

Enclosed Case (C Type)



Size: 6in x 4.18in x 1.38in

U-Chassis (U Type)



Size: 6in x 4.18in x 1.38in

DIN Rail (DN Type)



Size: 6in x 4.18in x 1.38in

**APPROVALS**



**FEATURES**

- Universal Input Range: 90~264VAC (120~370VDC)
- PFC Function
- High Efficiency
- RoHS Compliant Design
- 4000VAC I/O Isolation
- Short Circuit, Over Power, & Over Voltage Protection
- CE Safety Approval for All Models
- UL60950 & CB Safety Approvals for all Models Except U-Type 5V Models
- Meets EN55022 Class B
- U-Chassis, Enclosed or DIN Rail Case Available

**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, and high efficiency. All models in this series are RoHS compliant and have CE safety approvals. Every model except the U-Chassis type 5V model also have UL60950 and CB approvals. 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), or DIN Rail designs.

**MODEL SELECTION TABLE**

**U-Chassis Models (Type U)**

Model Number <sup>(1)</sup>	Input Voltage Range	Output Voltage	Output Current		Output Power	Ripple & Noise <sup>(2)</sup>	Efficiency
			Min.	Max.			
PSAQF240U-5S	90~264 VAC (120~370 VDC)	5 VDC	5%	36A	180W	150mVp-p	87%
PSAQF240U-12S		12 VDC	2%	20A	240W	120mVp-p	90%
PSAQF240U-15S		15 VDC	2%	16A	240W	200mVp-p	90%
PSAQF240U-24S		24 VDC	2%	10A	240W	200mVp-p	92%
PSAQF240U-28S		28 VDC	2%	8.57A	240W	200mVp-p	92%
PSAQF240U-32S		32 VDC	2%	7.5A	240W	200mVp-p	92%
PSAQF240U-36S		36 VDC	2%	6.66A	240W	200mVp-p	92%
PSAQF240U-48S		48 VDC	2%	5A	240W	200mVp-p	93%

**MODEL SELECTION TABLE**

**Enclosed Case Models (Type C)**

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

**MODEL SELECTION TABLE**

**DIN Rail Models (Type DN)**

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

**SPECIFICATIONS: PSAQF240 SERIES**

All specifications are based on 25°C warm-up time, Normal Input Voltage, and Full Load unless otherwise noted.  
We reserve the right to change specifications based on technological advances.

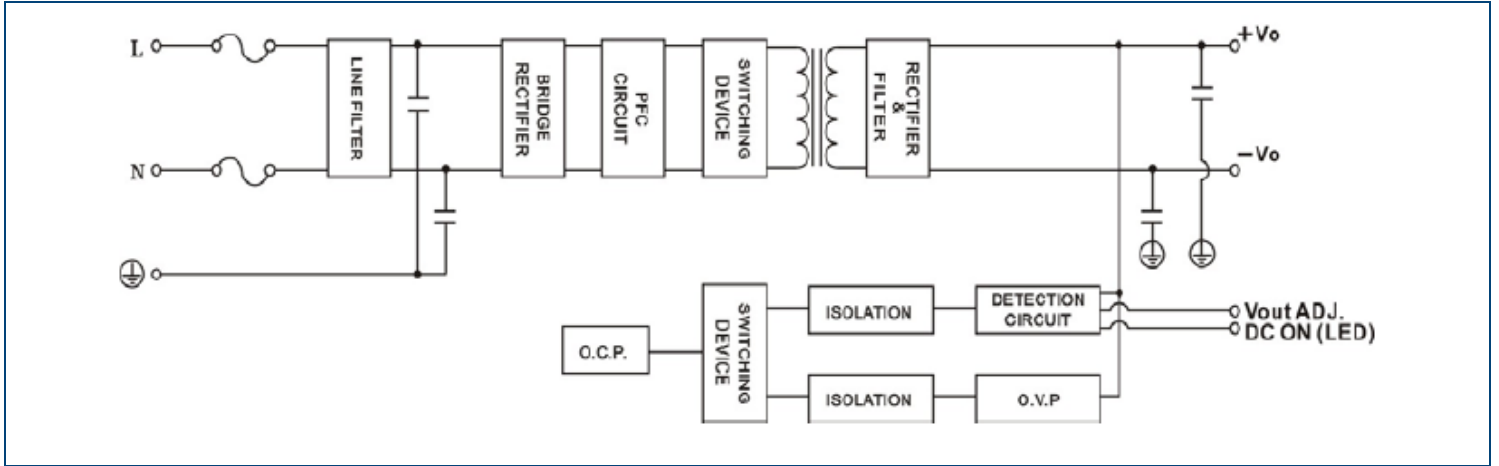
SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
<b>INPUT SPECIFICATIONS</b>					
Input Voltage	AC input voltage range	90		264	VAC
	DC input voltage range	120		370	VDC
Input Frequency		47		63	Hz
Input Current	At 115 VAC and full load			3.0	A
	At 230 VAC and full load			1.5	
Inrush Current (< 2ms)	At 115 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			
<b>OUTPUT SPECIFICATIONS</b>					
Output Voltage			See Table		
Voltage Accuracy		-2		+2	%
Output Current			See Table		
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
<b>PROTECTION</b>					
Short Circuit Protection			Latch-off		
Over Voltage Protection			Latch-off		
Over Power Protection			Auto-Recovery		
<b>GENERAL SPECIFICATIONS</b>					
Efficiency	At 230VAC		See Table		
	Input to Output		4000VAC or 5656VDC		
Isolation Voltage	Input to FG		2000VAC		
	Output to FG		500VAC		
Leakage Current				0.5	mA
<b>ENVIRONMENTAL SPECIFICATIONS</b>					
Operating Temperature	With derating (see derating curve)	-10		+70	°C
Storage Temperature		-25		+85	°C
Humidity				95	% RH
Cooling			Free air convection		
Vibration	10~500Hz, 2G 10 min./cycle, 60 min. each test along the X,Y,Z axis				
MTBF	25°C (MIL-HDBK-217F)	120,000			hours
<b>PHYSICAL SPECIFICATIONS</b>					
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)	Tolerance ±0.5mm	U-Chassis 5V Model	6.00" x 4.18" x 1.46" (150.0 x 106.0 x 37.0 mm)		
		Other U-Chassis, Enclosed & DIN Rail Models	6.00" x 4.18" x 1.38" (150.0 x 106.0 x 35.0 mm)		
<b>SAFETY &amp; EMC</b>					
Safety Approvals	U-Chassis Models	5V Model	CE		
		All Models	CE, UL60950 <sup>(3)</sup> , CB		
	Enclosed & DIN Rail Models	CE, UL60950 <sup>(3)</sup> , CB			
EMI	Conducted & Radiated Emissions		EN 55022 Class B		
EMS	Noise Immunity		EN55024		

**NOTES**

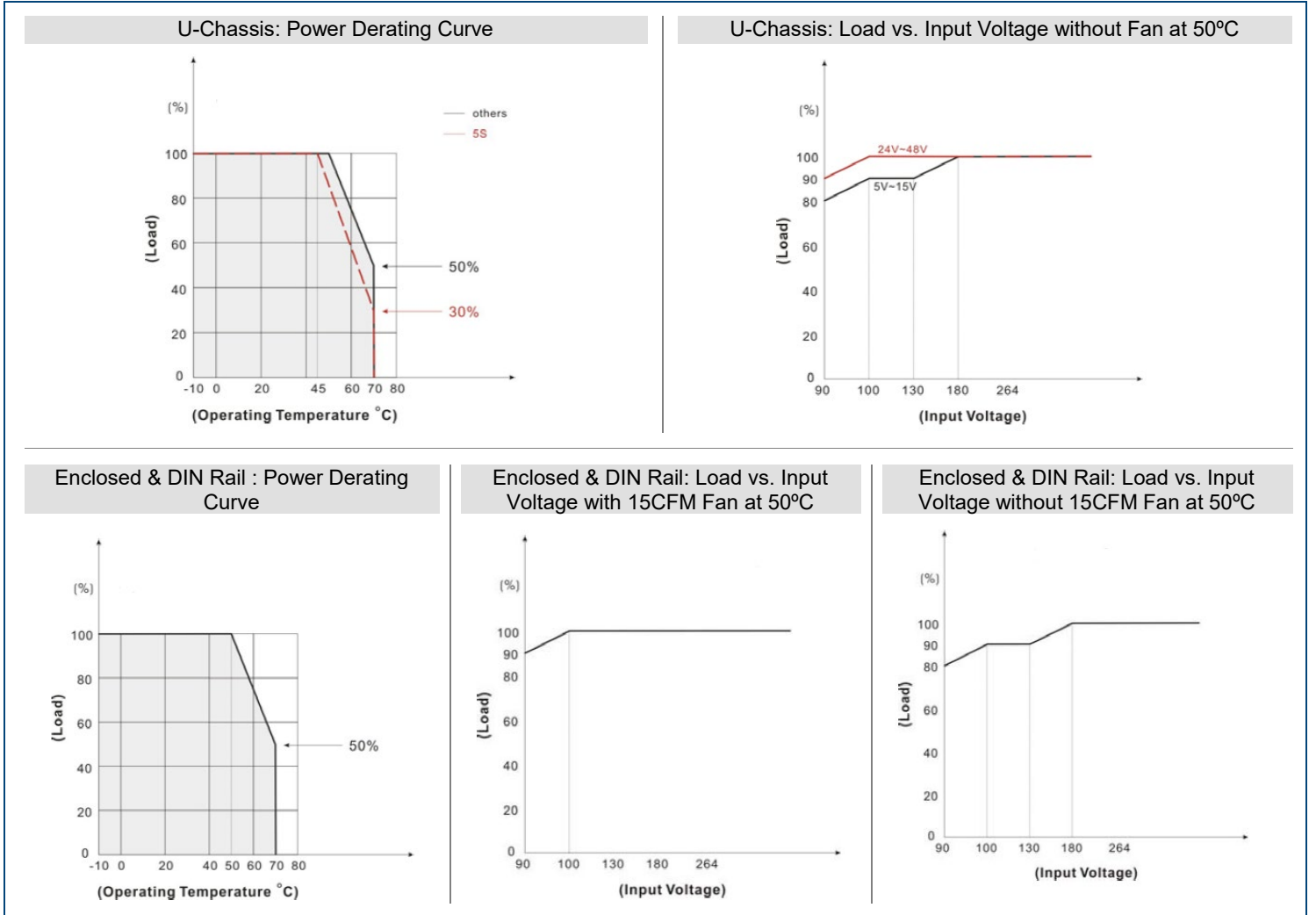
- Three mechanical options available: U-chassis (type U), enclosed case (type C), and DIN rail (type DN).
- Ripple & Noise are measured at 20MHz bandwidth and with 0.1µF and 47µF capacitors in parallel across the output.
- This product is Listed to applicable standards and requirements by UL.

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

**BLOCK DIAGRAM**

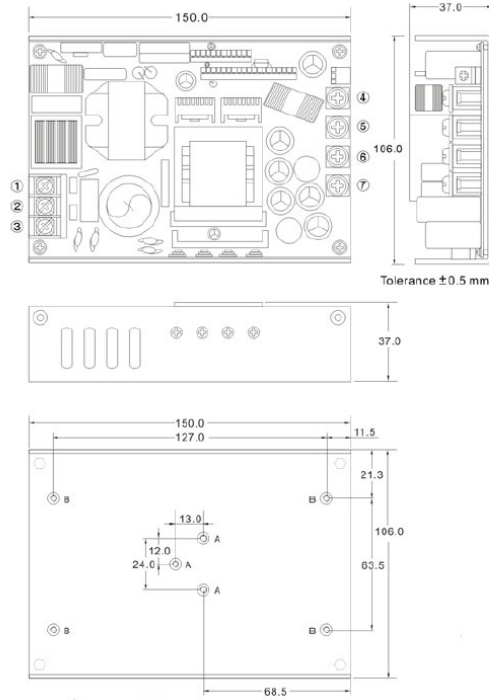


**DERATING**



MECHANICAL DRAWINGS

U-Chassis Models (U Type) 5V Model



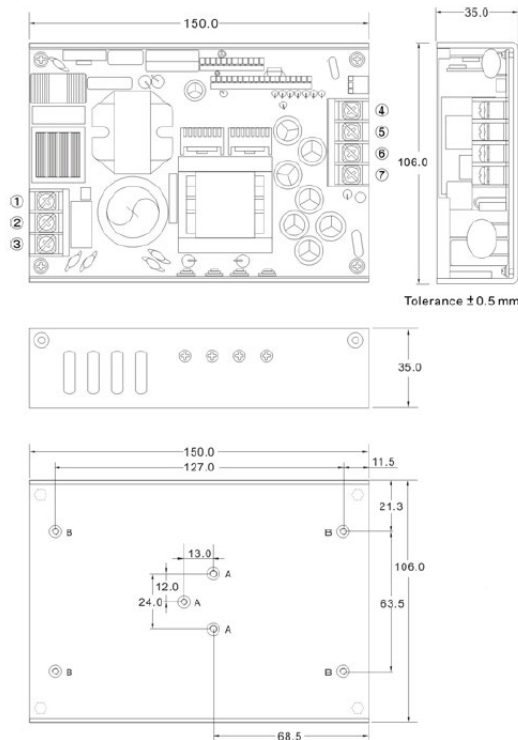
Pin Connections

Pin#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

A=For fixture to din rail clip only  
B=For fixture to pcb/chassis only  
A=M3x0.5P  
B=M3x0.5P

Assembly Instructions  
\*U Case T=2.0mm  
Customer is advised to screw into the threads  
no more than 2.0mm

U-Chassis Models (U Type) Other Models



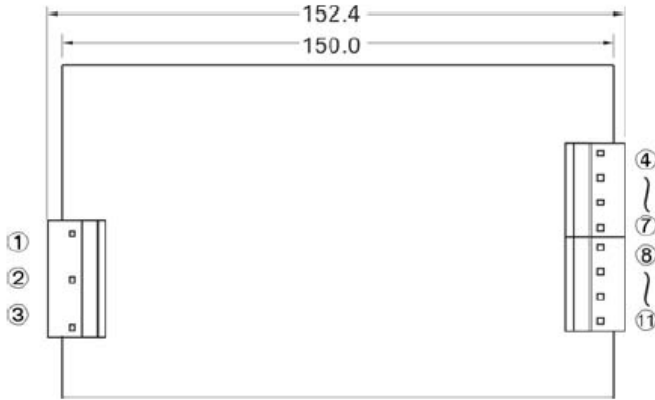
Pin Connections

Pin#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

A=For fixture to din rail clip only  
B=For fixture to pcb/chassis only  
A=M3x0.5P  
B=M3x0.5P

Assembly Instructions  
\*U Case T=2.0mm  
Customer is advised to screw into the threads  
no more than 2.0mm

A Type

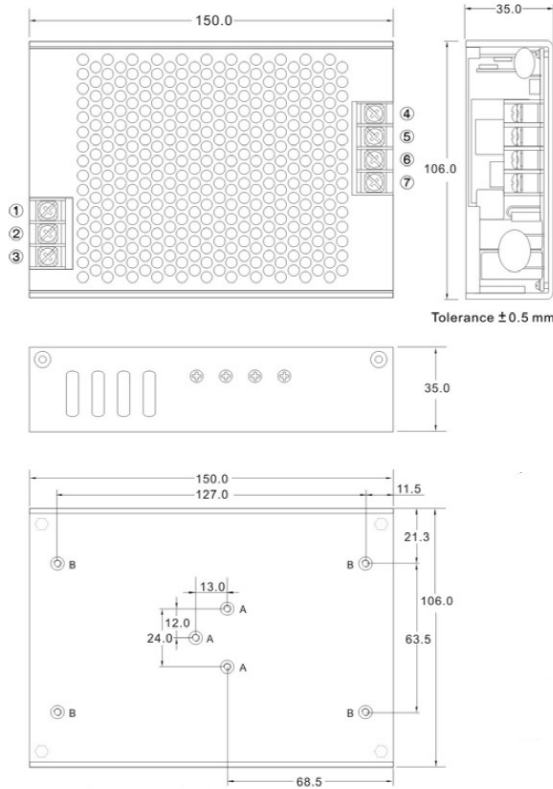


Pin Connections

Pin#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4~7	+DC OUT
8~11	-DC OUT

\*A type not available for 5V models

Enclosed Case Models (C Type)



Pin Connections

Pin#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

Tolerance  $\pm 0.5$  mm

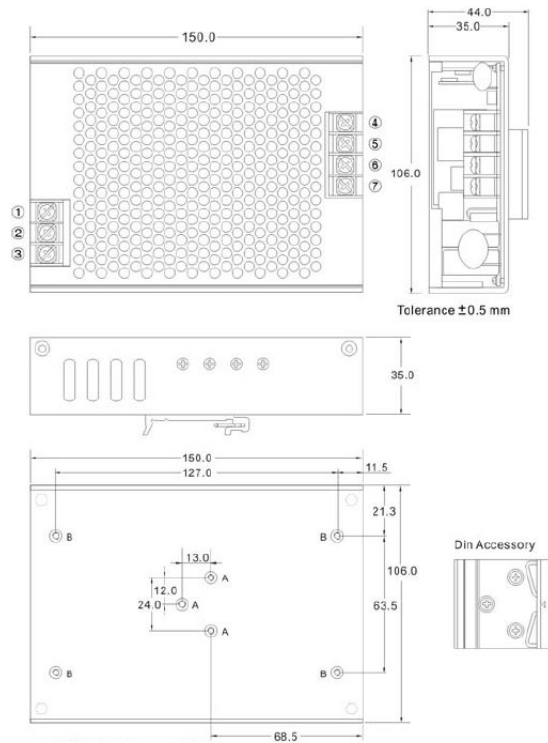
A=For fixture to din rail clip only  
B=For fixture to pcb/chassis only  
A=M3x0.5P  
B=M3x0.5P

Assembly Instructions

\*U Case T=2.0mm

Customer is advised to screw into the threads no more than 2.0mm

DIN Rail Kit (DN Type)



A=For fixture to din rail clip only  
B=For fixture to pcb/chassis only  
A=M3x0.5P  
B=M3x0.5P

Pin Connections

Pin#	Single
1	AC IN (L)
2	AC IN (N)
3	FG
4	+DC OUT
5	+DC OUT
6	-DC OUT
7	-DC OUT

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:

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