

RHINO PSE Series Encapsulated Power Supplies

The PSE series are AC/DC switch mode power supplies encapsulated in an ultra-compact, low profile housing. They are ideal for space limited applications and are easily screw mounted to a panel or equipment chassis, or can be DIN rail mounted using the optional DIN rail mounting kit. The PSE series features a universal input from 85-264 VAC and single or dual outputs from 15 Watts up to 60 Watts (above 30 Watt, single output only).

Features

- Ultra compact, low profile plastic case
- Single or dual output models
- Screw terminal blocks
- Chassis mount or 35mm DIN rail mount with optional adaptor
- Universal input 85-264 VAC, 47-440 Hz (60 Watt, 47-63 Hz)
- Double insulated - no external ground required
- UL508 listed, UL60950-1 recognized, CE marked
- Short circuit and overload protection
- 3-year warranty



Single Output Models 15 to 60 Watt				
Part No.	Price	Weight (lbs)	Output Power Max.	Output
PSE05-115	<--->	0.3	15 Watt	5 VDC / 3000 mA
PSE12-115	<--->	0.3		12 VDC / 1250 mA
PSE15-115	<--->	0.3		15 VDC / 1000 mA
PSE24-115	<--->	0.3		24 VDC / 625 mA
PSE05-130	<--->	0.5	30 Watt	5 VDC / 6000 mA
PSE12-130	<--->	0.5		12 VDC / 2500 mA
PSE15-130	<--->	0.5		15 VDC / 2000 mA
PSE24-130	<--->	0.5		24 VDC / 1250 mA
PSE05-150	<--->	0.8	51 Watt	5.1 VDC / 10,000 mA
PSE12-160	<--->	0.8	60 Watt	12 VDC / 5000 mA
PSE15-160	<--->	0.8		15 VDC / 4000 mA
PSE24-160	<--->	0.8		24 VDC / 2500 mA

Dual Output Models 15 to 30 Watt					
Part No.	Price	Weight (lbs)	Output Power Max.	Output 1	Output 2
PSE12-215	<--->	0.3	15 Watt	+12 VDC / 650 mA	-12 VDC / 650 mA
PSE15-215	<--->	0.3		+15 VDC / 500 mA	-15 VDC / 500 mA
PSE12-230	<--->	0.5	30 Watt	+12 VDC / 1300 mA	-12 VDC / 1300 mA
PSE15-230	<--->	0.5		+15 VDC / 1000 mA	-15 VDC / 1000 mA

Input Specifications		
Input Voltage	Nominal	100 - 240 VAC
	AC range (universal input)	85 - 264 VAC
	DC range	120 - 370 VDC (not for 60 Watt models)
Input Frequency	47 - 440 Hz (47 - 63 Hz for 60 Watt models)	
Input Current at Full Load (115 VAC / 230 VAC)	15 Watt models	300 mA / 190 mA typ.
	30 Watt models	550 mA / 330 mA typ.
	51/60 Watt models (typical for all)	1050 mA / 670 mA typ.
Input Current at No Load	15 mA @ 115 VAC & 20 mA @ 230 VAC typ.	
Inrush Current (< 2ms, cold start at 115 VAC / 230 VAC)	15 Watt models	15A / 30A
	30 Watt models	20 A / 40 A
	60 Watt models	30 A / 50 A
External Input Fuse Required (recommended value)	15 and 30 Watt models	1.5 A slow blow
	51/60 Watt models	3.0 A slow blow



PSE Series Encapsulated Power Supplies

- Company Information
- Systems Overview
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- Field I/O
- Software
- C-more & other HMI
- Drives
- Soft Starters
- Motors & Gearbox
- Steppers/ Servos
- Motor Controls
- Proximity Sensors
- Photo Sensors
- Limit Switches
- Encoders
- Current Sensors
- Pressure Sensors
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- Pushbuttons/ Lights
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- Relays/ Timers
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- Terminal Blocks & Wiring
- Power**
- Circuit Protection
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Output Specifications					
Voltage Set Accuracy	±2%				
Regulation	Input variation	1% max.			
	Load variation	Single output models (10-100%): 1% max. Dual output models balanced load (10-100%): 2.5% max. Dual output models unbalanced load (20/100%): 5.0% max.			
Minimum Load	Single and dual output models	10% of rated max. current			
Ripple and Noise (20MHz bandwidth)	5.0 VDC outputs	1.8% of Vout [mVpk-pk]			
	All other outputs	1.3% of Vout [mVpk-pk]			
Overload Protection by Current Limit	105% min. of nominal current, fold back, automatic recovery (long term overload condition may cause damage to the power supply)				
Max. Capacitive Load (µF)	Output	Model Series			
			PSE15	PSE30	PSE60
	Single Output Models	5.0 VDC; 5.1 VDC	3900	8000	8000
		12 / 15 VDC	2200	3900	3900
		24 VDC	1000	1500	1500
Dual Output Models	+/-12 V; +/-15V	1500	1500	NA	

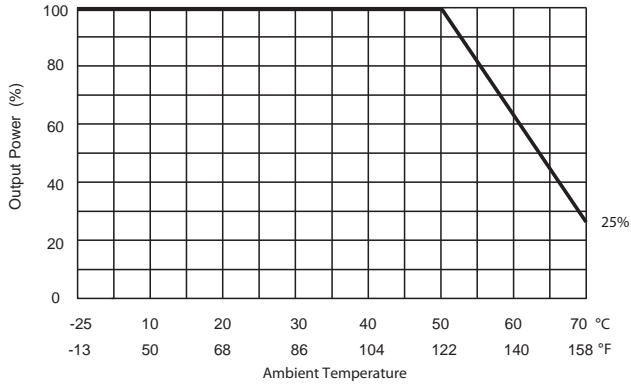
General Specifications			
Operating Temperature	-13° to 140°F (-25° to +60°C)		
Storage Temperature	-40° to 185°F (-40° to 85°C)		
Power Derating	3.75% per °C above +122°F (50°C) 2.5% per °C above +104°F (40°C) (for PSE05-150)		
Temperature Coefficient	0.02 %/°C		
Humidity (non-condensing)	95% rel. H max.		
Efficiency	78% typ.		
Switching Frequency	100 kHz typ. (fixed)		
Isolation Voltage (60 sec.)	Input/Output	3,000 VAC	
Isolation Resistance	Input/Output	100 MΩ (@ 500 VDC)	
Electromagnetic Compatibility (EMC), Emissions	EN 61000-6-3: 2007 EN61204-3: 2000, class A EN 55022, level B, FCC Part 15 level B		
Electromagnetic Compatibility (EMC), Immunity	EN61000-6-2: 2005 EN61204-3: 2000, class A		
	Electrostatic discharge ESD	EN61000-4-2 - 8kV / 4 kV, criteria B	
	RF field susceptibility	EN61000-4-3 - 10 V/m, criteria A	
	Electrical fast transient / burst immunity input	EN61000-4-4 - ±2 kV, criteria B	
	Electrical fast transient / burst immunity output	EN61000-4-4 - ±2 kV, criteria B	
	Surge immunity line - neutral	EN61000-4-5 - ±1 kV, criteria B	
	Surge immunity output	EN61000-4-5 - ±0.5 kV, criteria B	
	Immunity to conducted RF disturbances	EN61000-4-6 - 10 V, criteria B	
	Mains voltage dips and interruptions	EN61000-4-11 - 30% 10 ms, criteria B, 60% 100 ms, criteria C, 95% 5000 ms, criteria C	
Protection Class II	to IEC/EN 60536		
Safety Standards	Information technology equipment	IEC/EN 60950-1, UL 60950-1	
Agency Approvals	UL and cUL for UL 508, Listed file #E197592; UL and cUL for UL 60950-1, Recognized file #E198298; CE		
RoHS Compliant	Yes		
Vibration	None		
Shock	None		
Reliability / Calculated MTBF (MIL-HDBK-217F, @ +25°C, ground benign)	15 Watt Models	>280,000 hours	
	30 Watt Models	>250,000 hours	
	60 Watt Models	>125,000 hours	
Casing Material	Plastic resin + fiberglass (UL 94V-0 rated)		
Mounting Screw Torque Specifications	4-5 in-lb [0.45-0.56 Nm]		

Note: All specifications valid at nominal input voltage, full load and +25°C after warm-up time unless otherwise stated.

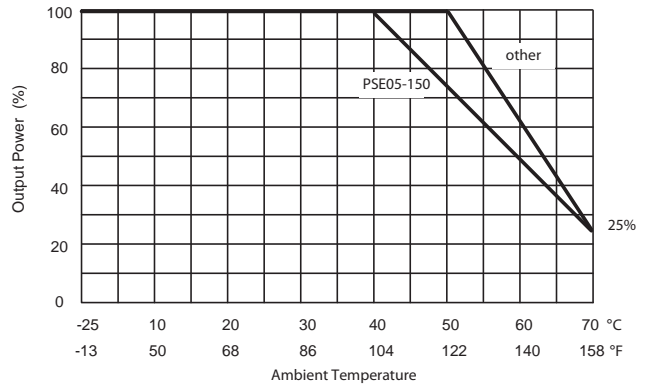
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Derating Curves

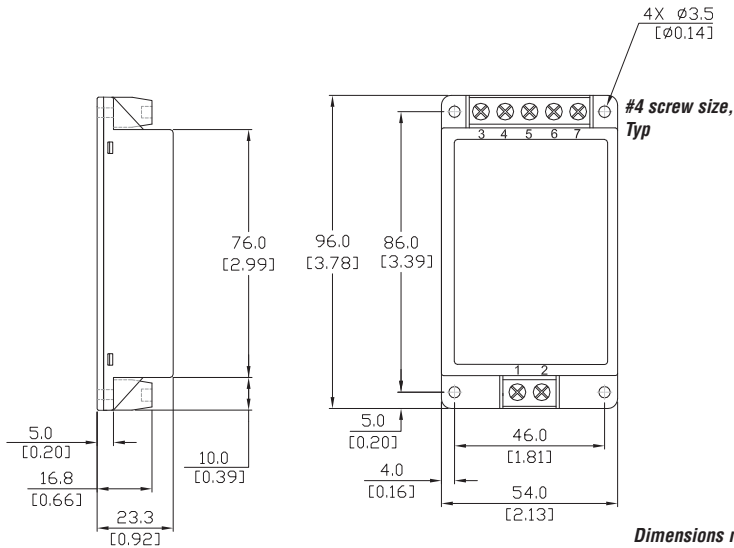
PSE 15 & 30W Models



PSE 51 & 60W Models



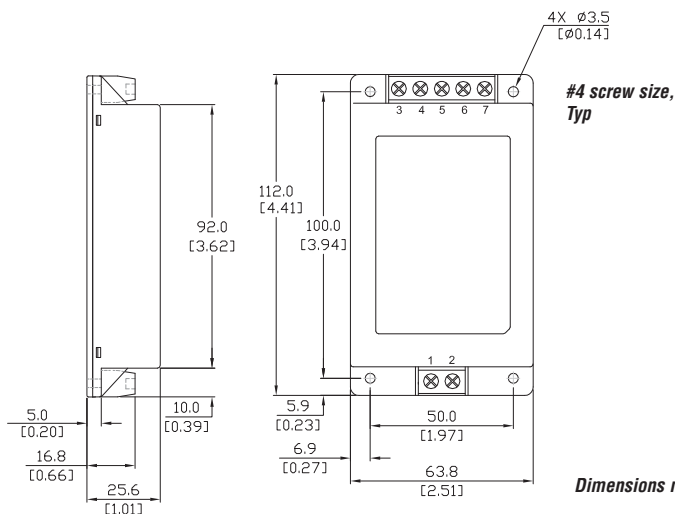
PSE 15W models for chassis mount



Connection		
Pin	Single	Dual (12V, 15V)
1	AC(N) - AC Neutral	
2	AC(L) - AC Line	
3	NC	
4	-Vout	
5	NC	Common
6	+Vout	
7	NC	

Dimensions mm [inches]

PSE 30W models for chassis mount

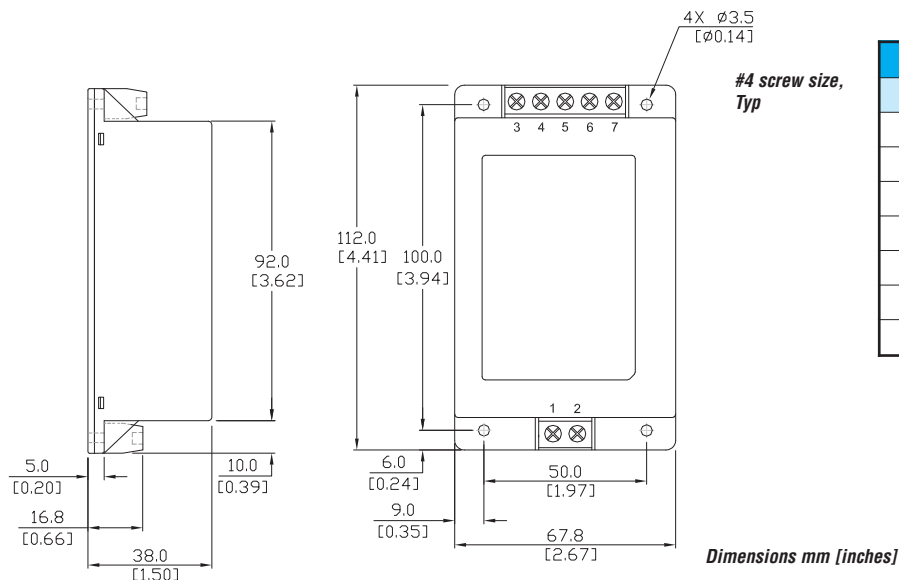


Connection		
Pin	Single	Dual (12V, 15V)
1	AC(N) - AC Neutral	
2	AC(L) - AC Line	
3	+Vout	
4	NC	
5	-Vout	Common
6	NC	
7	NC	-Vout

Dimensions mm [inches]

PSE Series Encapsulated Power Supplies

PSE 60W models for chassis mount



Connection	
Pin	Function
1	AC(N) - AC Neutral
2	AC(L) - AC Line
3	NC
4	+Vout
5	NC
6	-Vout
7	NC

35mm DIN Rail Mounting Bracket			
Part No.	Price	Weight (lbs)	Description
PSE-BRKT-1	<--->	0.2	DIN rail mounting bracket for 15W models
PSE-BRKT-2	<--->	0.2	DIN rail mounting bracket for 30W, 51W and 60W models

Note: Kit contains interface plate, DIN rail clip and necessary screws.

