

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 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 _{2t} @ 77°F [+25°C] typ [@ 115/230 VAC]	Efficiency [Typ @ 115VAC]	Recommended Backup Protection	Turn-on Time
PSL-05-010	\$32.00	PDF	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
PSL-12-010	\$29.00	PDF			0.8 A / 0.6 A	<25A / 50A	85%	13A B -or 8A C characteristic circuit breaker	
PSL-12-030	\$38.00	PDF			1.5 A / 1.0 A	<30A / 60A	86%	16A B -or 8A C characteristic circuit breaker	
PSL-12-060	\$52.00	PDF			1.5 A / 0.9 A	<40A / <80A	87%	16A B -or 8A C characteristic circuit breaker	<1.5 sec
PSL-12-090	\$66.00	PDF			0.3 A / 0.2 A	<15A / <30A	85%	16A B -or 8A C characteristic circuit breaker	
PSL-24-010	\$32.00	PDF			0.8 A / 0.6 A	<25A / <50A	88%	13A B -or 8A C characteristic circuit breaker	<3 sec
PSL-24-030	\$38.00	PDF			1.5 A / 1.0 A	<30A / <60A	82%	16A B -or 8A C characteristic circuit breaker	
PSL-24-060	\$52.00	PDF			2.2 A / 1.0 A	<30A / <60A	82%	16A B -or 8A C characteristic circuit breaker	
PSL-24-090*	\$66.00	PDF							<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]
PSL-05-010	5VDC	N/A	1.5	7.5	10ms / 30ms
PSL-12-010	12VDC	N/A	0.83	10	
PSL-12-030		11.5-14.5 VDC	2.1	25	25ms / 30ms
PSL-12-060			4.5	54	16ms / 30ms
PSL-12-090		12-14 VDC	6.0	72	18ms / 30ms
PSL-24-010	24VDC	N/A	0.42	10	10ms / 30ms
PSL-24-030		24-28 VDC	1.25	30	25ms / 30ms
PSL-24-060			2.5	60	16ms / 30ms
PSL-24-090		22-24 VDC	3.8	91.2	10ms / 30ms

RHINO PSL Series Power Supplies

Specifications

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

Certification and Standards	
Safety entry low voltage	SELV [EN60950]
Electrical safety (of information technology equipment)	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
Industrial control equipment	UL/C-UL listed to UL508 and CSA C22.2 No. 107.1-01; File No. E197592
Class 2 Power Supply	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
CE	In conformance with EMC directive 2014/30/EC and low voltage directive 2014/35/EC
ITE	EN55032, EN61000-3-2, EN61000-3-3, EN55024
RoHS	Yes

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

*Stripping length 7mm [0.28 in]