

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 120/240 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 120/240 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
- DC on LED indicator
- 3-year warranty



Single Output Models 15 to 60 Watt				
Part No.	Price	Weight (lbs)	Output Power Max.	Output
PSE05-115	\$50.00	0.3	15 Watt	5 VDC / 3000 mA
PSE12-115	\$50.00	0.3		12 VDC / 1250 mA
PSE15-115	\$50.00	0.3		15 VDC / 1000 mA
PSE24-115	\$50.00	0.3		24 VDC / 625 mA
PSE05-130	\$72.00	0.5	30 Watt	5 VDC / 6000 mA
PSE12-130	\$72.00	0.5		12 VDC / 2500 mA
PSE15-130	\$72.00	0.5		15 VDC / 2000 mA
PSE24-130	\$72.00	0.5		24 VDC / 1250 mA
PSE05-150	\$87.00	0.8	51 Watt	5.1 VDC / 10,000 mA
PSE12-160	\$87.00	0.8	60 Watt	12 VDC / 5000 mA
PSE15-160	\$87.00	0.8		15 VDC / 4000 mA
PSE24-160	\$87.00	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	\$52.00	0.3	15 Watt	+12 VDC / 650 mA	-12 VDC / 650 mA
PSE15-215	\$52.00	0.3		+15 VDC / 500 mA	-15 VDC / 500 mA
PSE12-230	\$75.00	0.5	30 Watt	+12 VDC / 1300 mA	-12 VDC / 1300 mA
PSE15-230	\$75.00	0.5		+15 VDC / 1000 mA	-15 VDC / 1000 mA

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Input Specifications		
Input Voltage	Nominal	120/240 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

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	

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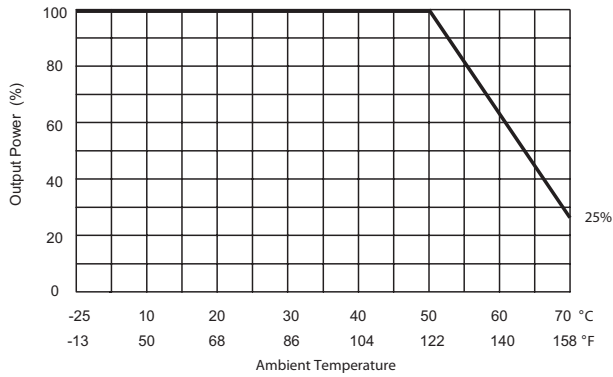
General Specifications					
Operating Temperature	Standard/ Approval	Model Series			
		PSExx-115	PSExx-130	PSExx-150	PSExx-160
	IEC/EN60950-1	-25°C to +71°C (-13°F to +159.8°F)	-25°C to +71°C (-13°F to +159.8°F)	-10°C to +40°C (14°F to +104°F)	-10°C to +50°C (14°F to +122°F)
UL508	-25°C to +50°C (-13°F to +122°F)	-25°C to +50°C (-13°F to +122°F)	-10°C to +40°C (14°F to +104°F)	-10°C to +40°C (14°F to +104°F)	
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.

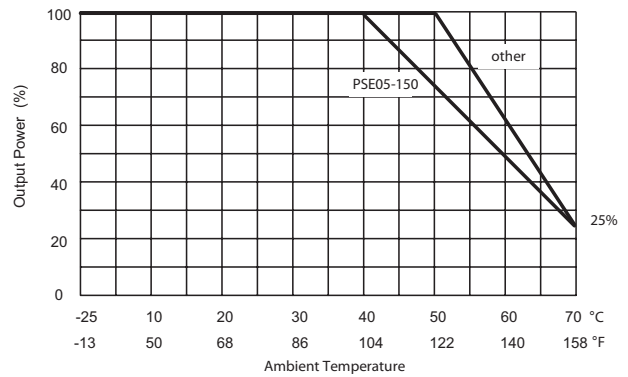
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Derating Curves

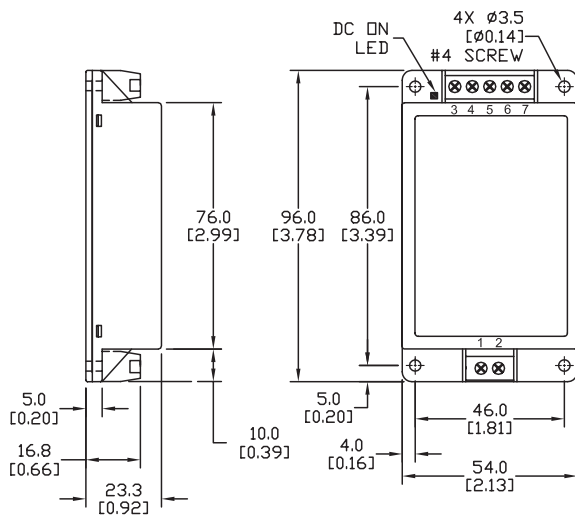
PSE 15 & 30W Models



PSE 51 & 60W Models



PSE 15W models for chassis mount

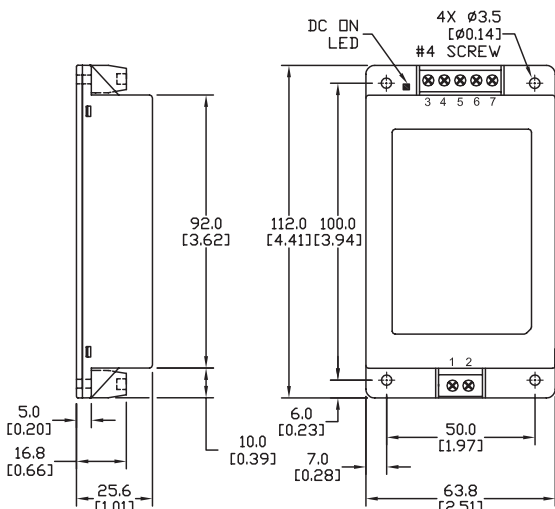


M3 x 0.5mm screw size, Typ

Dimensions mm [inches]

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	

PSE 30W models for chassis mount



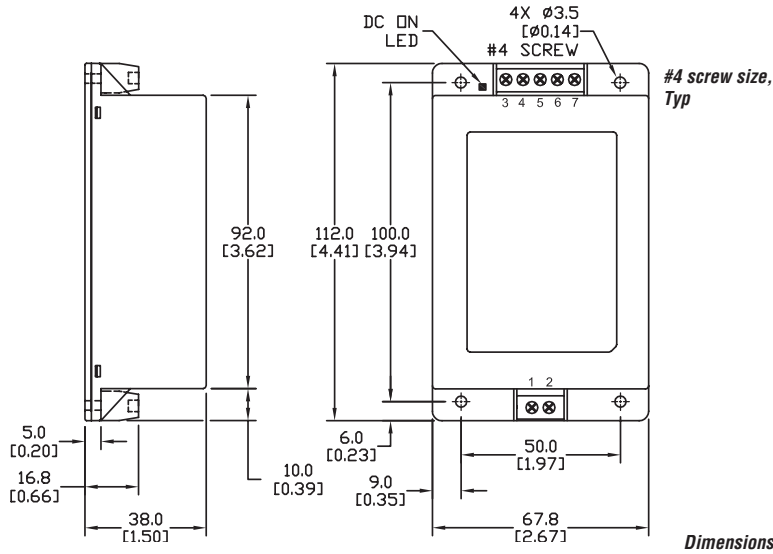
M3 x 0.5mm screw size, Typ

Dimensions mm [inches]

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

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PSE 60W models for chassis mount

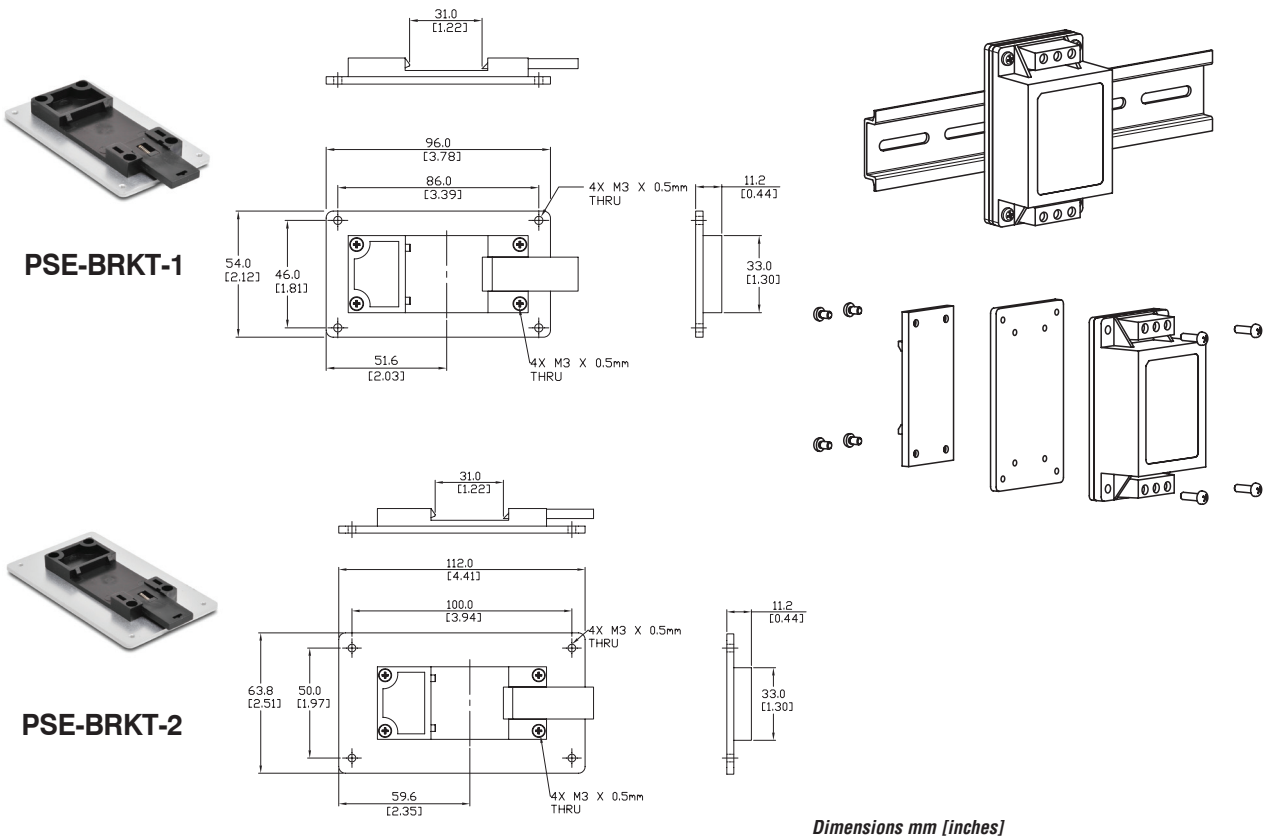


Connection	
Pin	Function
1	AC(N) - AC Neutral
2	AC(L) - AC Line
3	NC
4	+Vout
5	NC
6	-Vout
7	NC

Dimensions mm [inches]

35mm DIN Rail Mounting Bracket			
Part No.	Price	Weight (lbs)	Description
PSE-BRKT-1	\$9.00	0.2	DIN rail mounting bracket for 15W PSE models
PSE-BRKT-2	\$10.00	0.2	DIN rail mounting bracket for 30W-60W PSE models

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



Dimensions mm [inches]