



# LPX-N Series

Next Generation Low Profile Power Supply

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



- *Universal full range AC input*
- *Built-in active PFC function*
- *Level VI energy efficiency*
- *No load power consumption < 0.15W (< 0.5W for LPX-25)*
- *Comply with EISA 2000/DoE, NRCAN, and EU ErP*
- *125% peak load capability*
- *Fanless design, cooling by free air convection*
- *Protections: short circuit / overload / over voltage / over temperature*
- *RoHS compliant*
- *UL/CUL listed*



Model	LPX-10N	LPX-14N	LPX-18N	LPX-25N
<b>Output Voltage</b>	13.8 VDC			
<b>Output Current</b>	8.7 Amps	13 Amps	17.4 Amps	26 Amps
<b>Max Continuous Power</b>	120 Watts	179 Watts	240 Watts	359 Watts
<b>Max Ripple and Noise</b>	150 mV p-p			
<b>Input Voltage</b>	90 - 264 VAC / 47-63 Hz or 127 - 370 VDC			
<b>Protections</b>	Short circuit, overload, over voltage, and over temperature			
<b>AC Input Terminal</b>	Detachable power cord with NEMA 5-15P plug			
<b>DC Output Terminal</b>	Recessed connection of 0.16 in (4 mm) dia. hole with set screw 16/2 SAE/Ford connector included			
<b>Working Temperature</b>	-22 to 158 F (-30 to 70 C)			
<b>Storage Temperature</b>	-40 to 176 F (-40 to 80 C)			
<b>Product Dimensions</b>	7.55 x 7 x 1.8 in			
<b>Shipping Dimensions</b>	11 x 9 x 2.5 in			
<b>Shipping Weight</b>	2.12 lbs.			

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

## 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, 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.

DuraComm's power supply may operate with hazardous voltage inside the unit. In rare cases, voltage spikes, transients on the AC power line, or overheating, may cause a component failure in the power supply. Overload 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.

Failure of the power supply require investigation as to the cause and/or repair of the unit. There are no user serviceable parts inside. Service must be referred to a qualified factory personnel.

## Section 2 | Product Overview

The LPX Series power supplies are UL/CUL listed. They are manufactured in accordance with ISO 9001 quality assurance standards. These power supply converts 90-264 Volt 50/60Hz AC input to low-noise, regulated 13.8 Volt DC output.

The LPX Series power supply is protected against inadvertent short circuit and overload by an output current limiting circuit. The output is reduced to a very low and safe level until the short circuit and/or overload condition is removed from the power supply. When the short circuit and/or overload condition is removed, the output will be automatically restored. Additionally, the LPX Series power supplies incorporate over temperature feature to protect against undesired component failure should operation in excessive temperature occurs.

DuraComm LPX Series power supplies are compatible with all LPH radio hoods. Additional features can be configured for battery backup and charging applications with addition of the LPBC-25 unit.

See [www.duracomm.com](http://www.duracomm.com) for more information.

## Section 3 | Installation and Operation

DO NOT block any of the cooling vents on the sides or operate the unit in an over-temperature environment. Always allow adequate ventilation to prevent overheating of the unit as heat buildup will shorten component life. Be sure to operate the unit in a dry environment, so it is not exposed to rain or moisture.

Connect the 12V equipment to the red positive (+) and black negative (-) output terminals. Double check to make certain that the connections are correct. Then insert the AC plug into an AC outlet of the proper voltage.

Turn the switch to the ON position and observe that the power LED lights up. If the LED fails to light, recheck the equipment installation, hook-up polarity, and the AC outlet.

If the unit stop working, check the 12V connection for tightness. If the unit fails again or repeatedly, have the unit checked by a qualified technician.

DuraComm LPX Series power supplies are accurately regulated to maintain output voltage from no load to full load. At slightly above the rated output load, the current limiting circuit begins to engage, reducing the output voltage to prevent overload damage to the unit.

## Section 4 | Specifications

Model		LPX-10N	LPX-14N	LPX-18N	LPX-24N	
OUTPUT	DC Voltage	13.8 VDC				
	Rated Current	8.7 Amps	13 Amps	17.4 Amps	26 Amps	
	Current	Rated	0 – 8.7 A	0 – 13 A	0 – 17.4 A	0 – 26 A
		Peak <sup>2</sup>	10.9 A	16.3 A	21.7 A	32.6 A
	Wattage	Rated	120 W	179 W	240 W	359 W
		Peak <sup>2</sup>	150.4 W	225 W	300 W	450 W
	Max Ripple & Noise <sup>3</sup>	150 mV p-p max				
	Voltage Adj. Range	11.5 – 15.0 V				
	Voltage Tolerance <sup>4</sup>	± 1.0 %				
	Line Regulation <sup>5</sup>	± 0.5 %				
Load Regulation <sup>6</sup>	± 2.0 %					
Setup, Rise Time <sup>7</sup>	1000ms, 100ms at full load					
Typ. Hold Up Time	20ms at full load					
INPUT	Voltage Range <sup>8</sup>	90 – 264 VAC or 127 – 370 VDC				
	Frequency Range	47 – 63 Hz				
	Typ. Power Factor	PF>0.98/115VAC, PF>0.95/230VAC at full load				
	Typ. Efficiency	91 %	91 %	91 %	89.5 %	
	Typ. AC Current	1.25A/115VAC 0.63A/230VAC	1.9A/115VAC 0.95A/230VAC	2.5A/115VAC 1.25A/230VAC	3.8A/115VAC 1.9A/230VAC	
	Typ. Inrush Current	Cold start 65A/230VAC	Cold start 70A/230VAC	Cold start 75A/230VAC	Cold start 60A/230VAC	
	Leakage Current	<3.5mA / 240VAC				
	No Load Power Consumption	<0.15W	<0.15W	<0.15W	<0.5W	
PROTECTION	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 – 18.2 V				
		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 Temperature	-30 to 70°C				
	Working Humidity	20-95% RH non-condensing				
	Storage Temp., Humidity	-40 to 85°C, 10-95% RH non-condensing				
	Temp. Coefficient	±0.05%/°C (0-50°C)				
	Vibration	10–500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes				
SAFETY & EMC <sup>9</sup>	Safety Standards	IEC60950-1, UL60950-1, EAC TP TC 004 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: 100M Ohms / 500VDC / 25°C / 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; 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 period, 30% dip 25 periods >95% interruptions 250 periods			
OTHERS	MTBF	257K hrs min., MIL-HDBK-217F (25°C)				
	DIMENSION	192 x 178 x 45.5 mm				
NOTE	<ol style="list-style-type: none"> <li>All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.</li> <li>Peak current or peak power up to 3 seconds is provided.</li> <li>Ripple &amp; noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF and 47uF parallel capacitor.</li> <li>Tolerance: includes set up tolerance, line regulation, and load regulation.</li> <li>Line regulation is measured from low line to high line at rated load.</li> <li>Load regulation is measured from 0% to 100% rated load.</li> <li>Length of set up time is measured at cold start first. Turning ON/OFF the power supply very quickly may lead to increase of the setup time.</li> <li>Derating may be needed under low input voltages.</li> <li>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.</li> <li>The ambient temperature derating of 3.5°C/1000m with fanless model for operating altitude higher than 2000m (6500ft).</li> </ol>					

## 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 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 6 | Contact Us

### Location

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