



RLP-XX24BBSCLVD Series

Heavy Duty Rack Mount 24V Power Supply



- *Integrated Smart Charger & Low Voltage Battery Disconnect*
- *Short Circuit / Overload / Over Voltage / Over Temperature Protection*
- *Manual Battery Disconnect Switch*

Model	RLP-2024BBSCLVD	RLP-4024BBSCLVD
Output Voltage	27.6 VDC	
Output Amperage	20 Amps	40 Amps
Maximum Power	600 Watts	1200 Watts
Maximum Ripple and Noise	150 mV p-p	
Voltage Tolerance	± 1.0 %	
Line Regulation	± 0.2 %	
Load Regulation	± 0.5 %	
Input Voltage	115 or 230 VAC switch selectable, 47 - 63 Hz	
Typical Efficiency	88 %	
Maximum AC Current	11.5A/115VAC & 6.5A/230VAC	20A/115VAC & 11.5A/230VAC
Max Inrush Current, single cycle	35A/115VAC & 70A/230VAC	35A/115VAC & 70A/230VAC
Short Circuit Protection	Constant Current Limiting	
Overload Protection	85 - 115 % rated output power	
Over Voltage Protection	30 - 34.8 VDC	
Over Temperature Protection	Auto Output Shutdown > 195 F (90 C)	
Fan Control	Heat Sink Temperature > 140 F (60 C)	
Working Temperature Range	14 to 158 F (-10 C to 70 C)	
Storage Temperature Range	-4 to 185 F (-20 C to 85 C)	
Withstand Voltage	I/P-O/P: 3KVAC, I/P-FG: 2KVAC, O/P-FG: 0.5KVAC	
Maximum Charge Voltage	27.6 VDC	
Maximum Recharge Rate	4.3 Amps	
Max Battery Charger Power	118 Watts	
Suggested Battery Capacity	15 - 40 Ah	
Auto-Revert Battery/Power Supply	By dual Schottky diodes in OR configuration	
Charger Protection	Overload / voltage / temperature / reverse polarity	
Dead Battery Protection	Short circuit protected with deep discharge start function	
LED Indicator	Red = high rate charge / Green = float charge	
Maximum Battery Output	75 Amps in battery mode	
Disconnect / Reconnect	20 / 25 VDC	
Product Dimensions	19 x 14 x 3.5 in, 19" Rack Mount 2U Height	
Shipping Dimensions	23 x 17 x 10 in	
Shipping Weight	17 lbs.	20 lbs.

*NOTE: Specifications are subject to change without notice.

Edit: Dec. 26, 18

Section 1 | Important Safety Instructions

THESE INSTRUCTIONS ARE INTENDED FOR USE BY A TECHNICIAN FAMILIAR WITH ELECTRONIC PRODUCTS.

WARNING: There are no user serviceable parts inside. Service must be referred to a qualified factory-trained technician. DO NOT operate the unit in a hot, enclosed environment or compartment. Be sure adequate ventilation for cooling is provided since heat buildup will shorten component life.

NOTE: The individual user should take care to determine prior to use or installation whether this device is suitable, adequate, and safe for the use intended. Since individual applications are subject to numerous variations, DuraComm makes no representation or warranty as to the merchantability, suitability, or fitness of these units for any specific application.

Section 2 | Product Overview

The RLP-XX24BBSCLVD is an enclosed 2 RU rack mount power supply. All RLP models come with a power factor correction and a built-in analog meter that can monitor voltage and amperage by simply switching the knob that is located to the right of the display (Note: the meter can only monitor one input at a time). All RLP models come with four layers of protection: short circuit, overload, over voltage, and over temperature. See www.duracomm.com for more information.

Section 3 | Installation

The outputs are NOT referenced to the chassis. The modular system can be used either positive or negative ground.

DO NOT block any of the cooling vents on the sides and/or cooling fan. Always allow adequate ventilation by not installing the unit inside tightly closed spaces.

Conductor Pretreatment

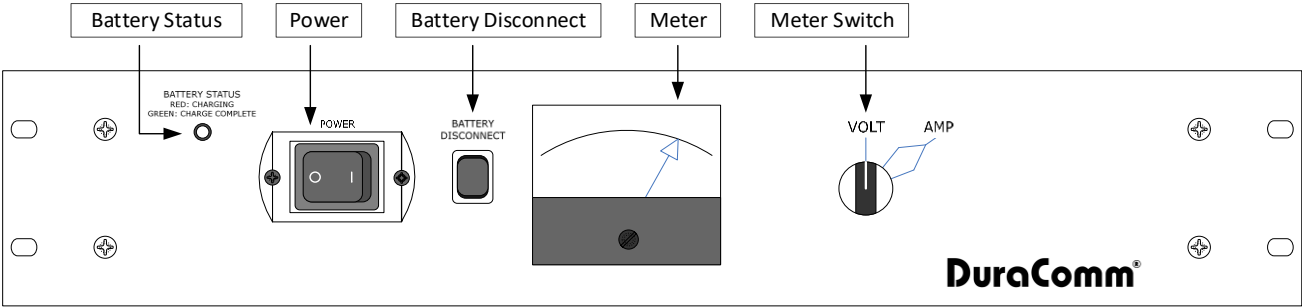
All kinds of copper conductors can be clamped without treatment. DO NOT solder tin stranded conductors. The solder yields and fractures under high pressure. The result is increased contact resistance and excessive temperature rise. Additionally, corrosion has been observed due to the fluxes. Notch fractures at the transition from the rigid tinned part to the flexible conductors are also possible. Ferrules can be used as a protection when wiring stranded conductors. Copper ferrules prevent the current transfer from being influenced by dissimilar metals and remove the risk of corrosion. Always use the correct tool to crimp the ferrule.

Recommended Copper Wire Size for Current Capacity

(Insulated Wire, Single Conductor in free air)

Current Level in Amperes	Wire Size Requirements According to MIL-W-5088B	
	Up to 5 feet	Up to 10 feet
<7 AMPERES	20 AWG	18 AWG
14 AMPERES	18 AWG	16 AWG
20 AMPERES	16 AWG	14 AWG
30 AMPERES	14 AWG	12 AWG
40 AMPERES	12 AWG	10 AWG
50 AMPERES	10 AWG	8 AWG
70 AMPERES	8 AWG	6 AWG
100 AMPERES	6 AWG	4 AWG

Front Panel Layout



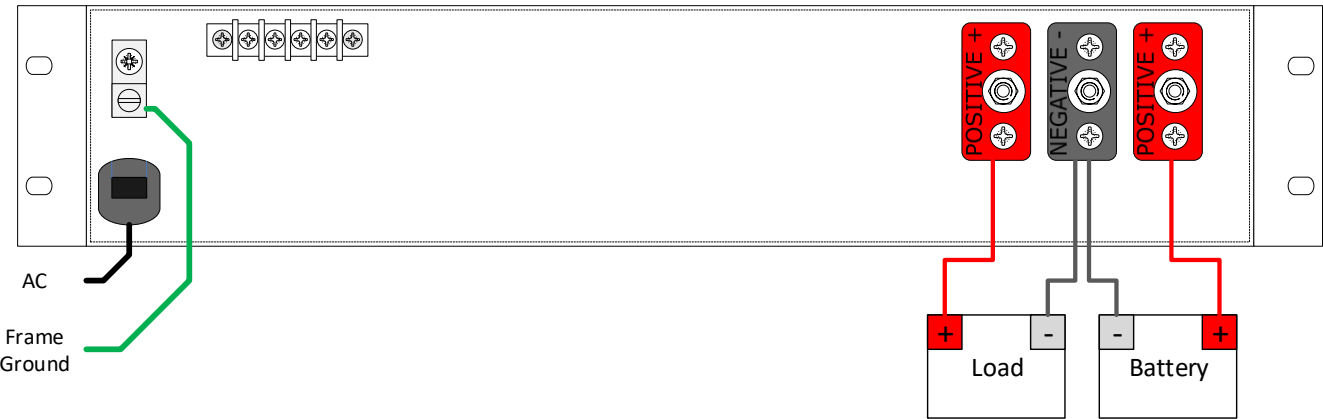
Meter Circuit

The panel meter is switched to provide DC output voltage measurement and individual output load current measurement for each individual module. When set to the VOLT position, the full-scale reading is 30 volts. When set to the AMP position, the full-scale reading is 30 amps.

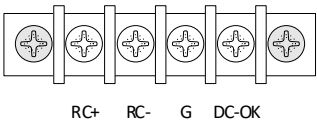
The meter and associated circuitry accuracy is 10 percent of full scale deflection. Since full scale is 30 amps, a 20 amp current can vary from 18 to 22 amps indicated. To prevent unnecessary output voltage drops, the meter circuits use the voltage drop of the black #12 AWG negative return to the module as a meter shunt. The #12 AWG wire provides a nominal 100 mV drop at 30 amps. The meter sensitivity for voltage measurement is 1000 ohms per volt.

Rear Panel Wiring

The system setup provides continuous power to the load and maintain the battery bank with a smart charger while AC power is on. There is a seamless transfer of the load to the battery when the AC power goes off. The LVD will disconnect the battery if the voltage drops below 20 VDC. The battery reconnects once AC power is restored and battery voltage reaches 25 VDC.

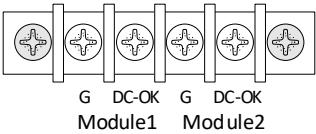


Rear Connectors



Connectors for RLP-2024BBSCCLVD

Between RC+ and RC-	Output Status
Switch Closed or 0 - 0.8V	PSU OFF
Switch Open or 4 - 10V	PSU ON



Connectors for RLP-4024BBSCCLVD

Between DC-OK and GND	Output Status
0 - 1 V or TTL Low	PSU OFF
3.3 - 5.6 V or TTL High	PSU ON

Section 7 | Warranty

DuraComm warrants to the initial end user, each power supply manufactured by DuraComm to be free from defects in material and workmanship when in normal use and service for a period of three years from the date of purchase from an authorized DuraComm dealer.

Should a product manufactured by DuraComm fail or malfunction due to manufacturing defect, or faulty component, DuraComm, at its option, will repair or replace the faulty product or parts thereof, which, after examination by DuraComm, prove to be defective or not operational according to specifications in effect at the time of sale to the initial end user. The product that is replaced or repaired under the provisions of this warranty will be warranted for the remainder of the original warranty period, only, and will not extend into a new three-year warranty period.

The limited warranty does not extend to any DuraComm product which has been subject to misuse, accidental damage, neglect, incorrect wiring not associated with the manufacturer, improper charging voltages, or any product which has had the serial number removed, altered, defaced, or changed in any way.

DuraComm reserves the right to change, alter, or improve the specifications of its products at any time, and by so doing, incurs no obligation to install or retrofit any such changes or improvements in or on products manufactured prior to inclusion of such changes.

DuraComm requires any product needing in or out of warranty service to be returned to DuraComm. All requests for warranty service must be accompanied by proof of purchase, such as a bill of sale with purchase date identified. DuraComm is not responsible for any expenses or payments incurred for the removal of the product from its place of use, transportation or shipping expenses to the place of repair, or return expenses of a repaired or replacement product to its place of use.

The implied warranties that the law imposes on the sale of this product are expressly LIMITED, in duration, to the three (3) year time period specified herein. DuraComm will not be liable for damages, consequential or otherwise, resulting from the use and operation of this product, or from the breach of this LIMITED WARRANTY.

Some states do not allow limitations on the duration of the implied warranty or exclusions or limitations of incidental or consequential damages, so said limitations or exclusions may not apply to you. This warranty gives you specific legal rights which vary from state to state.

This warranty is given in lieu of all other warranties, whether expressed, implied, or by law. All other warranties, including WITHOUT LIMITATION, warranties of merchantability and fitness or suitability for a particular purpose, are specifically excluded. DuraComm reserves the right to change or modify its warranty and service programs without prior notice.

Section 8 | Contact Us

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