

U-Chassis (U Type)



Size: 6.00 x 4.18 x 1.38 inches

Enclosed Case (C Type)



Size: 6.00 x 4.18 x 1.38 inches

DIN Rail (DN Type)



Size: 6.00 x 4.18 x 1.38 inches

FEATURES

- RoHS Compliant
- High Efficiency up to 93%
- Single Outputs
- Up to 240 Watts Output Power
- Universal Input Range: 90~264VAC (120~370VDC)
- PFC Function, PF > 0.95 at 230VAC
- -10°C to +70°C Operating Temperature Range
- 4000VAC I/O Isolation
- Short Circuit, Over Power, & Over Voltage Protection
- UL60950, CE, & CB Safety Approvals
- Meets EN55022 Class B
- U-Chassis, Enclosed Case, and DIN Rail Clip Available

APPROVALS



DESCRIPTION

The PSAQF240 series of AC/DC switching power supplies offers up to 240W of output power. All models have a single output and a universal input voltage range of 90~264VAC (120~370VDC). Some features include 4000VAC I/O isolation, PFC function > 0.95, and efficiency up to 93%. These supplies also have UL/cUL, CE, and CB safety approvals and are RoHS compliant. All models are protected against short circuit, over power, and over voltage conditions. Models are available in U-chassis (type U), enclosed case (type C), and DIN rail (type DN) designs.

MODEL SELECTION TABLE

U-Chassis Models (Type U)

Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Output Current	Output Power	Ripple & Noise ⁽²⁾	Efficiency
PSAQF240U-12S	90~264 VAC (120~370 VDC)	12 VDC	20A	240W	120mVp-p	90%
PSAQF240U-15S		15 VDC	16A	240W	200mVp-p	90%
PSAQF240U-24S		24 VDC	10A	240W	200mVp-p	92%
PSAQF240U-28S		28 VDC	8.57A	240W	200mVp-p	92%
PSAQF240U-32S		32 VDC	7.5A	240W	200mVp-p	92%
PSAQF240U-36S		36 VDC	6.66A	240W	200mVp-p	92%
PSAQF240U-48S		48 VDC	5A	240W	200mVp-p	93%

Enclosed Case Models (Type C)

Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Output Current	Output Power	Ripple & Noise ⁽²⁾	Efficiency
PSAQF240C-12S	90~264 VAC (120~370 VDC)	12 VDC	16.66A	200W	120mVp-p	90%
PSAQF240C-15S		15 VDC	14.66A	220W	120mVp-p	90%
PSAQF240C-24S		24 VDC	10A	240W	120mVp-p	92%
PSAQF240C-28S		28 VDC	8.57A	240W	200mVp-p	92%
PSAQF240C-32S		32 VDC	7.5A	240W	200mVp-p	92%
PSAQF240C-36S		36 VDC	6.66A	240W	200mVp-p	92%
PSAQF240C-48S		48 VDC	5A	240W	200mVp-p	93%

DIN Rail Models (Type DN)

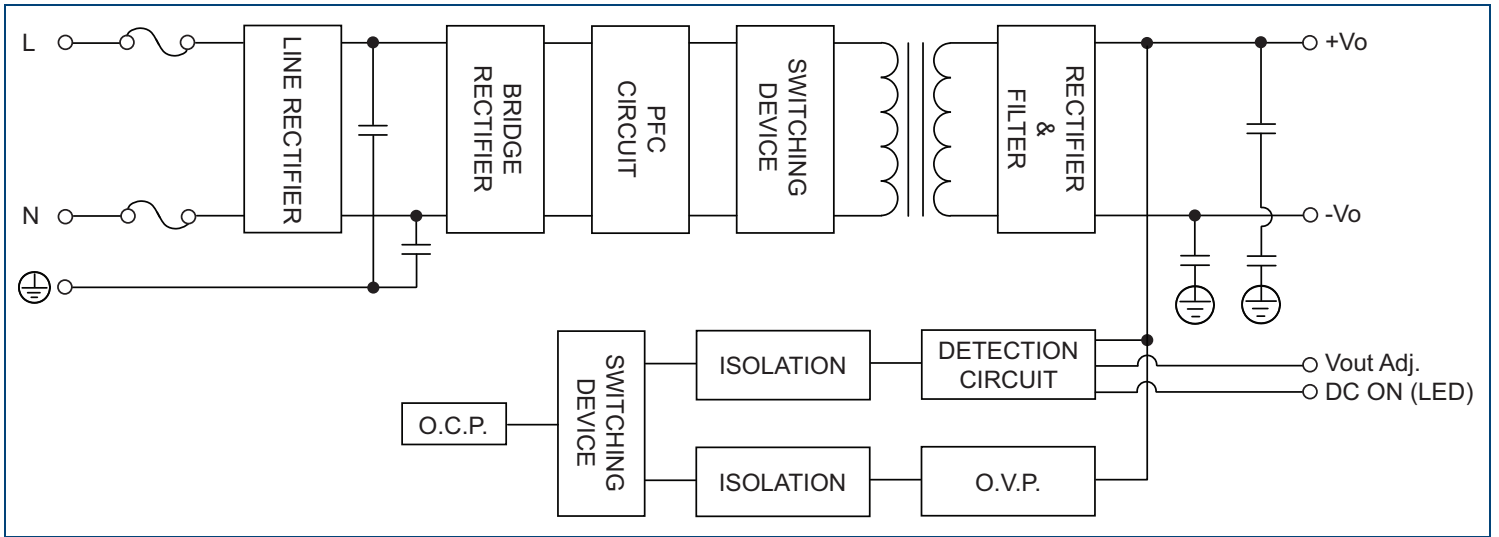
Model Number ⁽¹⁾	Input Voltage Range	Output Voltage	Output Current	Output Power	Ripple & Noise ⁽²⁾	Efficiency
PSAQF240DN-12S	90~264 VAC (120~370 VDC)	12 VDC	16.66A	200W	120mVp-p	90%
PSAQF240DN-15S		15 VDC	14.66A	220W	120mVp-p	90%
PSAQF240DN-24S		24 VDC	10A	240W	120mVp-p	92%
PSAQF240DN-28S		28 VDC	8.57A	240W	200mVp-p	92%
PSAQF240DN-32S		32 VDC	7.5A	240W	200mVp-p	92%
PSAQF240DN-36S		36 VDC	6.66A	240W	200mVp-p	92%
PSAQF240DN-48S		48 VDC	5A	240W	200mVp-p	93%

NOTES

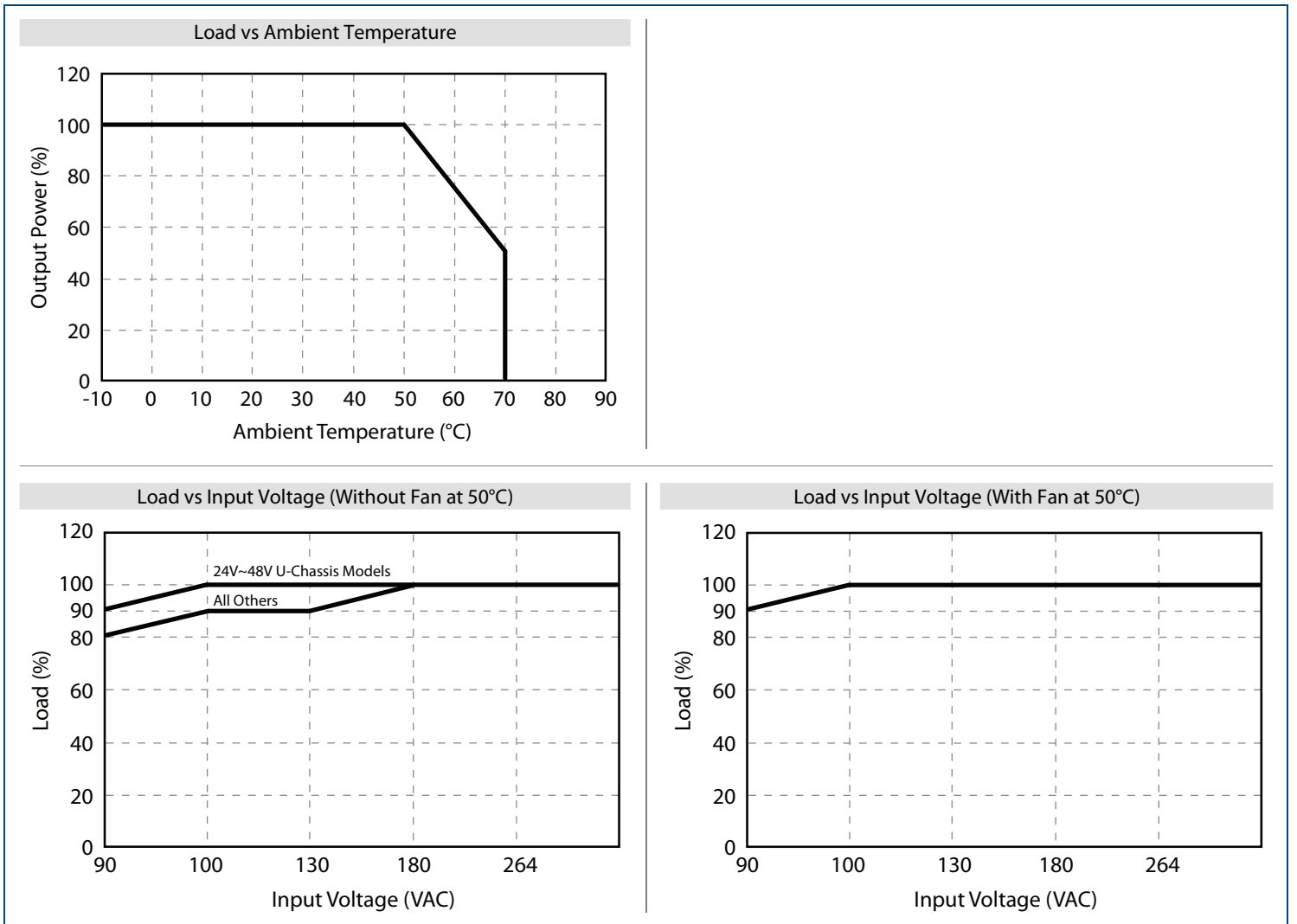
1. Three mechanical options available: U-chassis (type U), enclosed case (type C), and DIN rail (type DN).
2. Ripple & Noise are measured at 20MHz bandwidth and with 0.1µF and 47µF capacitors in parallel across the output.

SPECIFICATIONS: PSAQF240 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	AC input voltage range	90		264	VAC
	DC input voltage range	120		370	VDC
Input Frequency		47		63	Hz
Input Current	At 115 VAC and full load			3.0	A
	At 230 VAC and full load			1.5	
Inrush Current (< 2ms)	At 115 VAC and full load			30	A
	At 230 VAC and full load			60	
Power Factor	At 115VAC and full load	0.98			
	At 230 VAC and full load	0.95			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy		-2		+2	%
Output Current		See Table			
Minimum Load		1			%
Line Regulation	Low line to high line	-1		+1	%
Load Regulation	Min load to max load	-1		+1	%
Output Power		See Table			
Ripple & Noise		See Table			
Maximum Capacitive Load	Depending on model	470		23,000	µF
Hold-up Time	U-Chassis (U Type) models	13			ms
	Enclosed Case (C Type) & DIN Rail (DN type) models	20			
Temperature Coefficient	0~50°C	-0.03		+0.03	%/°C
PROTECTION					
Short Circuit Protection		Latch-off			
Over Voltage Protection		Latch-off			
Over Power Protection		auto-recovery			
GENERAL SPECIFICATIONS					
Efficiency	At 230 VAC and full load	See Table			
Isolation Voltage	Input to Output	4000			VAC
	Input to FG	2000			
	Output to FG	500			
Leakage Current				0.5	mA
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	With derating (see derating curve)	-10		+70	°C
Storage Temperature		-25		+85	°C
Humidity				95	% RH
Cooling		Free air convection			
Vibration	At 10~500Hz, 10 min./cycle for 60 min. each test along the X,Y,Z axis		2		G
MTBF	25°C (MIL-HDBK-217F)	50,000			hours
PHYSICAL SPECIFICATIONS					
Weight	U-Chassis (U Type) models	1.28 lbs (580g)			
	Enclosed Case (C Type) models	1.34 lbs (610g)			
	DIN Rail (DN type) models	1.36 lbs (615g)			
Dimensions (L x W x H)		6.00" x 4.18" x 1.38" (150.0 x 106.0 x 35.0 mm)			
SAFETY & EMC					
Safety Approvals		CE, UL60950-1, CB			
EMI (Conducted & Radiated Emissions)		EN 55022 Class B			
EMS (Noise Immunity)		EN55024			

BLOCK DIAGRAM

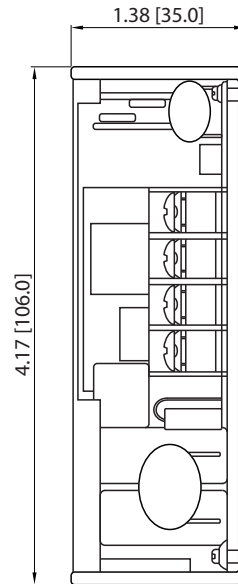
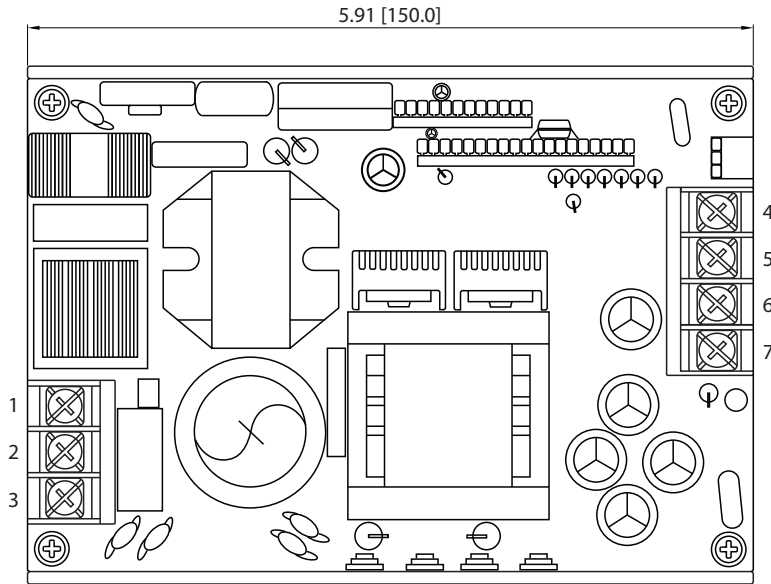


DERATING

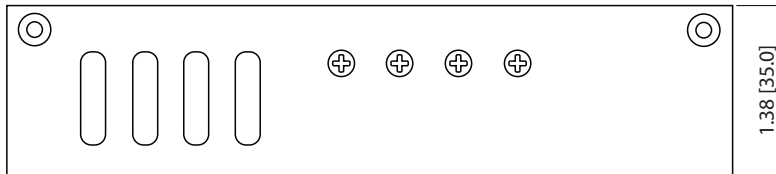


MECHANICAL DRAWINGS

U-Chassis Models (U Type)

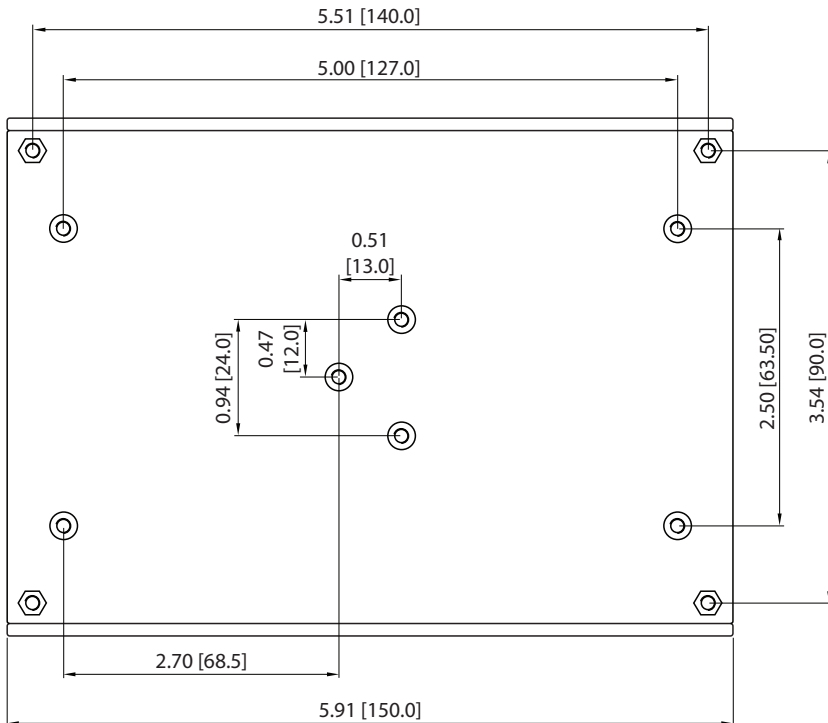


PIN CONNECTIONS	
PIN	ASSIGNMENT
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT



NOTES

1. Unit: inches [mm]
2. Tolerance: ± 0.02 [± 0.5]
3. Weight: 1.28 lbs (580g)
4. All dimensions are for reference only

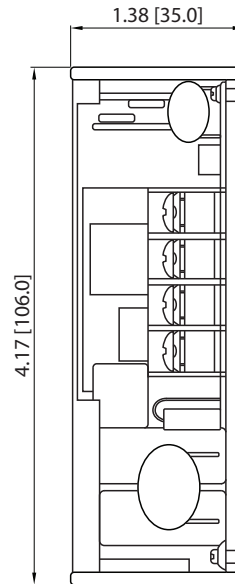
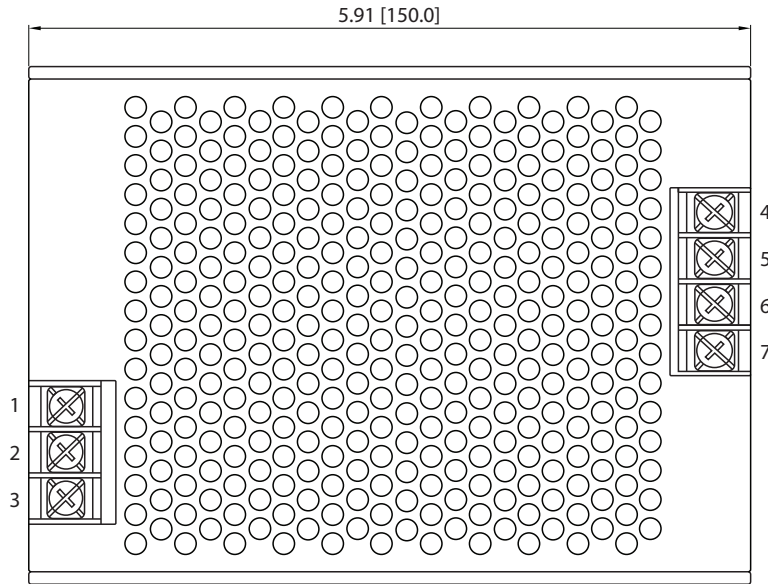


ASSEMBLY INSTRUCTIONS

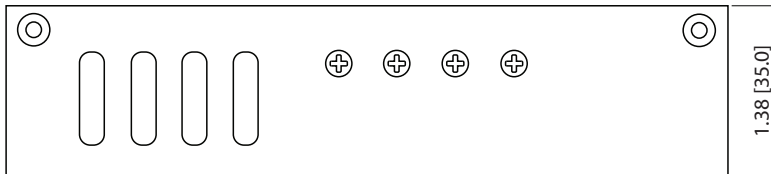
1. Mounting Inserts: M3 threaded on bottom. 0.125" thru-holes on sides (countersunk 82° to 0.250")
2. Depth of mounting hardware 0.02" [0.5mm] max on bottom; therefore, the screw length is the thickness of the customer's mounting surface plus 0.10" [2.5mm]

MECHANICAL DRAWINGS

Enclosed Case Models (C Type)

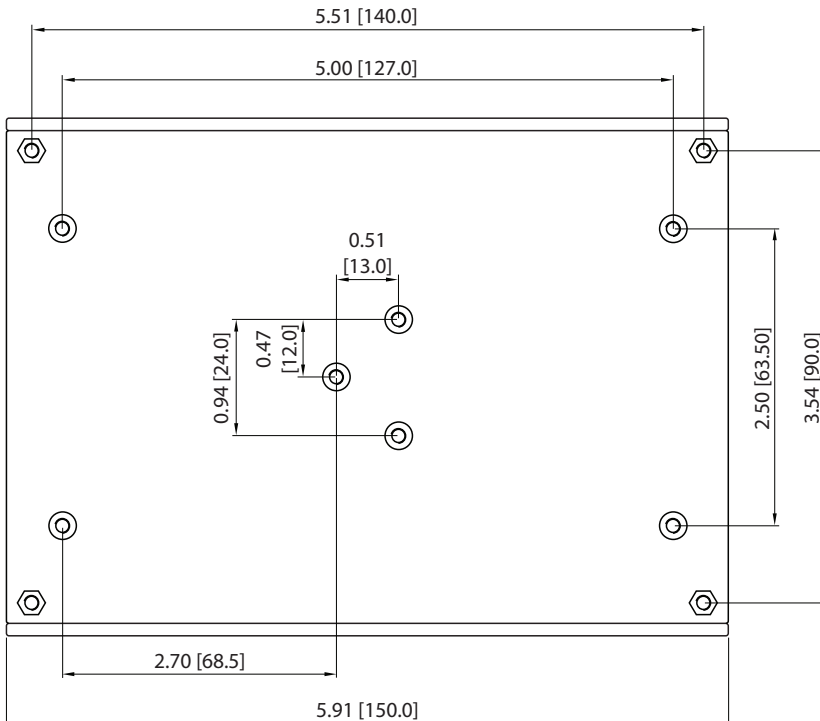


PIN CONNECTIONS	
PIN	ASSIGNMENT
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT



NOTES

1. Unit: inches [mm]
2. Tolerance: ± 0.02 [± 0.5]
3. Weight: 1.34 lbs (610g)
4. All dimensions are for reference only

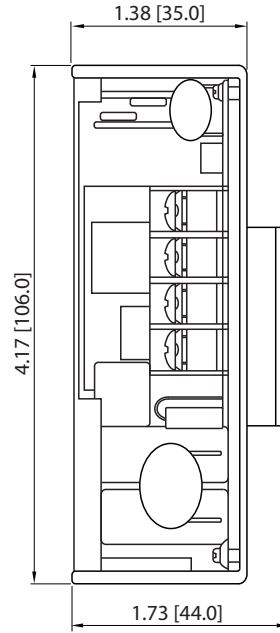
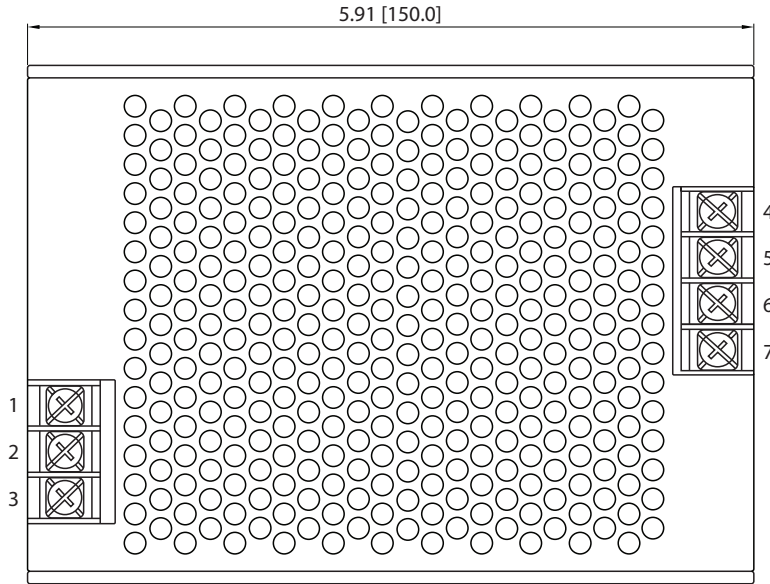


ASSEMBLY INSTRUCTIONS

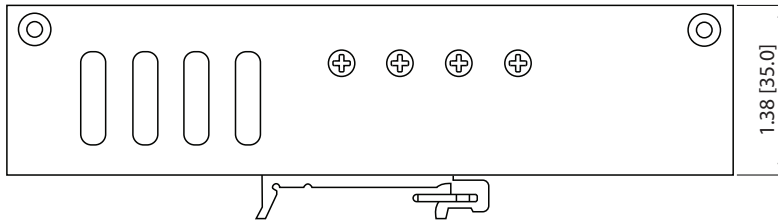
1. Mounting Inserts: M3 threaded on bottom. 0.125" thru-holes on sides (countersunk 82° to 0.250")
2. Depth of mounting hardware 0.02" [0.5mm] max on bottom; therefore, the screw length is the thickness of the customer's mounting surface plus 0.10" [2.5mm]

MECHANICAL DRAWINGS

DIN Rail Models (DN Type)

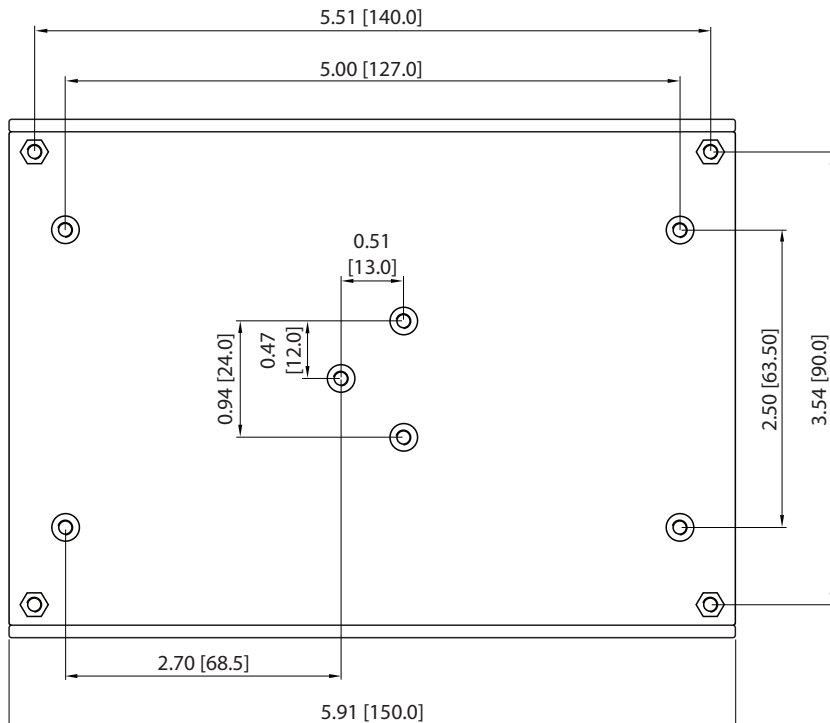


PIN CONNECTIONS	
PIN	ASSIGNMENT
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

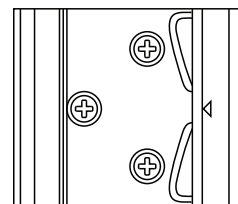


NOTES

- Unit: inches [mm]
- Tolerance: ± 0.02 [± 0.5]
- Weight: 1.36 lbs (615g)
- All dimensions are for reference only



DIN Rail Accessory



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 ISO9001-2008 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: 5 Watson Brook Road
Exeter, NH 03833