LPX Series

Next Generation Low Profile Power Supplies

LPX-10, LPX-14, LPX-18, LPX-25

The LPX Series is the next generation of DuraComm's popular and reliable LP desktop power supply. We enhanced the electronic filtering and noise shielding, added auto ranging AC input, and adjustable DC output, all while maintaining the rugged 7 inch standard design. The improved efficiency meets DoE level VI green energy standards.

UL60950-1

	LPX-10	LPX-14	LPX-18	LPX-25
Input Voltage (Nominal)	90-264 VAC or 127-370 VDC			
Output voltage	13.8V			
OUTPUT RIPPLE & NOISE (ON FULL LOAD, PEAK TO PEAK)	150 mV			
OUTPUT CURRENT, CONTINUOUS	8.7A	13A	17.4A	26A
CURRENT LIMIT	10.9A	16.3A	21.7A	32.6A
COOLING	Convection Cooled			
PROTECTIONS	Overload, over voltage, and over temperature			
ENVIRONMENTAL TEMPERATURE RANGE	-30 to +70˚C		-22 to +158˚ F	
AC INPUT	Detachable power cord C/W NEMA 5-15P plug			
DC OUTPUT	Terminals w/ recessed hole DIA. 0.16" (4 mm) with set screw			
DIMENSIONS, (L x W x H) Shipping	280 x 230 x 60 mm		11.02 x 9.06 x 2.36in	
DIMENSIONS, (L x W x H) Product	192 x 178 x 45 mm		7.56 x 7.00 x 1.77 in	
WEIGHT	1 KG		2.21 LB	

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

Edited: May 11, 2018

Table of Contents

Section 1 | Important Safety Instructions

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

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

The DuraComm series of desk top power supplies are accurately regulated to maintain output voltage from no load to full load. Slightly above the rated output load, the current limiting circuit begins to act, reducing the output voltage to prevent unit overload damage.

Precision regulated power supplies operate internally from voltages in excess of l3.8V. In rare cases, voltage spikes or transients on the AC power line, or overheating, may cause a component failure in the power supply. If this failure results in over voltage at the output terminals, the electronic over voltage feature will operate. Overload of the output will cause the over current feature 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.

THIS UNIT DOES NOT HAVE ANY USER SERVICEABLE PARTS. SERVICE AND REPAIR MUST BE REFERRED TO QUALIFIED PERSONNEL

PRECAUTIONS: DO NOT block any openings in the case or operate the unit in a hot, enclosed environment or compartment. Be sure adequate ventilation is provided since heat build-up will shorten component life. NOTE: Most audio and radio equipment draws much less average current than the peak demand.

If the unit stops working, check the 12 volt connections for tightness. If the unit fails again or repeatedly, have the unit checked by a qualified technician.

HAZARDOUS VOLTAGES EXIST INSIDE THE UNIT. THERE ARE NO USER SERVICEABLE PARTS INSIDE. DO NOT EXPOSE THE UNIT TO RAIN OR MOISTURE.

Section 2 | Product Overview

The DuraComm LPX Series of power supplies are UL/CUL listed. They are manufactured in accordance with ISO 9001 quality assurance standards. These power supplies convert 90~264 Volt 50/60 Hz AC power to low noise and ripple, regulated 13.8 volt DC output.

DuraComm's power supplies are protected against inadvertent shorts and overloads by an electronic output current limiting circuit. This current limiting circuit reduces the output limiting to a very low and safe value until the overload is removed from the power supply. As soon as the overload is removed, the output will be automatically restored.

Additionally the power supplies incorporate an over temperature feature to protect against undesired component failure should operation in excessive environmental temperatures occur.

DuraComm LPX series power supplies are compatible with all LPH radio hoods. DuraComm LPX series power supplies may be configured for battery backup & charging applications with the addition of the LPBC-25.

See www.duracomm.com for more information.

Section 3 | Installation

Connect your 12 volt DC device to the red (positive) and black (negative) output terminals. Be certain you connect positive to positive (red) and negative to negative (black). Insert the AC plug into an AC outlet of the proper voltage.

Section 4 | Operation

Press the ON/OFF switch to the ON position and observe that the indicator light illuminates. If the indicator light fails to light, recheck the equipment installation, hook-up polarity, and the AC outlet.

Section 5 | Specifications

Model			LPX-10	LPX-14	LPX-18	LPX-25
Output	DC Voltage		13.8V			
	Rated Current		8.7A	13A	17.4A	26A
	Current	Rated	0 ~ 8.7A	0~13A	0 ~ 17.4A	0 ~ 26A
		Peak	10.9 A	16.3A	21.7A	32.6A
	Wattage	Rated	120W	179.4W	240.1W	359W
		Peak	150.4W	225W	300W	450W
	Ripple & Noise (Max)		150mVp-p			
	Voltage ADJ. Range		11.5 ~ 15V	11.5 ~ 15V	11.5 ~ 15V	11.5 ~ 15V
	Voltage Tolerance		±1.0%	±1.0%	±1.0%	±1.0%
	Line Regulation		±0.5%	±0.5%	±0.5%	±0.5%
	Load Regulation		±2.0%	±2.0%	±2.0%	±2.0%
	Setup, Rise Time		1000ms, 100ms at full load			
	Hold Up Time*		20ms at full load			
Input	Voltage Range		90 ~ 264VAC 127 ~ 370VDC			
	Frequency Range		47 ~ 63Hz			
	Power Factor *		PF>0.98/115VAC, PF>0.95/230VAC at full load			
	Efficiency *		89.5%	91%	91%	91%
	AC Current*		1.25A/115VAC 0.63A/230VAC			
	Inrush Current * Cold Start at 230 VAC		65A	70A	75A	60A
	Leakage Current		<3.5mA / 240VAC			
	No Load Power		<0.15W	<0.15W	<0.15W	<0.5W
Protections	Short Circuit		Protection type : Constant current limiting, recovers automatically after fault condition is removed			
	Overload		Normally works within 110 ~ 125% rated output power for more than 3 seconds and switches to constant current limiting, with auto-recovery after the peak load condition is removed			
			Constant current limiting, if >125% rated power, with auto-recovery after the overload condition is removed			
	Over Voltage		15.5 ~ 18.2V			
			Protection type : Shut down o/p voltage, re-power on to recover			
	Over Temperature		Shut down O/P voltage, recovers automatically after temperature goes down			
Environment	Working Temp		-30 ~ +70℃			
	Working Humidity		20 ~ 95% RH non-condensing			
	Storage Temp		-40 ~ +85℃, 10 ~ 95% RH non-condensing			
	Temp. Coefficient		±0.05%/℃ (0 ~ 50℃)			
	Vibration		10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes			
Safety & EMC (Note 9)	Safety Standards		IEC60950-1, UL60950-1 approved			
	Withstand Voltage		I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC			
	Isolation Resistance		I/P-O/P, I/P-FG, O/P-FG:100M Ohms / 500VDC / 25℃/ 70% RH			
	EMC Emission		Parameter	Standard		Test Level / Note
			Conducted	EN55032 (CISPR32) / FCC PART15 (CISPR22)		Class B
			Radiated	EN55032 (CISPR32) / FCC PART15 (CISPR22)		Class B
			Harmonic Current	EN61000-3-2		-----
			Voltage Flicker	EN61000-3-3		-----
	EMC Immunity		EN55024			
			Parameter	Standard		Test Level / Note
			ESD	EN61000-4-2		Level 3, 8KV air ; Level 2, 4KV contact
			Radiated	EN61000-4-3		Level 2, 3V/m
			EFT / Burst	EN61000-4-4		Level 2, 1KV
			Surge	EN61000-4-5		Level 2, 1KV/Line-Line,Level 3, 2KV/Line-Earth
			Conducted	EN61000-4-6		Level 2, 3Vrms
			Magnetic Field	EN61000-4-8		Level 1, 1A/m
			Voltage Dips and Interruptions	EN61000-4-11		>95% dip 0.5 periods, 30% dip 25 periods, >95% interruptions 250 periods
Others	MTBF		257K hrs. min. MIL-HDBK-217F (25℃)			
Notes	1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25 of ambient temperature. 2. Peak current or peak power up to 3 seconds is provided. 3. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor. 4. Tolerance: includes set up tolerance, line regulation and load regulation. 5. Line regulation is measured from low line to high line at rated load. 6. Load regulation is measured from 0% to 100% rated load. 7. Length of set up time is measured at cold first start. Turning ON/OFF the power supply very quickly may lead to increase of the set up time. 8. Derating may be needed under low input voltages. Please check the derating curve for more details. 9. The power supply is considered as an independent unit, but the final equipment still needs to re-confirm that the whole system complies with the EMC directives.					

Section 6 | 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 7 | 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

DuraComm®
POWER SUPPLIES
A Benny Lee Company