

# LDX-C120 Series

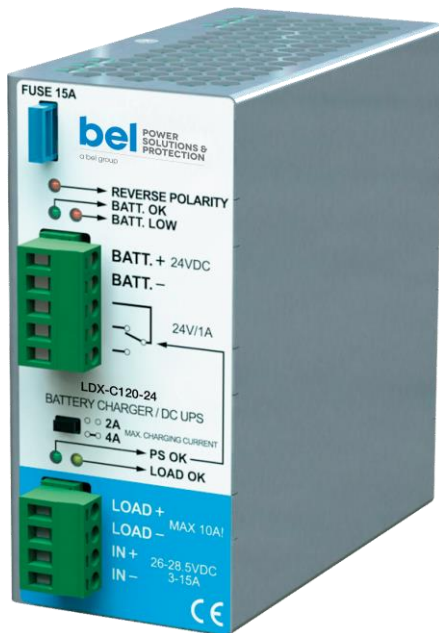
## Battery Charger / DC UPS Module

LDX-C120 Series is a 120 W integrated DIN Rail Battery Charger / DC UPS Power Supplies, suitable for wide variety of industrial applications.

In case of mains or unit failure the DC UPS function enables the power supply to feed the load from the battery without any interruption, until the mains is recovered or the battery reaches the “Deep Discharge Voltage” threshold.

These units have received excellent market approval for their high efficiency, excellent reliability and compactness. Simple but elegant look and easy installation make them market leaders for various industrial applications.

LDX-C120 Series are isolation devices suitable for SELV and PELV circuitry and are designed to be mounted on DIN rail and installed inside a protective enclosure.



### Key Features & Benefits

- Accessory for the charging of a 12 or 24 VDC battery
- Suitable for power supplies with adjustable output
- For Lead Acid batteries
- For LiFePO<sub>4</sub> batteries compatible with Lead Acid batteries
- Allows to feed the load and to charge the battery at once
- Built-in battery protection fuse
- “Low battery” cut-off system

## 1. MODEL SELECTION

MODEL	INPUT VOLTAGE RANGE FROM POWER SUPPLY	OUTPUT VOLTAGE	CHARGING CURRENT LIMIT (SETTABLE)	MAX LOAD CURRENT
LDX-C120-12	12 VDC (10 – 15 VDC)	12 VDC	2 A or 4 A	10 A
LDX-C120-24	24 VDC (20 – 28 VDC)	24 VDC	2 A or 4 A	10 A

## 2. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Voltage Range from Power Supply	LDX-C120-12	13 - 15.5 VDC
	LDX-C120-24	26 - 28.5 VDC
Input Current	Rated	10 A

## 3. OUTPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Load Nominal Voltage	LDX-C120-12 (to be set at 14 VDC for battery charging)	12 VDC (10 – 15 VDC)
	LDX-C120-24 (to be set at 27 VDC for battery charging)	24 VDC (20 – 28 VDC)
Charging Current Limit	Settable	2 A or 4 A
Maximum Load Current		10 A
Battery Float Voltage	LDX-C120-12	U <sub>in</sub> – 0.4 V, min. 11 VDC
	LDX-C120-24	U <sub>in</sub> – 0.4 V, min. 26 VDC
Deep Discharge Cut-Off Voltage	LDX-C120-12	9.2 VDC ± 0.5 V
	LDX-C120-24	18 VDC ± 0.5 V
Chargeable Capacity of the Battery vs Power Supply Voltage	LDX-C120-12	75% @ 13 VDC
		85% @ 13.5 VDC
		100% @ 14 VDC
	LDX-C120-24	75% @ 26 VDC
		85% @ 27 VDC 100% @ 28 VDC
Status Signals	PS OK: green LED and dry contact (1 A / 30 V) LOAD OK: amber LED and dry contact (1 A / 30 V) BATT. OK: green LED BATT. LOW: red LED REVERSE POLARITY: red LED	
Battery OK Green LED	LDX-C120-12 LDX-C120-24	ON for U <sub>Batt.</sub> > 11.6 VDC ± 0.2 VDC ON for U <sub>Batt.</sub> > 23.5 VDC ± 0.2 VDC
Battery LOW Red LED	LDX-C120-12 LDX-C120-24	ON for U <sub>Batt.</sub> < 11.6 VDC ± 0.2 VDC ON for U <sub>Batt.</sub> < 23.5 VDC ± 0.2 VDC
Protections	Battery reverse connection Battery short-circuit / overload Battery deep discharge	
Protection Fuse	Mini Blade (car type) 32 V user replaceable	15 A

## 4. GENERAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Operating Temperature	Overtemperature protection (Start-up type tested: - 40°C <sup>1</sup> )	- 40 to + 50°C
Storage Temperature		- 40 to + 80°C
Humidity	Non-condensing	5 - 95% RH
Overvoltage Category		III
Pollution Degree		2 (IEC 664-1)
Isolation against Closure		0.75 kVDC
Safety Standards & Approvals	UL508 (reference)	
	EN60950 (reference)	

EMC Standards	Emission	EN55022:2010 (CISPR22)	Class A
		EN55011:2009 /A1:2010	Class A
		EN61000-4-2:2008	Level 3
	Immunity	EN61000-4-3:2006 /A2:2010	Level 3
		EN61000-4-4:2012	Level 3
		EN61000-4-5:2014	Level 1
		EN61000-4-11:2004 /A1:2010	Level 2
Protection Degree		EN60529:1989 / A:2013	IP20
Vibration Sinusoidal		IEC 60068-2-6:2007	5-17.8 Hz: ±1.6 mm; 17.8-500 Hz: 2g 2Hours / axis (X,Y,Z)
Shock		IEC 60068-2-27:2008	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total

<sup>1</sup> Possible at nominal voltage with load deration.

## NOTES:

- For more details, performance and description regarding all parameters not indicated in the above table, refer to user manual.
- Technical parameters are typical, measured in laboratory environment at 25°C and 240 VDC.
- Power rating, losses, efficiency, ripple, thermal behaviour and start-up may change outside of the nominal rated input range. Contact factory for details.
- Data may change without prior notice in order to improve the product.

## 5. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		300 g
Dimensions		55 x 110 x 113 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)
Connection Terminals	Screw type pluggable (24 - 12 AWG)	2.5 mm <sup>2</sup>
Case Material	Aluminum	

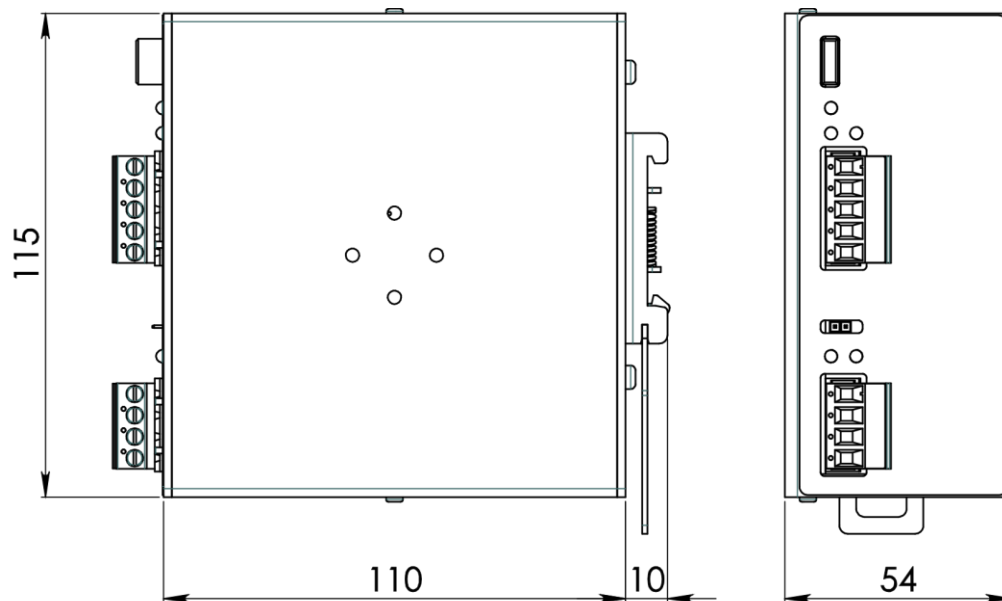
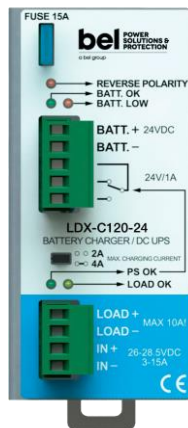


Figure 1. Mechanical Drawing

## 6. PIN LAYOUT & DESCRIPTION



### INPUT / OUTPUT CONNECTION

- IN (+/-) = connect to DC (+/-) Power supply
- LOAD (+/-) = connect to DC (+/-) Load
- BATTERY (+/-) = connect to DC (+/-) Battery
- PS OK = dry contact SPDT

**For more information on these products consult: [tech.support@psbel.com](mailto:tech.support@psbel.com)**

**NUCLEAR AND MEDICAL APPLICATIONS** - Products are not designed or intended for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems.

**TECHNICAL REVISIONS** - The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.