



PRODUCT INFORMATION

The leader in rugged fiber optic technology.

✓ Unconditional Lifetime Warranty

2012A-0509

RLH DIN Rail 48V Power Supply with UPS Battery Backup System

Provide backup battery power to 48VDC industrial equipment

Overview

RLH 48VDC DIN rail mount power supplies with battery backup are compact units designed to provide uninterruptible power in the event of a power outage.

The system is comprised of a RLH DIN mount switching power supply that can accept either AC or DC input, battery charge controller unit, and a 48V backup battery pack.

**FLEX - POWER:
AC/DC & DC/DC**

Battery packs are sized according to the power supply used, and may be wall mounted. They feature connection terminals on the bottom, and an external replaceable fuse. The internal batteries are sealed and maintenance free, and are field replaceable.

The charge controller continuously maintains the correct charge level on the battery and ensures a seamless power transition to battery power when needed for a complete UPS power supply solution.



Battery Pack Terminals and fuse



RLH-D-ACDC-75-48-BU-1 75 Watt/48VDC Battery Backup shown

Standard Features

Complete UPS system with Power Supply, Charge Controller and Sealed Backup Battery Pack

Power supply and charge controller may be installed on DIN Rail TS35 / 7.5 or 15

Includes DIN mount circuit breaker and DIN terminal block

DIN rail and mounting hardware is included

Power supplies have low output ripple along with short circuit, overvoltage and overload protection

Switching power supplies accept AC or DC (110/240VAC or 120~330VDC) input

Sealed battery design, field replaceable

Suitable for 48V systems up to 30A

Built-in battery test function

Battery polarity protection

Relay contact signal output and LED indicator for DC BUS OK, Battery Fail, and Battery Discharge

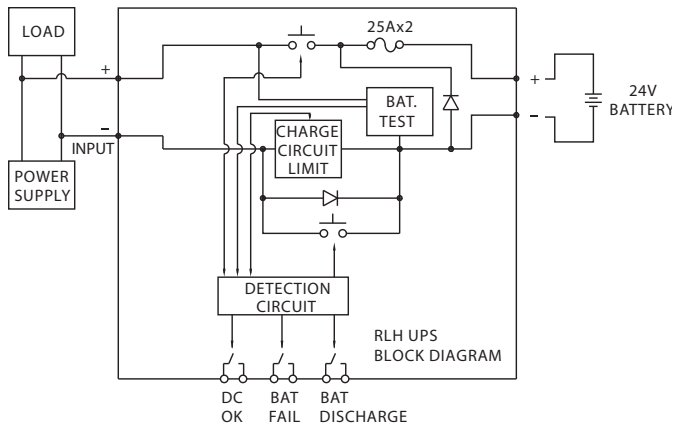
Cooling by free air convection

Convenient screw down terminals

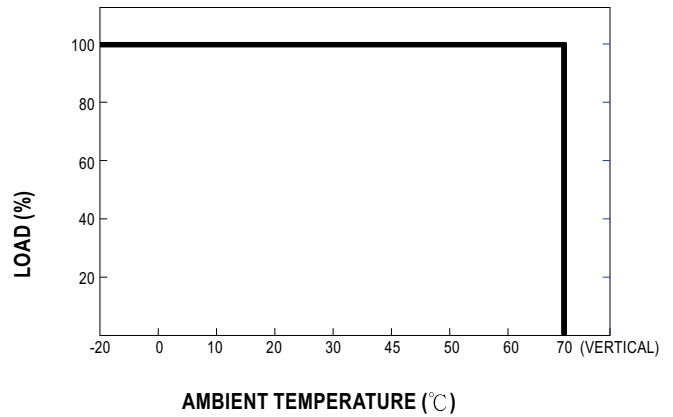
Battery packs are covered by our **10 year unconditional warranty**

Power supply and Charge Controller are covered by our **Exclusive Unconditional Lifetime Warranty**

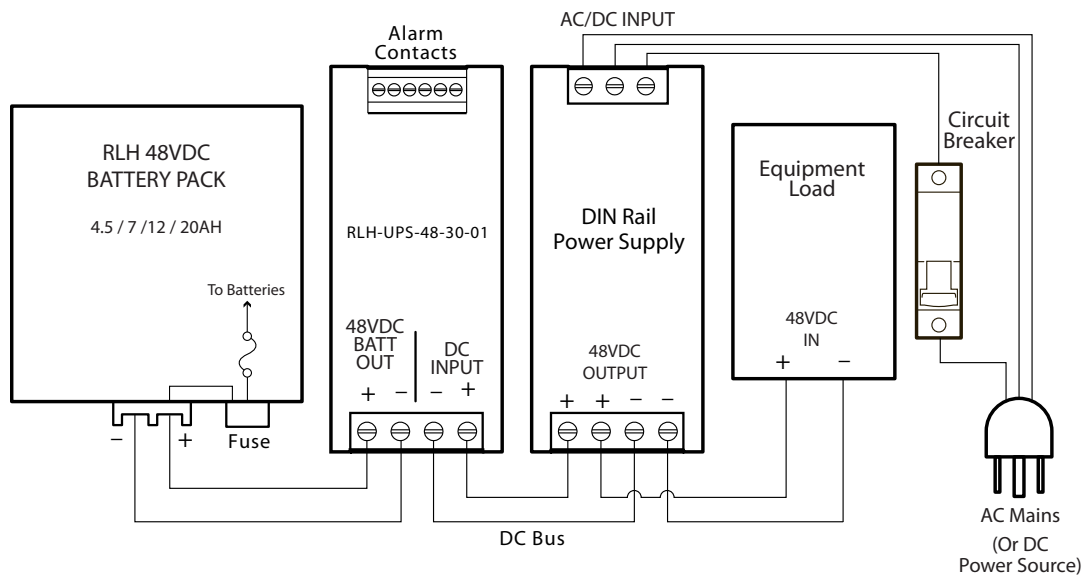
UPS Block Diagram



Charge Controller Derating Curve



Connection Diagram



Note: DC voltage cannot be measured at the DC INPUT of the UPS unit unless a working DC power source is connected to the DC INPUT UPS terminals. The UPS unit employs a protective relay that allows voltage to travel only in one direction when the UPS system is connected to both the battery and power source.

Wiring Information

System Output	Recommended Wire Gauge	Min. Wire Gauge	Max. Wire Gauge
1/6A / 2.5A / 5A / 10A	12 AWG	14 AWG	8 AWG

Product Information



Circuit Breaker



75W Power Supply



120W Power Supply



240W Power Supply



500W Power Supply



20AH Battery Pack

Ordering Information

Power Supply	Input	Output	Backup Battery	Circuit Breaker	Description	Part Number
75W	110-240AC/ 120-370VDC	48VDC/1.6A	1.2AH	3A	75 Watt w/ 48VDC 1.2Ah Battery Backup	RLH-D-ACDC-75-48-BU-2
			4.5AH	3A	75 Watt w/ 48VDC 4.5Ah Battery Backup	RLH-D-ACDC-75-48-BU-1
120W	100-240AC/ 250-370VDC	48VDC/2.5A	4.5AH	4A	120 Watt w/ 48VDC 4.5Ah Battery Backup	RLH-D-ACDC-120-48-BU-2
			7.2AH	4A	120 Watt w/ 48VDC 7.2Ah Battery Backup	RLH-D-ACDC-120-48-BU-1
240W	110-240AC/ 120-370VDC	48VDC/5A	7.2AH	5A	240 Watt w/ 48VDC 7.2Ah Battery Backup	RLH-D-ACDC-240-48-BU-3
			12AH	5A	240 Watt w/ 48VDC 12Ah Battery Backup	RLH-D-ACDC-240-48-BU-1
			20AH	5A	240 Watt w/ 48VDC 20Ah Battery Backup	RLH-D-ACDC-240-48-BU-2
500W	110-240AC/ 120-330VDC	48VDC/10A	7.2AH	10A	500 Watt w/ 48VDC 7.2Ah Battery Backup	RLH-D-ACDC-500-48-BU-3
			12AH	10A	500 Watt w/ 48VDC 12Ah Battery Backup	RLH-D-ACDC-500-48-BU-2
			20AH	10A	500 Watt w/ 48VDC 20Ah Battery Backup	RLH-D-ACDC-500-48-BU-1

- ▶ Please contact your RLH sales representative for pricing and delivery information
- ▶ For additional information, refer to the [DIN power supply](#), [UPS charge controller](#) and [battery pack](#) pages on our web site, or contact your RLH sales representative

Spares Information

Description	Size	Fuse Rating	Part Number
4.5Ah 48V Backup Battery Pack	H 11.3in. x W 9.3in. x D 5.4in. (293mm x 236mm x 138mm)	6A	RLH-4804-1BP
7.2Ah 48V Backup Battery Pack	H 11.3in. x W 9.3in. x D 5.4in. (293mm x 236mm x 138mm)	6A	RLH-4807-1BP
12Ah 48V Backup Battery Pack	H 11.5in. x W 10in. x D 8in. (292mm x 254mm x 203mm)	6A	RLH-4812-1BP
20Ah 48V Backup Battery Pack	H 16in. x W 14in. x D 8in. (406mm x 356mm x 203mm)	6A	RLH-4820-1BP

Description	Batteries per Set	Part Number
4.5AH 48V Sealed Replacement Battery Set	4	RLH-4804-1RB
7.2AH 48V Sealed Replacement Battery Set	4	RLH-4807-1RB
12AH 48V Sealed Replacement Battery Set	4	RLH-4812-1RB
20AH 48V Sealed Replacement Battery Set	4	RLH-4820-1RB

Charge Controller Specifications

DC INPUT / DC BUS	DC VOLTAGE (Typ.)	48 ~ 55V
	RATED CURRENT	30A
BATTERY INPUT / OUTPUT	VOLTAGE RANGE (Typ.)	48 ~ 55V
	CURRENT RANGE	0 ~ 30A
	CHARGE CURRENT (Typ.)	1A ~ 2A auto sensing
	EXTERNAL BATTERY (Typ.)	1.2 / 4.5 / 7.2AH / 48V
FUNCTION	RELAY CONTACT RATING	30VDC, 1A (max.)
	DC BUS OK	Relay contact : Short when DC voltage between 41~55V(3%), relay contacts LED (Green) ON : DC BUS OK; LED (Green) OFF : DC BUS failure
	BATTERY FAIL See Note 2	Relay contact : Short when battery failure is observed through the battery test function, relay contacts LED (Red) ON : Battery over-discharge warning or battery malfunction LED (Red) OFF : Battery OK
	BATTERY DISCHARGE	Relay contact : Short when battery in discharge condition, relay contacts LED (Yellow) ON : Battery discharging LED (Yellow) OFF : Battery is not discharging or discharging current <2.0A
	ENVIRONMENT	WORKING TEMP.
	WORKING HUMIDITY	20 ~ 90% RH
	STORAGE TEMP., HUMIDITY	-20 ~ +85° C, 10 ~ 95% RH
	VIBRATION	Component : 10 ~ 500Hz, 2G 10min./1 cycle, 60min. each X,Y,Z axes ; Mounting : Compliance to IEC600068-2-6
SAFETY & EMC	WITHSTAND VOLTAGE	Terminal-Chassis :0.5KVAC, Relay Contacts-Terminal :0.5KVAC
	ISOLATION RESISTANCE	Terminal-Chassis :>100M Ohms/500VDC 25 70%RH
	EMI CONDUCTION & RADIATION	Compliance to EN55022 (CISPR22) Class B
	EMS IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8, ENV50204, heavy industry level, criteria A
OTHER	MTBF	162,000 hrs.
	DIMENSIONS	55.5x125.2x100mm (WxHxD)
NOTE	1. All parameters NOT specially mentioned are measured at rated load and 25°C of ambient temperature. 2. Every 25 seconds, unit will send out test signal through "Battery Fail" relay contact and LED indicator once the battery has failed.	



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Specifications subject to change without notice.