequency	23KHz fixed frequency	
Efficiency	75%-85% depending on model	
HI-POT test	Input Line to Chassis	1500VAC (10mA DC cut off current) for 3 seconds
	Primary to Secondary	3000VAC for 3 seconds
	Primary to Core	1500VAC for 3 seconds
Burn-in	45±5°C for one hour at 230VAC with full load.	
Leakage Current	< 1mA (<i>optional: 300µA max. at 120VAC; 500µA max. at 240VAC input</i>)	
Grounding Test	Apply 25A from ground pin of the three prong plug to the far most earth. Max allowable resistance is 0.1Ω	
ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature	0°C to +70°C ambient, de-rating at 2.5% per degree from +50°C to +70°C.	
Storage Temperature	-20°C to +85°C	
Operating Humidity	5% to 90% RH non-condensing	
Storage Humidity	5% to 95% RH non-condensing	
Vibration	Frequency 5 to 50Hz, acceleration ±7.35 m/(s x s) on X, Y, and Z axis.	
Cooling	U & C type models	Convection
	E & F type models	Built-in fan
MTBF	100,000 hours at 30°C according to MIL-HDBK-217F	
FUNCTIONS		
Power Supply ON	Green LED designated as LED 1 on the PCB	
Power Good	Designated as PG on the CN1 goes high 100-500ms after DC regulation and goes low at least 1ms before loss of regulation (open collector)	
Fan Drive	12VDC/400mA is available to drive an external fan.	
Fan Fail (FF) Alarm	Designated as FF on pin 3 of CN1; two types of logical signal provided. Please contact factory for more details.	
PHYSICAL SPECIFICATIONS		
Weight	U type models	1.32 lbs (600g)
	C type models	1.43 lbs (650g)
	E type models	1.65 lbs (750g)
	F type models	1.76 lbs (800g)
Dimensions (L x W x H)	U type models	6.00 x 4.00 x 1.50 inches (152.40 x 101.60 x 38.10 mm)
	C type models	6.00 x 4.00 x 1.57 inches (152.40 x 101.60 x 39.90 mm)
	E type models	7.00 x 4.00 x 1.60 inches (177.80 x 101.60 x 40.64 mm)
	F type models	6.00 x 4.00 x 2.00 inches (152.40 x 101.60 x 50.80 mm)
SAFETY & EMC		
Safety Approvals	UL60950-1 ⁽⁵⁾ , EN60950-1, IEC60950-1	
EMI Conduction & Radiation	EN55022 Class B	
Harmonic Current	EN61000-3-2, EN61000-3-3	
EMS Immunity	EN55024, IEC61000-4-2, 3, 4, 5, 6, 11	

MODEL SELECTION TABLE

U-CHASSIS MODELS (TYPE "U")

Model Number	Input Voltage Range	Output Voltage	Maximum Output Current		Maximum Output Power		
			Convection	18CFM	Convection	18CFM	
PSRL0601DU-0512	V1	90 ~ 264 VAC	+5 VDC	15 A	30 A	125W	250W
	V2		+12 VDC	10.42 A	16.67 A		
PSRL0601DU-0524	V1		+5 VDC	15 A	30A	125W	250W
	V2		+24 VDC	5.2 A	8.33 A		
PSRL0601DU-0548	V1		+5 VDC	15 A	30 A	125W	250W
	V2		+48 VDC	2.6 A	4.16 A		
PSRL0601DU-1224	V1		+12 VDC	12.5 A	16.67 A	150W	300W
	V2		+24 VDC	6.25 A	8.33 A		

U-CHASSIS WITH TOP COVER MODELS (TYPE "C")

Model Number	Input Voltage Range	Output Voltage	Maximum Output Current	Maximum Output Power	
PSRL0601DC-0512	V1	90 ~ 264 VAC	+5 VDC	15 A	125W
	V2		+12 VDC	10.42 A	
PSRL0601DC-0524	V1		+5 VDC	15 A	125W
	V2		+24 VDC	5.2 A	
PSRL0601DC-0548	V1		+5 VDC	15 A	125W
	V2		+48 VDC	2.6 A	
PSRL0601DC-1224	V1		+12 VDC	12.5 A	150W
	V2		+24 VDC	6.25 A	

ENCLOSED WITH SIDE BUILT-IN FAN MODELS (TYPE "E")

Model Number	Input Voltage Range	Output Voltage	Maximum Output Current	Maximum Output Power	
PSRL0601DE-0512	V1	90 ~ 264 VAC	+5 VDC	30 A	250W
	V2		+12 VDC	16.67 A	
PSRL0601DE-0524	V1		+5 VDC	30A	250W
	V2		+24 VDC	8.33 A	
PSRL0601DE-0548	V1		+5 VDC	30 A	250W
	V2		+48 VDC	4.16 A	
PSRL0601DE-1224	V1		+12 VDC	16.67 A	300W
	V2		+24 VDC	8.33 A	

ENCLOSED WITH TOP BUILT-IN FAN MODELS (TYPE "F")

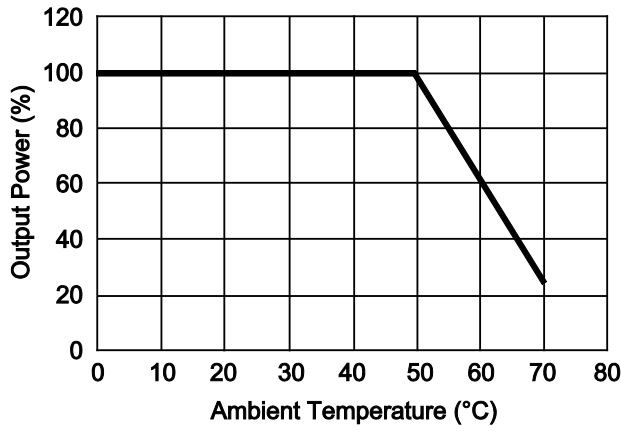
Model Number	Input Voltage Range	Output Voltage	Maximum Output Current	Maximum Output Power	
PSRL0601DF-0512	V1	90 ~ 264 VAC	+5 VDC	30 A	250W
	V2		+12 VDC	16.67 A	
PSRL0601DF-0524	V1		+5 VDC	30A	250W
	V2		+24 VDC	8.33 A	
PSRL0601DF-0548	V1		+5 VDC	30 A	250W
	V2		+48 VDC	4.16 A	
PSRL0601DF-1224	V1		+12 VDC	16.67 A	300W
	V2		+24 VDC	8.33 A	

NOTES

- Four types of mechanical options are available: U-chassis ("U" type), U-chassis with top cover ("C" type), enclosed with side built-in fan ("E" type), and enclosed with top built-in fan ("F" type).
- 10% minimum load is required to maintain the ripple and regulation specifications.
- Output is full isolated
- For single output models see the PSRL0601 series.
- This product is Listed to applicable standards and requirements by UL.

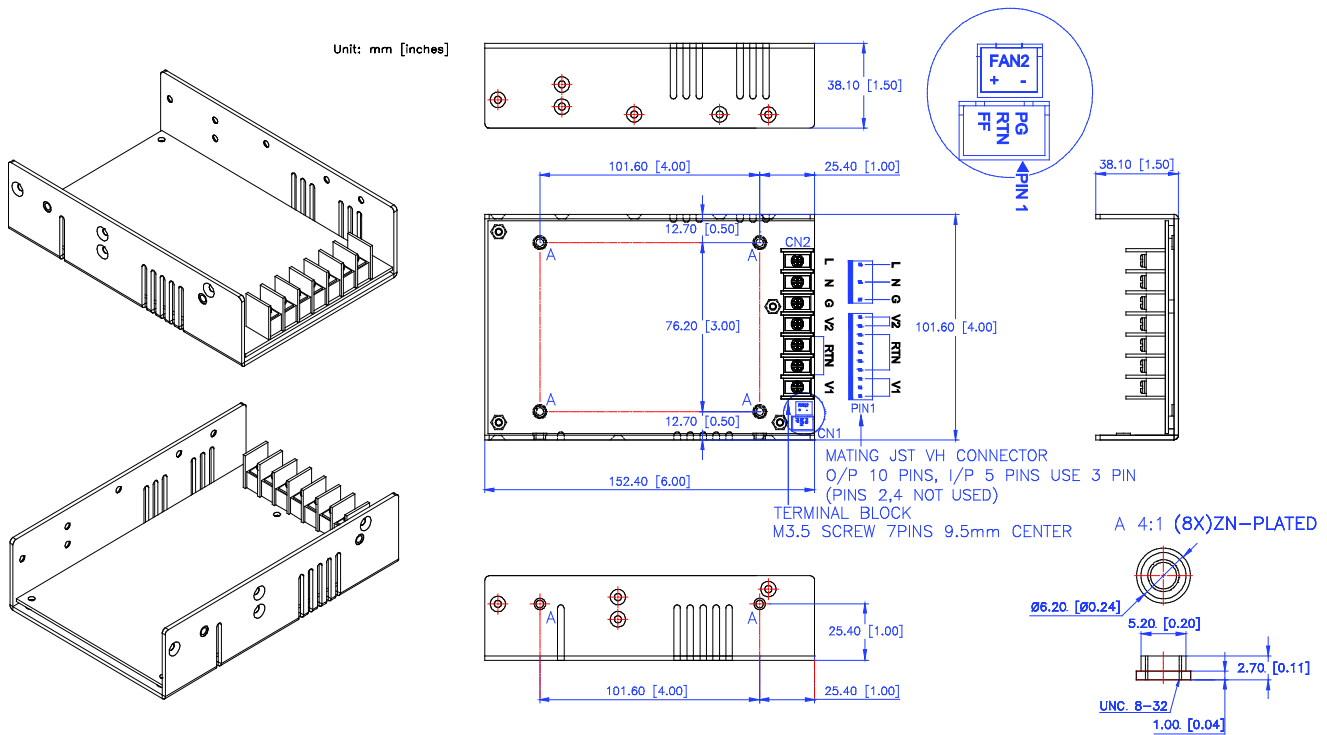
***Due to advances in technology, specifications subject to change without notice.**

DERATING CURVE



MECHANICAL DRAWING

U-Chassis Models (Type "U"): 6.00(L) x 4.00(W) x 1.50(H) inches; Weight: 1.32 lbs



I/O CONNECTOR PIN ASSIGNMENTS

Input and Output Connector (CN2):

Terminal block: Howder Part No. HB-95-7P

Molex - Mating JST VH series. Input 5 pin connector (3 pins used, pins 2 & 4 removed)

PCB Labeling: L = Line; N = Neutral; G = Chassis Ground. Output 10 pin connector.

Input and Output Connector Pin Assignment:

PIN ASSIGNMENT	
Howder	Molex
Pin 1: V1	Pins 1-3: V1
Pins 2-3: RTN	Pins 4-8: RTN
Pin 4: V2	Pin 9-10: V2
Pin 5: GND	Pin 11: GND
Pin 6: Neutral	Pin 13: Neutral
Pin 7: Line	Pin 15: Line

Mounting Inserts:

6 Places 8-32 (M4X0.7 Optional). Maximum penetration 4mm; see outline drawing for location.

Logic Signal Connector (CN1):

Mating JST XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03);

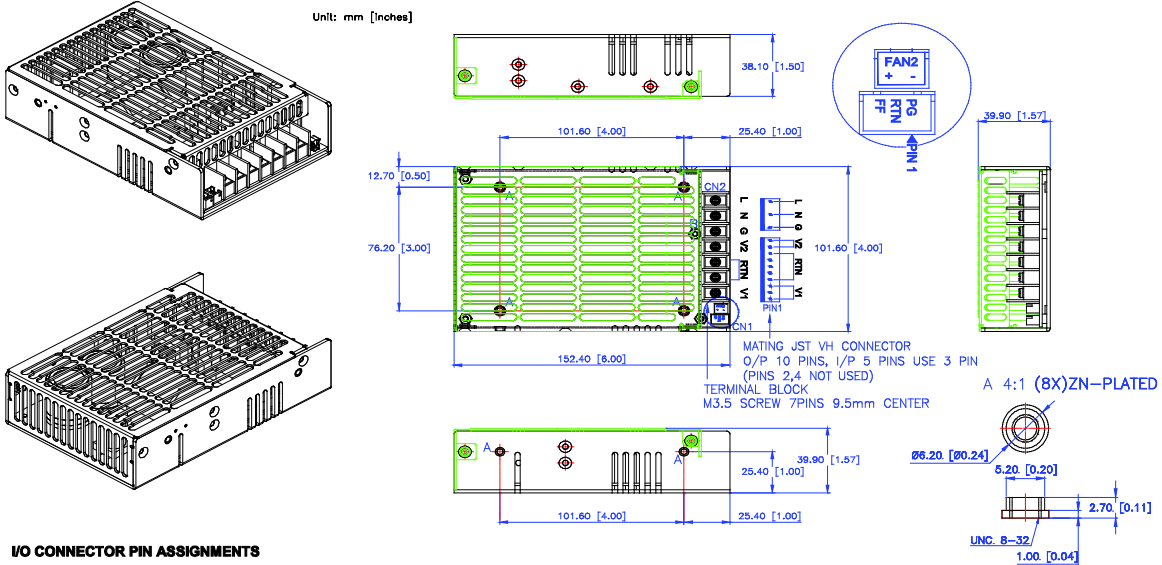
Mating Pins: JST SXH-002T-P0.6 FOR AWG 30 to 28

Fan Driver Connector (FAN2):

Mating connector is JST P/N XHP-2 (2 pins 0.98 ditch) or equivalent (CHYAO SHIUNN js-2001-02)

MECHANICAL DRAWING

U-Chassis with Top Cover Models (Type "C"): 6.00(L) x 4.00(W) x 1.57(H) inches; Weight: 1.43 lbs



I/O CONNECTOR PIN ASSIGNMENTS

Input and Output Connector (CN2):
Terminal block: Howder Part No. HB-95-7P
Molex - Mating JST VH series. Input 5 pin connector (3 pins used, pins 2 & 4 removed)
PCB Labeling: L = Line; N = Neutral; G = Chassis Ground. Output 10 pin connector.

Input and Output Connector Pin Assignment:

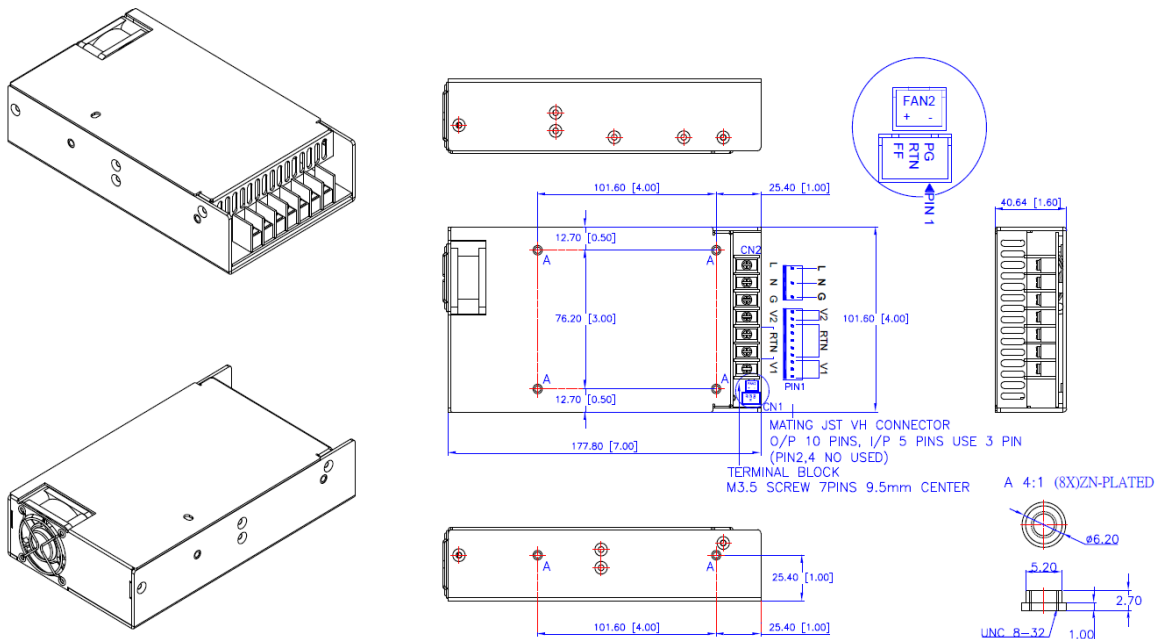
PIN ASSIGNMENT	
Howder	Molex
Pin 1: V1	Pin 1-3: V1
Pin 2-3: RTN	Pin 4-6: RTN
Pin 4: V2	Pin 9-10: V2
Pin 5: GND	Pin 11: GND
Pin 6: Neutral	Pin 13: Neutral
Pin 7: Line	Pin 15: Line

Mounting Inserts:
6 Places 9-32 (MAX0.7 Optional). Maximum penetration 4mm; see outline drawing for location.

Logic Signal Connector (CN1):
Mating JST XHP-3 or equivalent (CHYAO SHIUNN JS-2001-03);
Mating Pins: JST GXH-002T-P0.6 FOR AWG 30 to 26

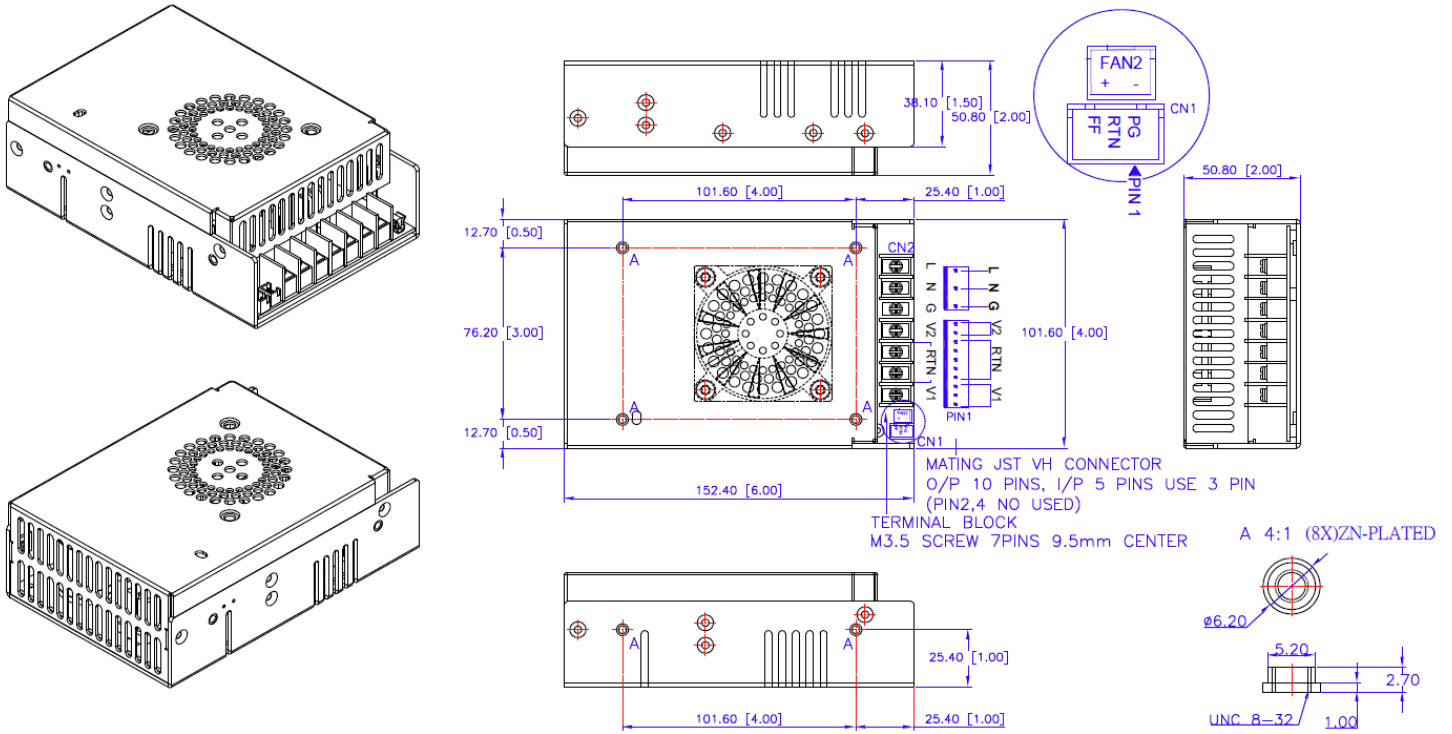
Fan Driver Connector (FAN2):
Mating connector is JST PIN XHP-2 (2 pins 0.98 ditch) or equivalent (CHYAO SHIUNN JS-2001-02)

Enclosed with Side Built-in Fan Models (Type "E"): 7.00(L) x 4.00(W) x 1.60(H) inches; Weight: 1.65 lbs



MECHANICAL DRAWING

Enclosed with Top Built-in Fan Models (Type "E"): 6.00(L) x 4.00(W) x 2.00(H) inches; Weight: 1.76 lbs



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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