

# INSTALLATION INSTRUCTION

## LDX-L30

### Sealed Lead Acid Dual Voltage Battery Housing



LDX-L30

#### MAIN FEATURES

- Designed for hosting 2 standard sealed lead acid batteries 12 VDC / 1.2 Ah
- Settable output voltage: 12 - 24 VDC / 2.4 - 1.2 Ah
- Integrated self-resettable overcurrent protection
- Batteries not included

READ THIS CAREFULLY BEFORE INSTALLATION!	VOR DER INSTALLATION BITTE FOLGENDE SICHERHEITSHINWEISE BEACHTEN!	LEGGERE ATTENTAMENTE PRIMA DELL'INSTALLAZIONE!	A LIRE ATTENTIVEMENT AVANT L'INSTALLATION!
<p>Before operating, read this document thoroughly and retain it for future reference. Non-respect of these instructions may reduce performances and safety of the devices and cause danger for people and property. The products must be installed, operated, serviced and maintained by qualified personnel in compliance with applicable standards and regulations. Do not open the device, it does not contain replaceable components, the tripping of the internal fuse (if included) is caused by an internal failure. Do not repair or modify the device, if malfunction or failure should occur during operation, send unit to the factory for inspection. No responsibility is assumed by Bel for any consequences deriving from the use of this material.</p>	<p>Lesen Sie dieses Dokument vor der Inbetriebnahme sorgfältig durch und bewahren Sie es zum späteren Nachschlagen auf. Die Nichtbeachtung dieser Anweisungen kann die Funktion und Sicherheit der Geräte beeinträchtigen und birgt Gefahren für Personen und Eigentum. Die Geräte müssen von qualifiziertem Personal unter Einhaltung der geltenden Normen und Vorschriften installiert, betrieben, gewartet und instand gehalten werden. Öffnen Sie das Gerät nicht, es enthält keine austauschbaren Komponenten, das Auslösen der internen Sicherung (falls vorhanden) ist stets auf tiefergehende Fehler im Schaltkreis zurück zu führen. Reparieren oder modifizieren Sie das Gerät nicht. Sollte während des Betriebs eine Fehlfunktion oder ein Defekt auftreten, schicken Sie das Gerät zur Überprüfung ins Werk. Bel übernimmt keine Haftung für die Folgen, die sich aus dem Einsatz dieses Gerätes ergeben.</p>	<p>Prima dell'installazione, leggere attentamente questo documento istruzioni e conservarle per future consultazioni. L'insosservanza delle presenti istruzioni può compromettere le caratteristiche e la sicurezza dell'apparecchio e causare pericolo per le persone e le cose. Il prodotto deve essere installato, utilizzato e riparato da personale qualificato e nel rispetto delle normative vigenti. Non aprire il prodotto, esso non contiene componenti sostituibili, il guasto del fusibile interno (se previsto) è causato da un guasto interno. Non tentare di riparare o modificare il prodotto, se durante il funzionamento si verificano guasti o anomalie, inviarlo al produttore per il controllo. Bel non si assume nessuna responsabilità per qualunque conseguenza derivante dall'uso di questo materiale.</p>	<p>Lire ces instructions avant l'installation, conserver ce manuel pour référence future. Défaut de se conformer à ces instructions peut affecter les caractéristiques et la sécurité du dispositif, et causer du danger aux personnes ou aux biens. Les produits doivent être installés, exploités et entretenus par du personnel qualifié et en conformité avec les règlements. N'ouvrez pas le produit, il ne contient aucune pièce réparable, le déclenchement du fusible interne (le cas échéant) est causé par un défaut interne. Ne pas essayer de réparer ou modifier le produit ; si des défaillances se produisent pendant le fonctionnement, retourner le produit au fabricant pour inspection. Bel n'assume aucune responsabilité des conséquences éventuelles découlant de l'utilisation des produits.</p>
<p><b>CAUTION</b></p> <p><b>RISK OF BURNS, EXPLOSION, FIRE, ELECTRICAL SHOCK, PERSONAL INJURY.</b> Never carry out work on live parts! Danger of fatal injury! The product's enclosure may be hot, allow time for cooling product before touching it. Do not allow liquids or foreign objects to enter into the products. To avoid sparks, do not connect or disconnect the device before having previously turned-off input power and wait for internal capacitors discharge (minimum 1 minute).</p>	<p><b>ACHTUNG</b></p> <p><b>GEFAHR VON VERBRENNUNGEN, EXPLOSIONEN, FEUER, STROMSCHLAG, PERSONENSCHÄDEN.</b> Führen Sie niemals Arbeiten an spannungsführenden Teilen durch! Gefahr von tödlichen Verletzungen! Das Gehäuse des Gerätes kann heiß sein, lassen Sie Zeit zum Abkühlen des Gerätes, bevor Sie es berühren. Lassen Sie keine Flüssigkeiten oder Fremdkörper in die Geräte eindringen. Um Überschläge zu vermeiden, schließen Sie das Gerät nicht an oder trennen Sie es nicht ohne vorher die Eingangsspannung abgeschaltet zu haben, und warten Sie die Entladung der internen Kondensatoren ab (mindestens 1 Minute).</p>	<p><b>ATTENZIONE</b></p> <p><b>RISCHIO USTIONI, ESPLOSIONE, INCENDIO, SCOSSA, LESIONI GRAVI.</b> Non effettuare mai operazioni sulle parti sotto tensione! Pericolo di lesioni letali! Il contenitore può scottare, lasciar quindi raffreddare il dispositivo prima di toccarlo. Non far entrare liquidi o oggetti estranei nel dispositivo. Per evitare scintille, non collegare o scollegare l'apparecchiatura prima di avere tolto tensione di ingresso e prima che sia avvenuta la scarica dei condensatori interni (min. 1 minuto).</p>	<p><b>AVVERTISSEMENT</b></p> <p><b>RISQUE DE BRULURES, EXPLOSION, INCENDIE, ELECTROCUTION, DOMMAGE AUX PERSONNES.</b> Ne jamais effectuer des opérations sur les parties sous tension! Danger de mort! Le boîtier peut produire des brûlures, le laisser refroidir avant de toucher l'appareil. Ne faire pas pénétrer des liquides ou des corps étrangers dans l'appareil. Pour éviter des étincelles, ne pas connecter ou déconnecter l'équipement jusqu'à ce que la tension d'entrée a été supprimée et avant qu'il n'ait eut lieu la décharge des condensateurs internes (minimum 1 minute).</p>
<p><b>INTENDED USE</b></p> <p>These are isolated devices suitable for <b>SELV</b> and <b>PELV</b> circuitry and are designed to be mounted on DIN rail and installed inside a protective enclosure. They are intended for general use such as in industrial control, communication, and instrumentation equipment. Do not use these devices in applications where malfunction may cause injury or death.</p>	<p><b>BESTIMMUNGSGEMÄßER BETRIEB</b></p> <p>Es handelt sich um galvanisch getrennte Geräte, die für SELV- und PELV-Anwendungen geeignet sind und für die Montage auf DIN-Schienen und die Installation in einem Schutzgehäuse konzipiert sind. Sie sind für den allgemeinen Gebrauch wie z.B. in industriellen Steuer-, Kommunikations- und Automatisierung-Anwendungen vorgesehen. Verwenden Sie diese Geräte nicht in Anwendungen, bei denen eine Fehlfunktion zu Verletzungen oder zum Tod führen kann.</p>	<p><b>USO PREVISTO</b></p> <p>I dispositivi sono isolati, adatti per applicazioni <b>SELV</b> e <b>PELV</b>, sono dotati di aggancio per il montaggio su guida DIN all'interno di quadri elettrici o contenitori di protezione, per l'utilizzo con controllori industriali, unità di comunicazione o apparecchi di misura. Non utilizzare in applicazioni in cui un eventuale guasto può comportare rischio di lesioni o di morte.</p>	<p><b>UTILISATION</b></p> <p>Les produits sont isolés, appropriés pour les circuits <b>TBTS</b> et <b>TBTP</b> et sont équipés d'un crochet pour montage sur rail DIN dans des armoires ou conteneurs de protection, pour utilisation avec les contrôleurs industriels, des modules de communication ou des unités de mesure. Ne pas utiliser ces dispositifs dans une application où un dysfonctionnement pourrait entraîner le risque des blessures ou de mort.</p>
<p><b>ENVIRONMENTAL CHARACTERISTICS</b></p> <p>Installation in a Pollution Degree 2 environment. Do not use in wet area or subject to moisture. Carefully recycle the product and related batteries according to local regulations.</p>	<p><b>UMGEBUNGSBEDINGUNGEN</b></p> <p>Installation in einer Umgebung mit Verschmutzungsgrad 2. Nicht in nassen Bereichen oder unter Feuchtigkeit verwenden. Das Gerät und die zugehörigen Batterien sind entsprechend den lokalen Vorschriften zu recyceln bzw. zu entsorgen.</p>	<p><b>CARATTERISTICHE AMBIENTALI</b></p> <p>Usare in ambienti con Grado di Inquinamento 2. Non far funzionare l'apparecchio in un ambiente umido o soggetto a formazione di condensa. Riciclare il prodotto e le batterie collegate, nel rispetto delle normative locali vigenti.</p>	<p><b>CARACTÉRISTIQUES ENVIRONNEMENTALES</b></p> <p>Utiliser les produits dans des environnements avec degré de pollution 2. Ne pas employer l'appareil dans un environnement humide ou soumis à la condensation. Recycler les produits et les batteries, conformément à la réglementation locale.</p>

**USER INSTRUCTIONS****DESCRIPTION**

DIN rail mountable Settable sealed Lead Acid Battery dual voltage housing.

**INSTALLATION**

Use DIN-rails according to EN60715. Installation should be made vertically (see Fig.4). For better device stability fix the rail to the wall close to the point where the device is to be mounted. In order to guarantee sufficient convection, we recommend observing a minimum distance to other modules (see Fig.3).

**CONNECTIONS**

The device is equipped with pluggable screw terminals. To avoid sparks, do not connect or disconnect the connectors before having previously turned-off input power and waited for internal capacitors discharge (minimum 1 minute)

In order to comply with UL certification, use appropriate copper cables of indicated cross section, designed for an operating temperatures of:

60°C for ambient up to 45°C

75°C for ambient up to 60°C

90°C for ambient up to 70°C

Strip the connecting ends of the wires according to the indication and ensure that all strands of a stranded wire enter the terminal connection (see Fig.5)

**INPUT PROTECTION**

The device input is provided with polyswitch against overcurrent.

**DC INPUT / OUTPUT CONNECTION**

Connect **BATT. +** terminal to + pole, **BATT. -** terminal to - pole.

The device is suitable for **SELV** and **PELV** circuitry.

**WARRANTY**

Battery pack are guaranteed free from factory defects for the time specified in the "Sales Conditions"

Failures caused by misuse, external and/or abnormal events (i.e. overvoltage, over temperatures) or non-respect of above parameters and standards, are not covered by warranty. Opening the housing of the product makes warranty to be no longer valid.

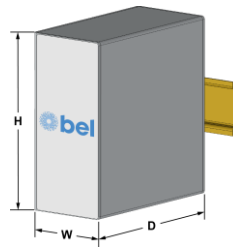
**BATTERY**

Please pay attention, **the batteries are not included**, we recommended to use batteries with final dimension (W x H x D) 48.5 x 54.5 x 97.5 mm Max terminals included.

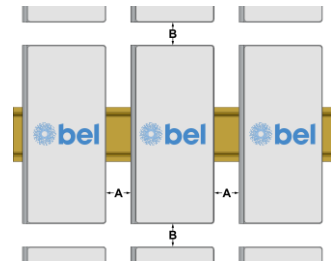
**FIG.1 - CONNECTIONS**

- (1) Battery Connection
- (2) Place wire Jumper to Set 24 VDC /1.2 Ah
- (3) Place wire Jumpers to Set 12 VDC /2.4 Ah

**Attention!**  
Do not Set the configuration 2 and 3 at the same time.

**FIG.2 - DIMENSIONS**

Dimension	mm (inc)
W	54 (2.12)
D	110 (4.33)
H	115 (4.52)

**FIG.3 - DISTANCES**

Distance	mm (inc)
A	20
B	20

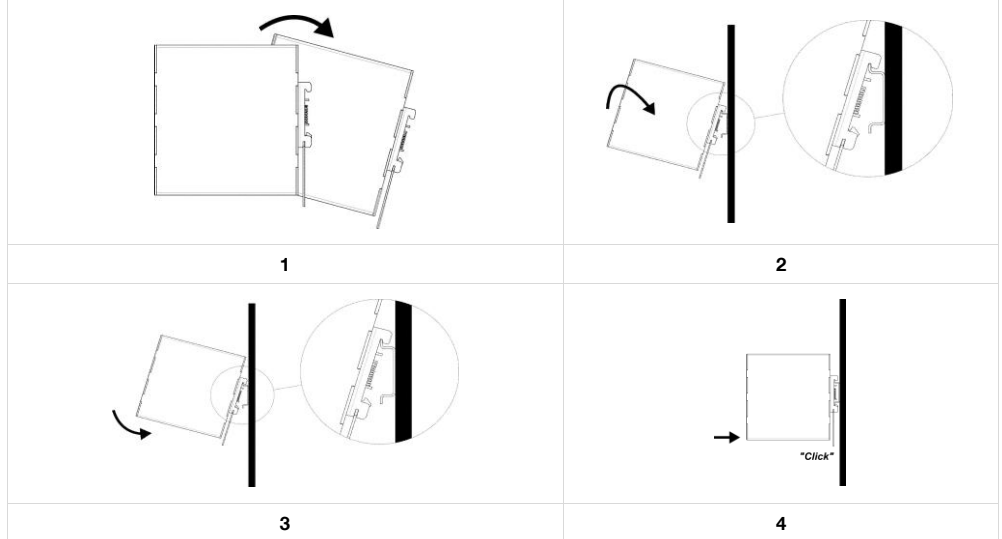
**FIG.4 - MOUNTING / DISMOUNTING INSTRUCTIONS**

For DIN rail fastening according to IEC 60715 TH35-7.5(-15)

Mounting as shown in figure, with input terminals on lower side, with suitable cooling and maintaining a proper distance between adjacent devices as specified in the Installation Instruction of each family.

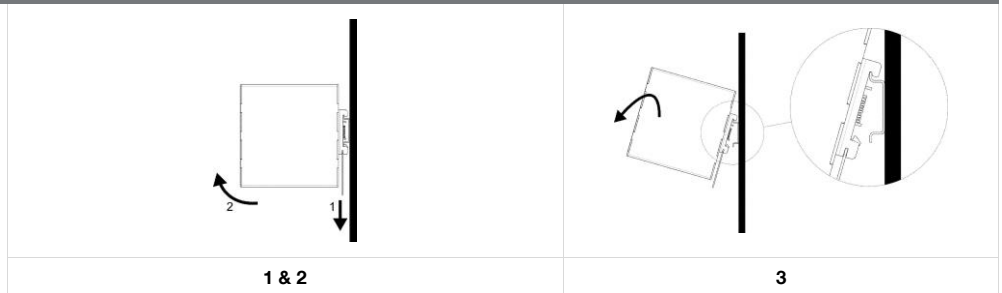
**MOUNTING:**

1. Tilt the unit slightly backwards.
2. Fit the unit over the top edge of the rail.
3. Slide it downward until it hits the stop.
4. Press against the bottom for locking.



**DISMOUNTING:**

1. Pull down the slide clamp lever
2. Tilt the unit upward  
Unhook the unit from the rail



**FIG.5 - RECOMMENDED CONNECTING CABLE**

	<p><b>Recommended Tightening torque</b> 0.5 - 0.6 Nm 4.42 - 5.30 lbf in</p>		<p>Solid: 2.5 mm<sup>2</sup> / 12 AWG Stranded: 1.5 mm<sup>2</sup> / 12 AWG L: 6.0 - 7.5 mm / 0.24-0.30 in</p>
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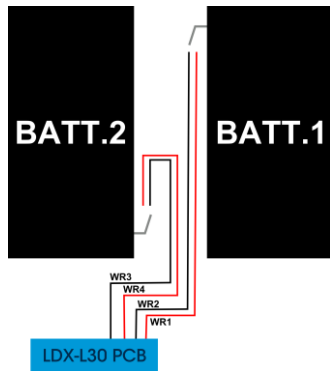
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FIG.6 - ENVIRONMENT ASSEMBLY STEPS

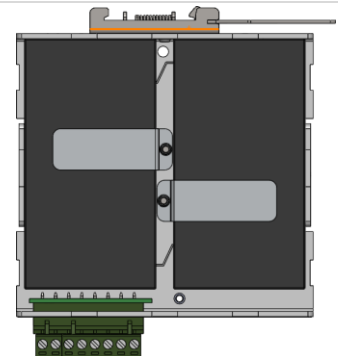
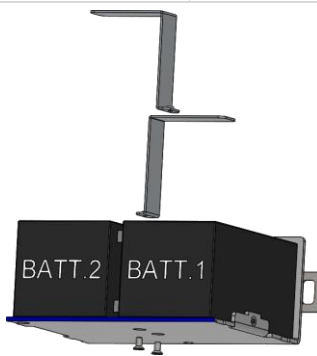
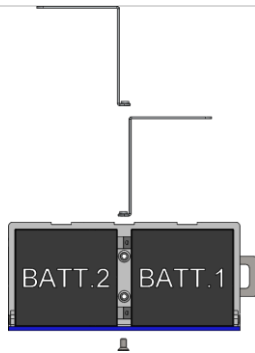


**USE only Lead-acid Batteries 12 VDC 1.2 Ah. Dimension 48.5 x 54.5 x 97.5 mm. Faston type 4.8 mm**

WR1: Red stranded wire 1.5 mm<sup>2</sup>, length 140 mm.  
 WR2: Black stranded wire 1.5 mm<sup>2</sup>, length 140 mm.  
 WR3: Black stranded wire 1.5 mm<sup>2</sup>, length 120 mm.  
 WR4: Red stranded wire 1.5 mm<sup>2</sup>, length 120 mm.

**Attention!**

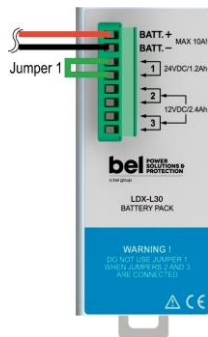
WR1 and WR2 must be connected at the Battery 1.  
 WR3 and WR4 must be connected at the Battery 2.  
 The colored wires must respect the Battery polarity.  
 The colored wires should respect the bending as indicated in the diagram on side.



**Attention!** Do not stress mechanically the cables!

After connecting the wires on the batteries and after having placed the batteries in the enclosure, the LDX-L30 should appear as on the picture above.

FIG.7 - ENVIRONMENT BATTERY SETUP



**Attention!** Do not use Jumper 1 when Jumper 2 and 3 are connected.

FIG.8 - ENVIRONMENT

**OPERATING TEMPERATURE**

- 20°C to 40°C  
 According to battery limits indicated by the manufacturer

**NOTES:**

- Data may change without prior notice in order to improve the product.
- Please refer to the latest version of [LDX-L30 Datasheet](#) or [LDX-L30 Installation Instruction](#) on our website: [belfuse.com/power-solutions](http://belfuse.com/power-solutions).



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