

# RHINO PSL Series Power Supplies Specifications

## Low Cost NEC Class 2 Supplies\*

The RHINO PSL series power supplies are plastic low-profile switching supplies available in 5, 12 and 24VDC output models. There are 9 models with power ratings from 7.5W to 91W. They have an integral DIN rail mounting adapter and feature universal 90VAC to 264VAC input voltage, DC-OK LED indication, and output current limitation. Some models feature adjustable DC output.

These are designed to fit in shallow depth control panels often used in the building automation industry. Screw terminals are provided for simple and speedy wiring terminations.

The RHINO PSL series is both UL508 listed for demanding industrial applications and UL60950-1 recognized for NEC Class 2\* compliance in industrial, commercial, and residential applications.



## Features

- Low-profile housing - only 2.15 inches (55mm) deep (MCB form factor)
- 5, 12, 24VDC outputs (adjustable models available in 12 and 24VDC)
- Output power ratings from 7.5 to 91W
- Integral DIN rail mounting adapter
- Universal input voltage range 90-264 VAC, 125-375 VDC
- DC-OK LED indication
- UL508 Listed, File No. E198298
- UL60950-1 Recognized for NEC Class 2 compliance\*
- Protection Class II Double Isolation

Note: \*PSL-12-090 is not NEC Class 2



**PSL-05-010,  
PSL-12-010,  
PSL-24-010**



**PSL-12-030, PSL-24-030**



**PSL-12-060, PSL-24-060**



**PSL-12-090, PSL-24-090**

PSL Single-Phase Series Input Specifications										
Part Number	Price	Drawing Link	Input Voltage Range	Input Frequency Range	Input Current Max [@ 115/230 VAC]	Inrush Current I <sub>2t</sub> @ 77°F [+25°C] typ [@ 115/230 VAC]	Efficiency [Typ @ 115VAC]	Recommended Backup Protection	Turn-on Time	
<a href="#">PSL-05-010</a>	\$32.00	<a href="#">PDF</a>	100-240 VAC UL Approved  90-264 VAC 125-375 VDC	47-63Hz	0.3 A / 0.2 A	<15A / <30A	81%	8A B -or 4A C characteristic circuit breaker	<3 sec	
<a href="#">PSL-12-010</a>	\$29.00	<a href="#">PDF</a>					85%			
<a href="#">PSL-12-030</a>	\$38.00	<a href="#">PDF</a>			0.8 A / 0.6 A	<25A / 50A	86%	13A B -or 8A C characteristic circuit breaker		
<a href="#">PSL-12-060</a>	\$52.00	<a href="#">PDF</a>			1.5 A / 1.0 A	<30A / 60A	85%	16A B -or 8A C characteristic circuit breaker		
<a href="#">PSL-12-090</a>	\$66.00	<a href="#">PDF</a>			1.5 A / 0.9 A	<40A / <80A	87%			<1.5 sec
<a href="#">PSL-24-010</a>	\$32.00	<a href="#">PDF</a>			0.3 A / 0.2 A	<15A / <30A	85%	16A B -or 8A C characteristic circuit breaker		<3 sec
<a href="#">PSL-24-030</a>	\$38.00	<a href="#">PDF</a>			0.8 A / 0.6 A	<25A / <50A	88%	13A B -or 8A C characteristic circuit breaker		
<a href="#">PSL-24-060</a>	\$52.00	<a href="#">PDF</a>			1.5 A / 1.0 A	<30A / <60A	82%	16A B -or 8A C characteristic circuit breaker		
<a href="#">PSL-24-090*</a>	\$66.00	<a href="#">PDF</a>			2.2 A / 1.0 A	<30A / <60A	82%			<1.5 sec

\*PSL-24-090 is UL Listed for 125-250 VDC input.

Output Specifications					
Part Number	Output Voltage	Output Voltage Range	Output Current [A]	Output Power [Max] [W]	Min. Hold-Up Time at Nominal Load [@115/230VAC]
<a href="#">PSL-05-010</a>	5VDC	N/A	1.5	7.5	10ms / 30ms
<a href="#">PSL-12-010</a>	12VDC	N/A	0.83	10	
<a href="#">PSL-12-030</a>		11.5-14.5 VDC	2.1	25	25ms / 30ms
<a href="#">PSL-12-060</a>			4.5	54	16ms / 30ms
<a href="#">PSL-12-090</a>		12-14 VDC	6.0	72	18ms / 30ms
<a href="#">PSL-24-010</a>	24VDC	N/A	0.42	10	10ms / 30ms
<a href="#">PSL-24-030</a>		24-28 VDC	1.25	30	25ms / 30ms
<a href="#">PSL-24-060</a>			2.5	60	16ms / 30ms
<a href="#">PSL-24-090</a>		22-24 VDC	3.8	91.2	10ms / 30ms

# RHINO PSL Series Power Supplies

## Specifications

General Specifications	
<b>Enclosure Material</b>	Plastic [PC], closed
<b>Signals</b>	Green LED DC OK
<b>MTBF</b>	> 500,000 hrs. as per Telcordia
<b>Connection method</b>	Screw connection
<b>Protection Class II</b>	to IEC/EN 60536
<b>Leakage Current</b>	<0.25mA @ 240VAC
<b>Startup with capacitive loads</b>	Max. 3,000µF
<b>Line Regulation</b>	< 1% typ. [@ 90-264Vac, 100% load]
<b>Load Regulation</b>	< 2% typ. [@ 90-264Vac, 100% load]
<b>Residual ripple/ peak switching (20MHz) (at nominal values)</b>	< 50mVpp / < 150mVpp
<b>Operating Temperature (Surrounding air temperature)</b>	-25 to 71°C [-13 to 160°F] Derate above +55°C [2.5%/°C]
<b>Storage Temperature</b>	-25 to 85°C [-13 to 185°F]
<b>Humidity at 25°C, no condensation</b>	< 95% RH
<b>Vibration (operating)</b>	IEC60068-2-6, Sine Wave: 10-500Hz @ 19.6m/S² [2G peak]; 10 min per cycle, 60 min for all X, Y, Z directions
<b>Shock (operating)</b>	IEC60068-2-27, Half Sine Wave: 4G for a duration of 22ms, 3 shocks for each 3 directions, 9 times in total
<b>Pollution degree</b>	Pollution degree 2
<b>Altitude (operating)</b>	2000m [6562ft] maximum

Certification and Standards	
<b>Safety entry low voltage</b>	SELV [EN60950]
<b>Electrical safety (of information technology equipment)</b>	UL/C-UL recognized to UL60950-1 and CSA C22.2 No. 60950-1, CB scheme to IEC60950-1, Limited Power Source [LPS] PSL-12-090 is not LPS
<b>Industrial control equipment</b>	UL/C-UL listed to UL508 and CSA C22.2 No. 107.1-01; File No. E197592
<b>Class 2 Power Supply</b>	UL/C-UL recognized to UL60950-1 and CSA C22.2 No. 60950-1; File No. E198298 PSL-12-090 is not a Class 2 power supply
<b>CE</b>	In conformance with EMC directive 2014/30/EC and low voltage directive 2014/35/EC
<b>ITE</b>	EN55032, EN61000-3-2, EN61000-3-3, EN55024
<b>RoHS</b>	Yes

Additional Data		
Part Number	Weight kg [lb]	Wire Size / Torque*
<a href="#">PSL-05-010</a>	0.06 [0.13]	26-12AWG / 0.8 N·m [7.0 lb-in]
<a href="#">PSL-12-010</a>	0.06 [0.13]	
<a href="#">PSL-12-030</a>	0.14 [0.31]	24-12AWG / 0.45 N·m [4.0 lb-in]
<a href="#">PSL-12-060</a>	0.22 [0.49]	22-12AWG / 0.45 N·m [4.0 lb-in]
<a href="#">PSL-12-090</a>	0.35 [0.77]	20-12AWG / 0.45 N·m [4.0 lb-in]
<a href="#">PSL-24-010</a>	0.06 [0.13]	26-12AWG / 0.8 N·m [7.0 lb-in]
<a href="#">PSL-24-030</a>	0.14 [0.31]	24-12AWG / 0.45 N·m [4.0 lb-in]
<a href="#">PSL-24-060</a>	0.22 [0.49]	22-12AWG / 0.45 N·m [4.0 lb-in]
<a href="#">PSL-24-090</a>	0.35 [0.77]	2x24 AWG or 22-12AWG / 0.45N·m [4.0 lb-in]

\*Stripping length 7mm [0.28 in]