Fiber Link Card Housings

RACK/WALL MOUNT, OPTIONAL INTERNAL POWER SUPPLY

Introduction

RLH NEBS Level III Fiber Link Card Housings provide mounting for RLH Fiber Link Cards in a NEBS certified enclosure. They are available in 5, 8, and 12 card capacities, and are 19/23" rack mountable, occupying 4 rack spaces (4RU). An internal DC power terminal and AC/DC switching 48V power supply with UPS feature are available options.

These sturdy, powder coated steel (standard color grey) housings include wall and rack mounting hardware, fiber cable accessories and fiber slack brackets. The front access door is hinged and secures with thumb screw locks. The acrylic door panel allows for quick assessment of fiber optic card status and configurations. Multiple cable openings on the sides, bottom and back allow for flexible cable routing into and out of the housing.

The housings do not provide weather protection, and require a weatherproof enclosure for outdoor use.

Installation

Prior to installation:

- Check for shipping damage
- Check the contents to ensure correct model and power options
- Have a clean, dry, rack or wall installation environment ready

The fiber storage spools may need to be removed from the 12 card model for rack installation. Ensure that the housing is firmly mounted prior to installing Fiber Link Cards or attaching fiber cables. The front door is secured by the two thumbscrews at the upper corners.

5, 8 and 12 Fiber Link Card Housings

Standard Features
NEBS Level III certified
Optional plug-in 48VDC switching power supply and DC power terminal available
Power terminals accept one or two 24~56VDC inputs, and includes up to 12 outputs
Alarm contacts for power supply failure
Backup battery packs available for uninterruptible power operation
EIA 19/23" Rack or wall mount
Available in 5, 8, or 12 card capacities
Durable powder coated welded steel construction
Includes fiber management spools for fiber storage
Holds up to 12 Fiber Link Cards in any configuration
Fiber management clamps and hardware included
19/23" Rack and wall mount hardware included

Rack mounting

Install the mounting brackets at the front for standard equipment racks, or half way back for telco stye rack mounting. 5 and 8 Card Housings have included extension brackets that are required for 19/23" rack mounting. Rack mount hardware is included with the housing. Cables may be routed through access grommets on the sides, back and bottom of the housing.

12 card housing with 19" rack mounting brackets

Wall Mounting

Install the mounting brackets with the mounting ears flush with the back of the housing. For wall mounting to wood backboard, use the included screws and flat washers. For all other mounting surfaces, use appropriate mounting hardware as required.

When installing, choose a location protected from the elements, and make sure there is sufficient room for the front door to open fully. Consider access to AC power, fiber cables, backup batteries and any other connections as required when installing.

DC power terminal option

Housings may be ordered with a power terminal connection. The power terminal provides DC distribution terminals for ease of wiring up individual fiber link cards, and a dedicated connector for a UPS backup power source.

It accepts one or two 24-56VDC inputs. The second input can be used for a dual redundant powering arrangement for added reliability. The DC power terminal provides 8 or 12 outputs depending on the housing size. Green LEDs indicate which terminal has power. A UPS terminal is also provided for connection to a battery backup for a complete UPS system.

The multiple outputs provide simple and convenient power wiring to each individual Fiber Link Card. This option is available with all housings by adding "**-DC**" to the end of the housing part number.

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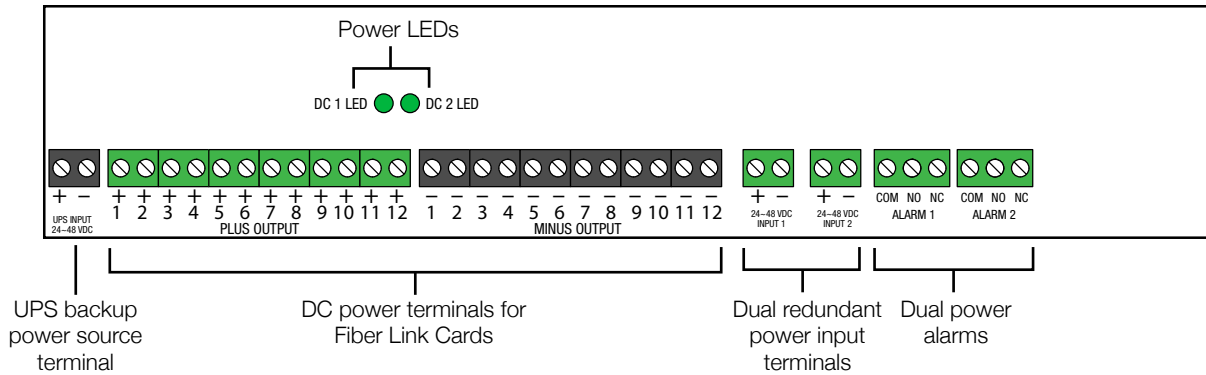
12-Position DC Power Terminal

(6-Position DC Power Terminal is similar)

Power supplies are connected directly to the terminal strip. Two power supplies may be used at the same time, providing redundancy. The power strip will automatically switch between the 2 inputs if a power supply fails, preventing an interruption in power.

The DC power terminal has 2 alarm contacts that provide alarms for incoming DC power to the terminal card. The alarm contacts are Normally Open when DC power is applied to the input terminal. These alarm contacts are ideal for monitoring internal power supplies. However, the alarm contacts on the terminal strip will not indicate that a power failure has occurred if there is backup power applied to the UPS input. Refer to the section on using UPS backup power for additional information.

The connection diagram below shows a typical redundant power connection.
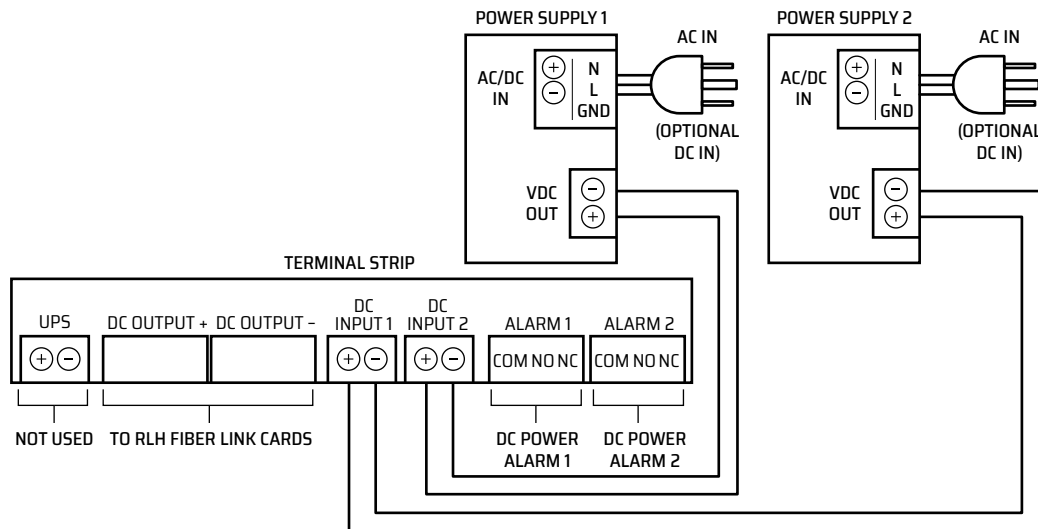
Power Terminal Connection Diagram

Using a UPS connection

When using a backup power source, such as the RLH 48V Battery Charge Controller with Backup Battery, use the alarm contacts on the charge controller itself to indicate when mains power or a power supply failure has occurred. If mains power supply is removed from the power strip, the charge controller alarm will indicate that the terminal strip and attached fiber link cards are operating off of backup battery power. Additionally, the RLH charge controller can relay battery and charge controller operation.
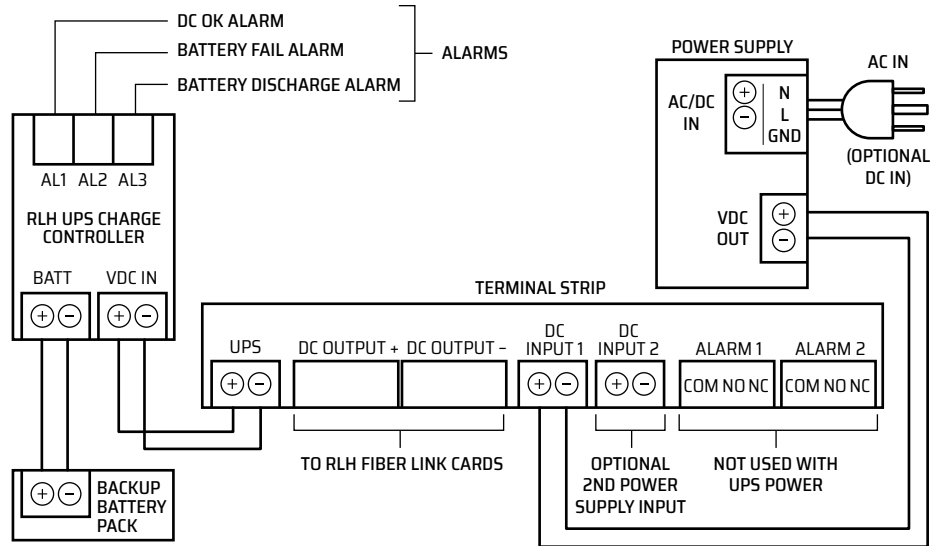
UPS Power Alarm Connection Diagram

AC/DC power supply option

Housings may be ordered with a switching power supply module preinstalled that converts AC or DC power. The power supply module occupies the last card position in the shelf. The RLH AC/DC module supplies 48V output, and a DC power terminal is preinstalled and prewired with the power supply.

For AC operation, plug the 6 ft. AC power cord into a standard 120V AC receptacle to apply power to the power supply.

For DC operation, remove the AC power cord and attach DC wiring. The DC inputs are polarity sensitive, so test the polarity of the DC input wiring before connecting to prevent damage to the power supply.

Connect the +DC lead to the AC L terminal, and the -DC lead to the AC N terminal.

Note: The DC power outputs are live when AC or DC input power is present.
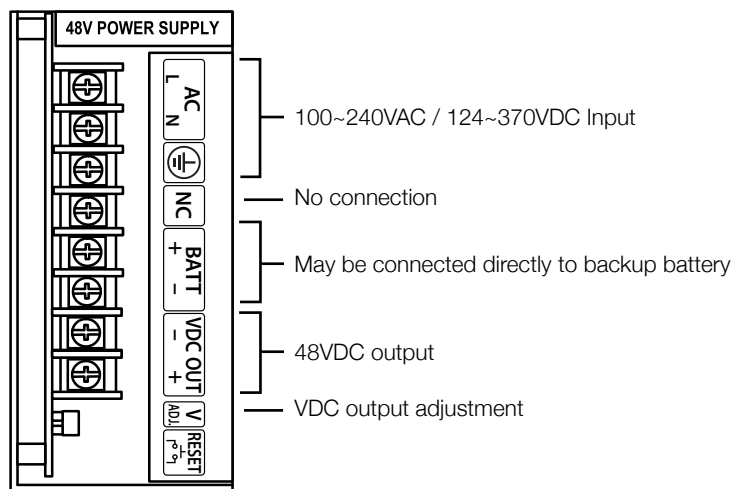

Power Supply Module

Backup battery connection

The power supply module may be used with an external battery pack to provide temporary power in case of an AC outage. The power supply module will maintain the correct charge on the battery pack and automatically switch to battery power when needed. Battery packs are available separately in 48VDC arrays. Refer to the ordering information for compatible battery packs.
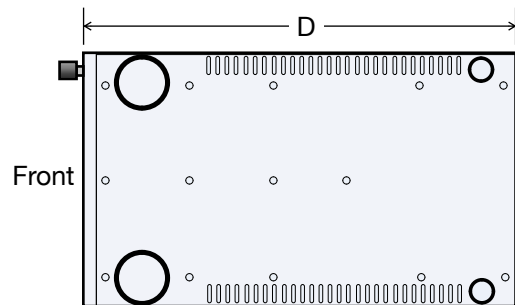
Connect the battery pack to the "B+" and "B-" terminals on the power module. Power supply modules may be ordered with housings by adding "**-A48**" to the end of the housing part number.

Refer to RLH's full line of UPS systems, battery packs and charge controllers for backup power solutions.

Dimensions

(Rack/wall brackets and adapters not shown)
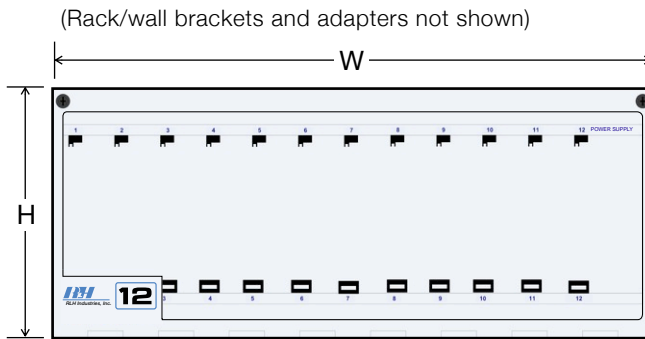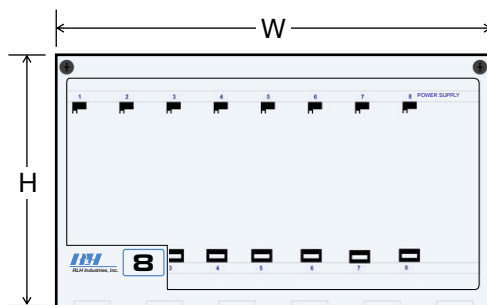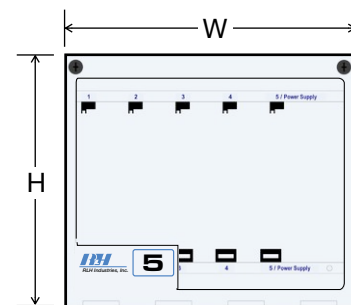

12 Card Housing

Housing side view, all models

8 Card Housing

5 Card Housing

Capacity	Rack Space	HxWxD Dimensions (without mounting brackets)
5	4RU	H 7in. x W 8in. x D 11.5in. (178mm x 203mm x 292mm)
8	4RU	H 7in. x W 12in. x D 11.5in. (178mm x 305mm x 292mm)
12	4RU	H 7in. x W 17in. x D 11.5in. (178mm x 626mm x 292mm)

General Specifications

48V AC/DC Power Supply

Input	Voltage Range	88-264VAC / 124-370VDC
	Current	2.5A/115VAC 1.5A/230VAC
Output	DC Voltage	54VDC, 2.7A
	Voltage Adj. Range	48 ~ 58V
	Battery Charge Current	0.2A
LED Indicators	DC output: Green	
Protection	Overload	105 ~ 135%
	Type	AC Charging Mode: Constant current limiting, recovers automatically after fault condition is removed.
		UPS Mode: Protected by internal fuse
	Overvoltage	62.1 ~ 72.9V
		Protection type: Shut down o/p voltage, re-power on to recover
	Battery Low	39V 2V
Environment	Working Temp.	-10℃ ~ +60℃ (14℉ ~ 140℃)
	Working Humidity	20~90% RH
Safety & EMC	Standards	UL60950-1, TUV EN60950-1 approved
	Withstand Voltage	I/P-O/P: 3KVAC I/P-FG: 1.5KVAC O/P-FG: 0.5KVAC
	Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG: 100M Ohms / 500VDC / 25℃ / 70% RH
	EMI Conductance & Radiation	Compliance to EN55022 (CISPR22) Class B
	Harmonic Current	Compliance to EN61000-3-2,-3
	EMS Immunity	Compliance to EN61000-4-2,3,4,5,6,8,11; ENV50204, EN55024, light industry level, criteria A
Other	MTBF	183.3K hrs min. MIL-HDBK-217F (25℃)
	Dimension	199 x110 x 50mm (L x W x H)
	Mounting	Factory installed with securing screw, occupies the last card slot.

DC Power Alarm

Alarm	Output	Normally Open/Closed Relay
	Max. Relay Rating	115VAC 0.6A, 110VDC 0.6A, 30VDC 2A
	Response Time	10ms

Ordering Information

Part Number	Description
8806-1231-03	5 Card Housing
8806-1229-03	8 Card Housing
8806-1230-03	12 Card Housing

▶ Add **-DC** to end of part number for DC power terminal.

▶ Add **-A48** to end of part number for for 48V AC/DC power supply with DC power terminal. Requires one card slot

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

Replacement Power Supply Modules

Part Number	Description
RLH-ACPM-48	AC/DC Card Housing Replacement Power Supply Module, 48VDC, 1.4A

Power Supply Module Compatible Battery Packs

Voltage	Part Number	Capacity	Mounting	Dimensions
48V	**RLH-4801-1BP**	1.2Ah	Wall Mount Battery Pack	H4.75” x W9.5” x D4”
	RLH-4807-1BP	7Ah	Wall Mount Battery Pack	H11" x W9" x D6"

▶ Battery Packs include mounting hardware and fuse protection.

▶ Batteries are field replaceable.

▶ Contact RLH for replacement batteries.

Replacement Power Terminals

Part Number	Description
PTS-08-1	8-Position Power Terminal (24-56VDC) - Fits 5 and 8 Card Housing
PTS-12-1	12-Position Power Terminal (24-56VDC) - Fits 12 Card Housing

Technical Support

Email:	support@fiberopticlink.com
Phone:	Toll Free 1-855-754-2497

Contact Information

Corporate Headquarters:	RLH Industries, Inc.
	936 N. Main Street
	Orange, CA 92867 USA
Phone:	(714) 532-1672
	Toll Free 1-800-877-1672
	Toll Free 1-866-DO-FIBER
Fax:	(714) 532-1885
Email:	info@fiberopticlink.com
Web site:	www.fiberopticlink.com

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Specifications subject to change without notice.