



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



LDX-U20

20 A High performance DC UPS

LDX-U20 is a microprocessor controlled DC-UPS rated 20 A usable in 12 V or 24 V systems.

LDX-U20 monitors the voltage supplied by a DC source and in case of power failure a backup battery is connected to the load.

When powered externally the unit charges the battery by an integrated battery charger supporting various battery chemistries.



Key Features & Benefits

- Digital Power regulation, LCD interface
- Multiple user settable parameters
- BI VOLTAGE: 12 V or 24 V (intermediate voltages possible)
- Battery chemistry: Lead acid, nickel and lithium
- Maximum battery capacity 150 Ah
- Load current: 20 A Max.
- Multiple protections
- Remote ON/OFF or other remote control functions possible through INHIBIT input
- Cold start
- Automatic sensing of input voltage, load current and battery current
- Battery protection against reverse polarity connection and overcurrent
- Battery health monitoring system: measuring battery internal resistance, battery temperature, charge/discharge cycles and Coulomb counter
- User settable maximum backup time

Embedded User Interface

- 4 keys and 1 color graphic CSTN LCD display
- Allows online device configuration
- Displays the LDX-U20 status and alarms
- USB communication port for remote monitoring and configuration
- Dry contacts

Suitable for POWERMASTER software

- Connection through USB interface
- Remote monitoring and configuration
- Firmware upgrade
- Same functionalities of the embedded user interface with the ease of the PC benefits
- Available for Windows and Android



bel POWER SOLUTIONS & PROTECTION

a bel group

belfuse.com/power-solutions

1. MODEL SELECTION

MODEL	INPUT VOLTAGE	INPUT CURRENT	BATTERY VOLTAGE	MAX BATTERY CHARGE CURRENT
LDX-U20	11 - 28 VDC (10 - 29 VDC)	20 A	12 V or 24 V	5 A

2. INPUT SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Input Voltage (Range)	Rated (UL Certified)	11 - 28 VDC (10 - 29 VDC)
Input Current	Rated	20 A
Standby Power		< 3 W

3. BATTERY SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Rated Battery Voltage	Other voltages possible by request	12 V or 24 V
Battery Chemistries	Lead Acid Nickel Lithium	
Maximum Battery Charge Current		5 A
Allowed Battery Capacity		up to 150 Ah
Maximum Battery Current		20 A (up to 35 A for 5 seconds)
Load to Battery Switch Time		< 5 μ s
Battery Protections	Overcurrent Deep discharge Reverse polarity	
Battery Health Monitor		
Battery Internal Resistance Range	Using Kelvin connection	1 - 300 m Ω
Additional Monitoring Functions	Coulomb counter Battery temperature through optional 10 k Ω NTC sensor Battery operating time since installation Number of cycles	

4. USER INTERFACE SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION
1.5 Inch Color Graphic LCD	Used to indicate the unit's status and to access the configuration menus
4 Keys	Used to program the unit and to access various menus
Red LED	Constantly ON: generic failure on the system, details on the LCD Blinking: battery backup function active
2 Dry Contacts (Relays) Rated 30 V / 1 A	May indicate units status (READY or on BACKUP model), battery failure (by toggling at 1 Hz) Configurable for remote PC shutdown
Other Interfaces	INHIBIT - Isolated remote ON/OFF input, active for 5 - 30 VDC BATTERY SENSE - recommended to have an accurate measurement of the battery internal resistance Mini USB-B - connector to be used with POWERMASTER software T SENSE - optional, remote temperature sensor for battery charging (WNTC-2MT)

5. GENERAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION	
Efficiency		> 97.5%	
Power Loss at Full Load (On Power Supply)		< 13 W	
Efficiency		> 96.5%	
Power Loss at Full Load(On Battery)		< 18 W	
Battery Charger Efficiency		> 90%	
Power Loss		< 16 W	
Maximum Backup Time	User programmable or up to battery discharge threshold		
Operating Ambient Temperature *	UL certified up to 60°C	-40°C to +60°C	
Storage Temperature		-40°C to +80°C	
Humidity	Non-condensing	5 - 95% r.H.	
Life Time Expectation	at 25°C ambient full load	253142 h (28.9 years)	
MTBF	MIL-HDBK-217F, at 25°C ambient full load	> 600 000 h	
Overvoltage category	EN50178	1	
Pollution degree	EC60664-1	2	
Isolation Against Enclosure		0.75 kVDC	
Safety Standards & Approvals	UL508 (certified) EN60950 (reference)		
EMC Standards	Emission	EN55011 (CISPR11)	Class A
		EN55022 (CISPR22)	Class A
	Immunity	EN61000-4-2	Level 3
		EN61000-4-3	Level 3
		EN61000-4-4	Level 3
	EN61000-4-5	Level 1	
Protection Degree	EN60529	IP20	
Vibration Sinusoidal	IEC 60068-2-6	5-17.8 Hz: ±1.6 mm; 17.8-500 Hz: 2g 2 Hours / axis (X, Y, Z)	
Shock	IEC 60068-2-27	30 g 6 ms, 20 g 11 ms; 3 bumps / direction, 18 bumps total	

* 1) Start-up type tested: - 40°C, possible at nominal voltage with load deration.
 2) For temperature ≤ - 20°C the LCD is not operating, but the unit will operate correctly

NOTES:

- For more details, performance and description regarding all parameters not indicated in the above table; please refer to user manual.
- Technical parameters are typical, measured in laboratory environment at 25°C, 24 V input and 24 V lead acid battery, at nominal values, after minimum 5 minutes of operation.
- 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.



Asia-Pacific
+86 755 298 85888

Europe, Middle East
+353 61 225 977

North America
+1 408 785 5200

6. CONNECTIONS

PARAMETER	DESCRIPTION / CONDITION	
IN/Battery/OUT Connectors	Screw type pluggable (24 – 12 AWG)	2.5 mm ² ,
Auxiliary Contacts Connectors	Fast Pluggable type (20 AWG)	Up to 0.5 mm ²
Temperature Sensor Connector	Friction lock connector	
USB Connector	Mini USB-B connector	



IN / BATTERY / OUT CONNECTION

IN: (connect to power supply)

- + = Positive DC
- - = Negative DC

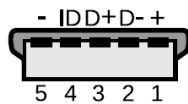
Battery: (connect to battery)

- + = Positive DC
- - = Negative DC

OUT: (connect to load)

- + = Positive DC
- - = Negative DC

Mini USB-B Type



- 1 = VBUS (+5V)
- 2 = Data (D-)
- 3 = Data (D+)
- 4 = Not connected (ID)
- 5 = GND

AUXILIARY CONNECTIONS

BATTERY SENSE: (connect to battery)

- + = Positive DC
- - = Negative DC

INHIBIT: (5...30Vdc)

- + = Positive DC
- - = Negative DC

READY: (programmable dry contact)

- NO
- COM

BACKUP: (close when running on Battery)

- NO
- COM

T SENSE: (remote temperature sensor for battery charging)

- Optional WNTC-2MT

7. MECHANICAL SPECIFICATIONS

PARAMETER	DESCRIPTION / CONDITION	SPECIFICATION
Weight		500 g
Dimensions		54 x 115 x 110 mm
Mounting Rail		IEC 60715/H15/TH35-7.5(-15)

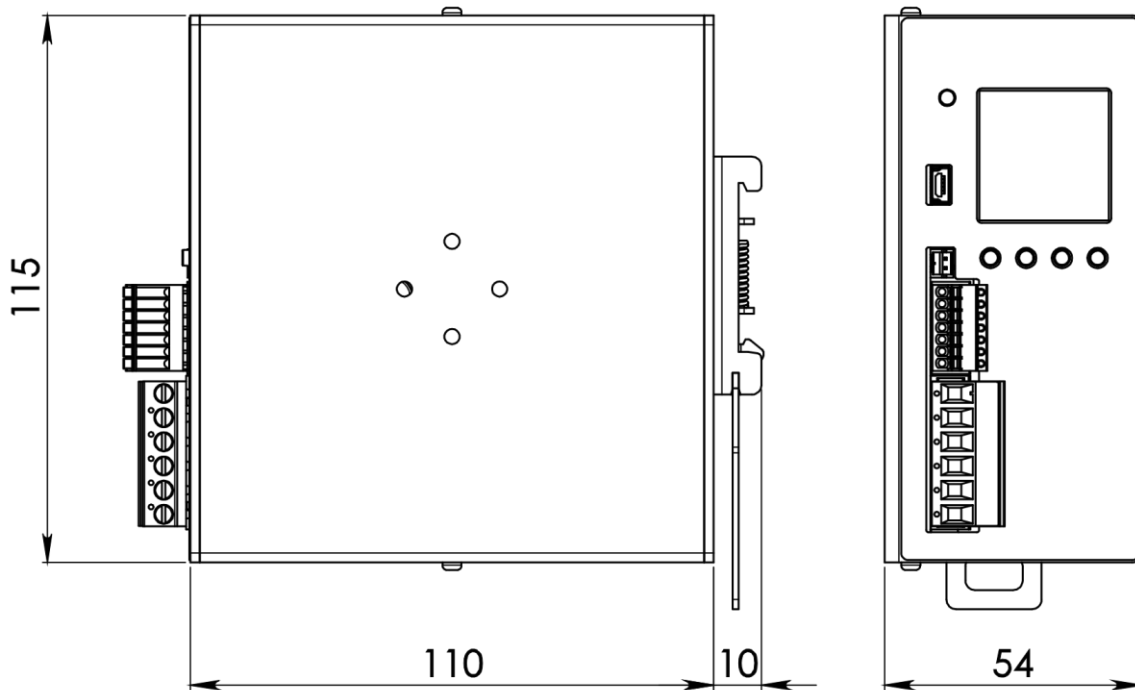


Figure 1. Mechanical Drawing

For more information on these products consult: 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.



Asia-Pacific
+86 755 298 85888

Europe, Middle East
+353 61 225 977

North America
+1 408 785 5200