

RPC Series DIN Rail AC/DC Power Supplies



COMPACT INDUSTRIAL POWER SUPPLY

The RPC series is a family of compact industrial DIN-rail power Supplies. They feature a universal input of 85-264VAC or 90-375VDC, and are designed for class I operation in industrial and residential environments. They consume very little standby power, and operate with high efficiency to comply with the requirements of the European Eco-design directive.

When used in combination with the optional battery charge controllers and battery packs, RPC power supplies make a compact and reliable UPS system.



RPC Series DIN Rail AC/DC Power Supplies

Key Features

Environment

Industrial, compact plastic housing

Power

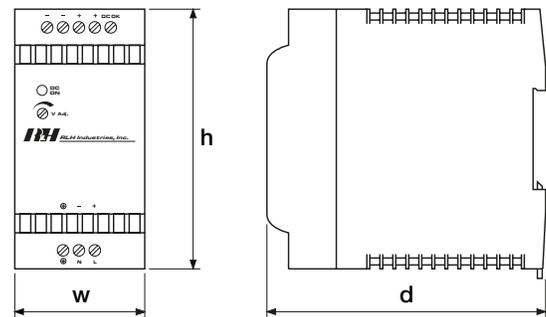
Universal input 85–264 VAC, 47–63 Hz
24 and 48VDC output power systems
Output voltage adjustable

Benefits

High efficiency across full load range
Overload and short-circuit protection
Optional module for parallel and redundant operation
Low ripple and noise

Compliances

UL Listed
RoHS
European ErP directive (green mode), <0.3 W no load power consumption
Worldwide safety approval package



Dimensional Information

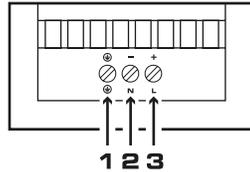
Model	Width (w)	Height (h)	Depth (d)	Weight
30 Watt	1.04"	3.54"	3.8"	160g
80 Watt	2.48"	3.54"	3.8"	360g
120 Watt	2.83"	3.54"	4.33"	440g

Connection Terminals

AC/DC Input Terminals

The AC/DC input terminals are located at the bottom of the power supply. View the chart below for the correct wiring.

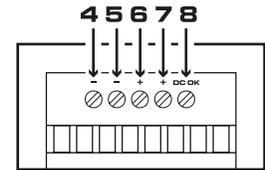
No.	Description	
	AC	DC
1	FG 	FG 
2	N	V-
3	L	V+



DC Output Terminals

The DC output terminals are located at the top of the power supply. View the chart below for the correct wiring.

No.	Description
4,5*	DC Output V-
6,7*	DC Output V+
8	DC OK Signal



* 30 Watt models have one (1) of each, V+ and V-.

Connection and Ambient Conditions

Surrounding Air Temperature:	-25°C – +70°C max, above +50°C see derating below		
Natural Air Convection Cooling	-13°F – +158°F max at nominal load, above +122°F see derating below		
Output Power Derating	Above +50°C → 2.5%/°C up to +70°C Above 122°F → 1.4%/°F up to +158°F <100Vac input voltage output power has to be derated by 2.5%/V for continuous operation <130Vdc input voltage output power has to be derated by 1%/V for continuous operation		
Wire Recommendation	Input terminals	0.5 – 2.5mm ²	AWG: 20 – 14
	Output terminals	0.5 – 2.5mm ²	AWG: 20 – 14
Connections	Screw type terminals. Recommended tightening torque 4.4lb.in.		

General Specifications

Temperature Ranges	Operating	-25°C – +70°C (-13°F – +158°F) max
	Storage (non operating)	-25°C – +85°C (-13°F – +185°F) max
Temperature Derating	2.5% / K above 50°C	
Humidity <i>non condensing</i>	95% rel. H max	
Temperature Coefficient	0.02% /K	
Efficiency	87% (84% on RPC-030 models) <i>Average at power consumption 25-100%</i>	
Reliability, Calculated MTBF at +25°C <i>According to IEC-1709</i>	RPC-030 models	>2.2 Mio h
	RPC-080 models	>1.5 Mio h
	RPC-120 models	>1.3 Mio h
Altitude	2,000m max. (6,500 ft) approved	

Input Specifications

Input Voltage Range	AC nominal rated	110 - 240VAC, 50-60Hz
	AC range (designed for)	85 - 264VAC, 50-60Hz
	DC nominal rated	130 - 300VDC
	DC range (designed for)	90 - 375VDC
Output Derating	At operation <100VAC	-2.5% / V
	At operation <130VDC	-1.0% / V
Standby Power Consumption	RPC-030 models	< 0.3 W
	RPC-080 models	< 0.5 W
	RPC-120 models	< 0.5 W
Harmonic Limits	EN 61000-3-2, Class A	
Recommended Circuit Breaker, Characteristic C	6.0 A	

Output Specifications

Output Voltage Range <i>Potentiometer on front panel</i>	24VDC models	24 - 28.8VDC
	48VDC models	48 - 56VDC
Regulation	Input variation	0.5% max
	Load variation (0 - 100%)	0.5% max
Ripple and Noise <i>20MHz Bandwidth</i>	100 mVpk-pk max	
Short Circuit Protection	<200% of I _{out} nom.	
Overvoltage Protection <i>% of max. adjustable voltage</i>	24VDC models	<160%
	48VDC models	<107%
Power Back Immunity	125% of nominal V _{out}	
Start-up Time	2 sec. max	
Hold-up Time <i>115VAC / 230VAC</i>	min. 15 ms / min. 40 ms	
Power OK Signal	Trigger	80 - 95%
	PNP open collector max. current	5mA (RPC-030 models)
		10mA (RPC-080 and RPC-120 models)



Safety and Compliance Information

Safety Standards	IEC 60950-1, EN 60950-1 (output SELV), UL 60950-1, UL 508, EN 50178, EN 60204, EN 61558-2-8.	
Safety Approvals	CB Scheme	IEC 60950-1
	UL Listing	UL 508C, file e366237
	UL Recognition	UL 60950
	CSA Certification	UL 60950-1, CSA 60950-1-03
Environmental Compliance	Reach	
	RoHS	RoHS directive 2011/65/EU
Electromagnetic Compatibility (EMC), Emissions	EN 61000-6-3 (residential environment)	
Electromagnetic Compatibility (EMC), Immunity (Voltage Sag)	EN 61000-6-2 (industrial environment)	
Class of Protection	Class 1 (earth connection needed)	
Case Protection	IP 20 (IEC 60529)	
Enclosure Material	Makrolon 2405 (UL 94V-0 rated)	

Ordering Information

Rated Output Power Max.	Part Number	Rated Output	*Output Voltage Adjustment Range	Recommended Circuit Breaker (Characteristic C)	Rated AC-Input Voltage Range	Operational Input Voltage Range
30 Watt	RPC-030-24	24VDC / 1.25A	24 - 28.8VDC	6A	Nominal 110 – 240VAC 50 – 60Hz	85 – 264VAC 47 – 63Hz
	RPC-030-48	48VDC / 0.6A	48 - 56VDC			
80 Watt	RPC-080-24	24VDC / 3.3A	24 - 28.8VDC			
	RPC-080-48	48VDC / 1.7A	48 - 56VDC			
120 Watt	RPC-120-24	24VDC / 5.0A	24 - 28.8VDC			
	RPC-120-48	48VDC / 2.5A	48 - 56VDC			

* Adjustable by potentiometer with insulated screwdriver.

