



LPB Series

Desktop Power Supplies with Internal Battery



- *Internal battery automatically recharges when AC power is restored*
- *Universal input 90-264 VAC*
- *Short circuit / over load / over temperature protections*
- *Built-in EMI filter*
- *Front panel DC output indicator*
- *Compatible with all DuraComm LPH Radio Hoods for custom mobile radio mounting*

Models	LPB-12	LPB-12H	LPB-15	LPB-24
Operational DC Voltage	13.8			27.5
Maximum Current, Peak	12 Amps	15 Amps		7 Amps
Maximum Current, Continuous	7 Amps	12 Amps		5 Amps
AC Input Range	90-264 VAC, 47-63 Hz			
Max Inrush Current, Single Cycle	Cold start, 30 Amps / 115 Volts; 60 Amps/ 230 Volts		Cold start, 40 Amps / 115 Volts; 70 Amps/ 230 Volts	
Overload Protection (Operates)	DC Circuit Breaker			
	15 Amps	15 Amps	20 Amps	15 Amps
Ripple and Noise	150 mV P-P or less, built-in EMI Filtering			
Internal Battery	rechargeable, sealed lead acid			
	12 VDC 7 Amp-Hrs	12 VDC 12 Amp-Hrs	12 VDC 7 Amp-Hrs	24 VDC 7 Amp-Hrs
	MK ES7-12T2 or equivalent	MK ES7-6T2 or equivalent	MK ES7-12T2 or equivalent	MK ES7-12T2 or equivalent
Working Temperature	-4 to 140 F (-20 to 60 C)			
Storage Temperature	-40 to 185 F (-40 to 85 C)			
Dimensions, (L x W x H) Product, inches	10 x 7 x 3.75	15.5 x 7 x 3.5	10 x 7 x 3.75	15.5 x 7 x 3.5
Dimensions, (L x W x H) Shipping, inches	21 x 10 x 10	21 x 10 x 12	21 x 10 x 10	21 x 10 x 12
Weight, Shipping, lbs.	12	16	12	19

***NOTE: Specifications are subject to change without notice**

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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 technician or 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.

NOTE: DuraComm’s precision regulated power supplies operate internally from voltages in excess of 300 volts. In rare cases, voltage spikes or transients on the AC power line, or overheating, may cause a component failure in the power supply. Over load of the output will cause the circuit breaker of the power supply circuitry to operate. In either case, the cause must be determined and corrected. Failures require investigation as to the cause and/or repair of the unit.

Section 2 | Product Overview

DuraComm's LPB Series Power Supply has auto-ranging AC input and can be used without any changes. It also contains a built-in, replaceable sealed lead acid battery that automatically takes over should AC power be disrupted. The DC output operating voltage from the internal battery and AC charger circuitry is delivered to the red and black jacks located on the rear panel. The power supply DC output is protected against inadvertent shorts and overloads by a thermal circuit breaker.

See www.duracomm.com for more information.

Charging

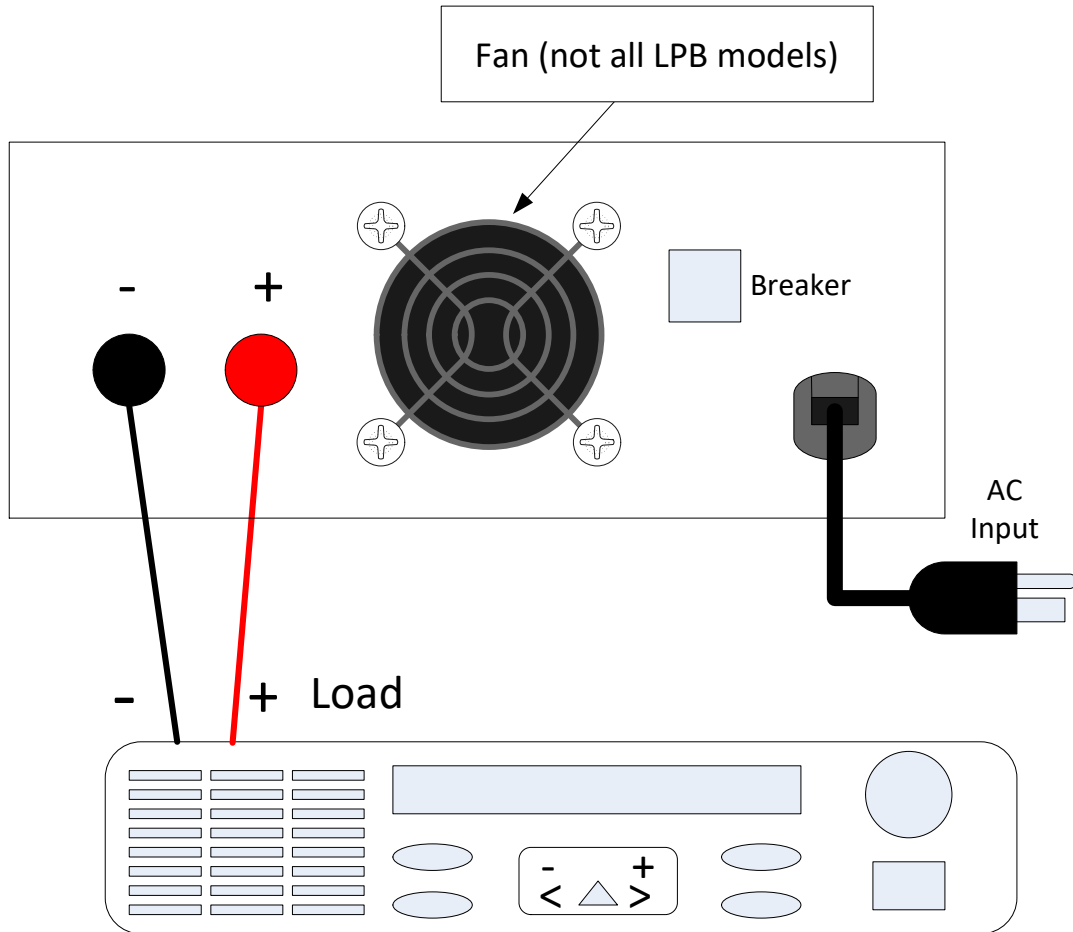
A special charging circuit is used in the power supply which keeps the battery at peak charge levels without danger of overcharging. When the AC power is interrupted, the internal battery automatically takes over and provides seamless transfer of DC power to the load.

If the battery become depleted, the charging circuit will recharge the battery once AC power is restored.

Battery Life

The length of time the battery will provide power depends on the current draw (demand) of the load. Based on a typical 80/10/10 duty cycle (80% standby /10% Rx 10% Tx), a radio drawing 0.25 amp on standby, 0.75 amp on Rx, and 10 amps on Tx will demand an average of 1.275 amps. Assuming a fully charged 12 amp-hrs battery and a de-rating factor of 20 % for "real world" operation, the approximate battery running time can be calculated as follows, $12 \text{ amp-hrs} / 1.275 \text{ amps} = 9.41 \text{ hours}$. Applying the de-rating factor ($9.41 \text{ hr} \times 0.8$) results in an approximate "real world" operating time of about 7.5 hours.

Section 3 | Installation



1. Connect your DC device (Two-way radio, repeater etc.) to the red (positive) and black (negative) binding posts on the rear of the power supply.
2. **BE SURE** you connect positive (red) to positive and negative (black) to negative of the DC equipment being powered.
3. Insert the AC plug into 90-264 VAC with Euro type "C" plug outlet. Press the ON/OFF switch on the front of the panel to the "on" position. L.E.D. indicates DC output power

Section 4 | Maintenance

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

Section 5 | 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 manufacture, 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 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 6 | Contact Us

Location
6655 Troost Avenue
Kansas City, MO. 64131

Phone Numbers:
816-472-5544
800-467-6741

Fax Number:
816-472-0959

Email Purchase Orders to
order@duracomm.com

www.DuraComm.com

