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U-141 2025-0328

# RLH 48V UPS Battery Charge Controller, DIN Rail Mount

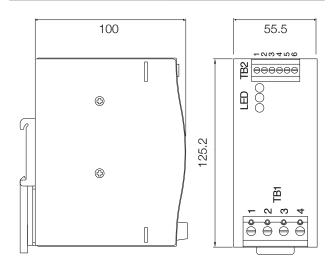
Provide UPS backup battery power to 48VDC industrial equipment

### Overview

RLH 48VDC DIN rail mount charge controllers are compact units designed to work with a DC power supply (such as the RLH DIN rail power supplies) and a UPS backup battery to provide uninterruptible power in the event of a power outage.

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.

#### **Dimensions**





RLH-UPS-48-30-01 UPS Battery Charge Controller

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Battery controller for DIN rail UPS systems

Simple parallel connection to the DC bus

Suitable for 48V systems up to 30A

Installed on DIN Rail TS35 / 7.5 or 15

Built-in battery test function

Battery polarity protection

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

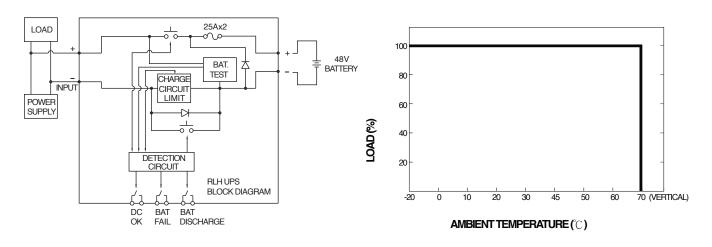
Cooling by free air convection

Convenient screw down terminals

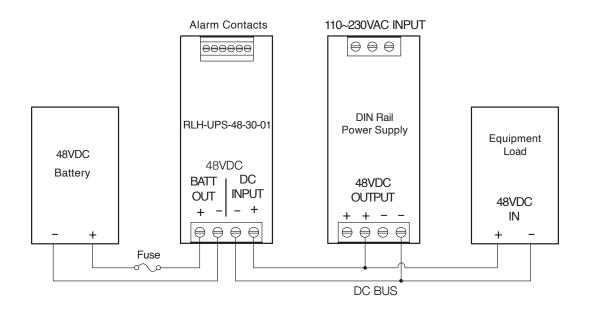


#### **Block Diagram**

#### **Derating Curve**



#### **Application Diagram**



**Note:** DC voltage cannot be measured at either the DC INPUT or the UPS unit without first having a working DC power source connected to the DC INPUT UPS terminals. The UPS unit employs a protective relay that allows voltage to only travel in one direction when that UPS system is connected to both the battery and power source.



# Specifications

DC INPUT /	DC VOLTAGE (Typ.)	48 ~ 55V
DC BUS	RATED CURRENT	30A
BATTERY INPUT / OUTPUT	VOLTAGE RANGE (Typ.)	48 ~ 55V
	CURRENT RANGE	0 ~ 30A
	CHARGE CURRENT	1A (max)
	EXTERNAL BATTERY	7Ah @ 48VDC (max)
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.	-20°C ~ +70°C
	WORKING HUMIDITY	20 ~ 90% RH
	STORAGE TEMP., HUMIDITY	-20°C ~ +85° C, 10 ~ 95% RH
SAFETY & EMC	WITHSTAND VOLTAGE	Terminal-Chassis :0.5KVAC, Relay Contacts-Terminal :0.5KVAC
	ISOLATION RESISTANCE	Terminal-Chassis :>100M Ohms/500VDC 25 70%RH
OTHER	DIMENSIONS	55.5*125.2*100mm (W*H*D)
Note	<ol> <li>All parameters NOT specifically mentioned are measured at rated load and 25°C of ambient temperature.</li> <li>Every 25 seconds, unit will send out test signal through "Battery Fail" relay contact and LED indicator once the battery has failed.</li> <li>The power source must be greater than the voltage across the battery terminals, and should be set to the charging voltage recommended by the battery manufacturer. Typically in a 48VDC system 52VDC should be the power source voltage.</li> </ol>	

# Ordering Information

Description	Part Number	Input	Output Charge Current
48V UPS Battery Charge Controller	RLH-UPS-48-30-01	48 ~ 55VDC, 30A	1A



## **Technical Support**

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Please contact your RLH sales representative for pricing and delivery information.

Specifications subject to change without notice.