



3LION *SYSTEM*



USER MANUAL



VALID FOR THE FOLLOWING MODELS

3LINK (BLACKBOX & DISPLAY)
L-100, L-100B, L-100P, L-150

SUMMARY

- 1. SYSTEM COMPONENTS 3Lion + 3Link.**
- 2. SAFETY**
- 3. INTRODUCTION**
- 4. INSTALLATION**
 - 4.1 3Link INSTALLATION**
 - 4.2 MOUNTING SCHEME**
 - 4.3 DISPLAY INSTALLATION**
- 5. OPERATION**
 - 5.1 CHARGE**
 - 5.2 DISCHARGE**
- 6. OPERATION CHECK**
- 7. VERIFIABLE PROBLEMS**
- 8. TECHNICAL CHARACTERISTICS**
- 9. WARRANTY**

1. SYSTEM COMPONENTS 3Lion + 3Link.

- Battery LiFePo4 3Lion
- Display 3Link
- Display mounting bracket
- Advanced BMS 3Link
- Assembly screws (n°. 8)
- Use and maintenance manuals
- Display connection cable

2. SAFETY



This manual serves as a guide for the installation, use and maintenance of the 3Lion + 3Link system. It is compulsory to carefully read all its parts for both the installer and the end user.

- Keep the device out of the reach of children.
- Read this manual carefully and keep it handy, preferably near the 3Lion , for any future consultation.
- The 3Lion must always be installed with the 3Link .
- The 3Lion can be installed with a maximum inclination of 90° compared to its natural positioning (i.e. with the poles facing up).
- Do not bump, puncture, disassemble, deform the 3Lion and the 3link . Do not open the 3Lion .
- In the event of electrolyte leakage, do not touch the battery. In case of contact, immediately flush skin with warm water and seek medical advice immediately.
- Be careful when installing, so that the two poles of the 3Lion do not come in contact with each other. Use isolated equipment and do not place and/or leave metal objects close to the product.
- Always dispose of the battery according to local laws. Do not dispose of other industrial waste.
- Protect the poles of the 3Lion from any contact with electrically conductive objects.
- The device must be protected from direct sunlight or direct heat sources to avoid overheating.
- Do not install the appliance in a sealed environment, otherwise it may overheat. Make sure that there is air circulation in the room where it is installed.
- To avoid the risk of electric shock and/or fire, make sure the power supply is in good condition.
- Do not use the appliance with damaged cables and/or of inadequate cross-section.
- Do not connect 2 or more 3Lion batteries in series. Do not connect in parallel with batteries of different technology.
- Do not use the device in an environment with high humidity or direct contact with splashes of water and/or liquids or in the rain.

- Install the device using cables of the appropriate cross-section as recommended in the section "INSTALLATION INSTRUCTIONS"
- Charge completely right after installing the system or after doing any maintenance on it otherwise the SOC on the display will not be real. When it is fully charged, the display will show 100% on the battery state of charge (SOC) display.
- The rated voltage of the 3Lion battery is 12V. Do not use the system with devices that are not compatible with this voltage. The company is not responsible for any damage caused by incorrect use of the entire system.

The supplied items are designed exclusively for this system and are not compatible with other devices. The product pictures in this manual are for reference only and for a purely explanatory purposes; the product you bought might be different. **NDS Energy** reserves the right to make changes to the product at any time without prior notice and without any obligation to apply these changes to the devices previously distributed.

NDS Energy is not responsible for any malfunctions due to improper use of the product, any installation mistakes or mistakes present in this manual.

3. INTRODUCTION

3Lion is the innovative NDS battery, built with the reliable Lithium Ferro Phosphate Technology (LiFePO₄), which combined with the integrated BMS and 3Link system (BMS Manager), delivers the best performance for services due to the advanced energy system.

Lithium technology provides significant advantages over traditional lead batteries (AGM, GEL, Free Acid). For example, it can withstand high charging currents, with a very high efficiency (or very low current dissipated during that phase), which implies a much better charging speed. It does not suffer from the typical sulfation of lead batteries, it has a very low self-discharge rate (less than 3%/month), which, combined with a 60% weight reduction and a large number of cycles (over 2500), guarantees more autonomy and remarkable savings in various areas.

The 3Lion dialogues only with the 3Link, which becomes the heart of the energy system. All the positives of the vehicle's system: Engine Battery, 3Lion battery and all electrical equipment, to not stress the electrical system, are connected to the 3Link which acts as a BMS manager. This allows a better charge management while driving by the alternator, achieving maximum current up to 75A (depending on the alternator), reducing charging times, and thus achieving greater autonomy during stops. Once the engine is turned off, the 3Lion service battery is able, via the BMS manager (3Link), to deliver current for all on board electrical equipment: lights, heating, coffee machines, etc ... The LiFePO₄ technology used for the 3Lion, unlike the traditional Li-Ion or LiPO, is extremely safe and reliable over time due to its special features. The BMS Manager (3Link) dialogues with the touch screen display that shows all available information about the state of the battery, the charging system and on-board power consumption systems.

4. INSTALLATION

To properly install the device, follow the instructions below.

4.1 INSTALLATION OF 3 Link

The 3Lion-3Link system offers maximum performance if supported by a suitable capacity alternator. It is recommended that the alternator be greater than or equal to 120A with a no-load voltage between 13.8V and 14.7V . No-load measurement means the voltage measured at the terminals of the engine battery, when the engine is on, the engine battery is charged or partially charged when all the electrical equipment on the vehicle is off (lights, conditioner, etc.) and when the services battery is disconnected from the system.

Prepare an area for housing the 3Link box , as close as possible to the 3Lion , and to the engine battery, but never in the engine compartment or in compartments that are not protected from atmospheric agents . Remove the two screws in the front (highlighted in red in the following figure), lift the cover and pull it out to allow convenient access to the connection points.

Attach the base of the 3Link to a wall or floor of the housing selected for installation; use the 4 self-tapping screws in the appropriate holes on the bottom of the base (highlighted in yellow in the following figure).



4.2 MOUNTING SCHEME:

Before installing, make sure the vehicle engine and the battery charger are off. Do not make junctions on the cables, make direct connections.

Front View:

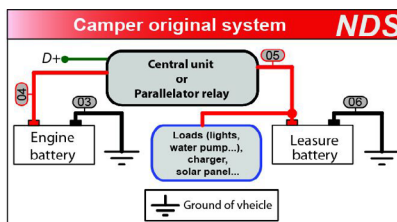


Rear view:



NUMBER	FUNCTION
1	M8 screw connector for engine battery positive terminal
2	M8 screw connector for system common positive
3	M8 Screw Connector for 3Lion battery positive terminal
4	2-way connector for D+ (optional)
5	2 way connector for ground connexion
6	Connection with display

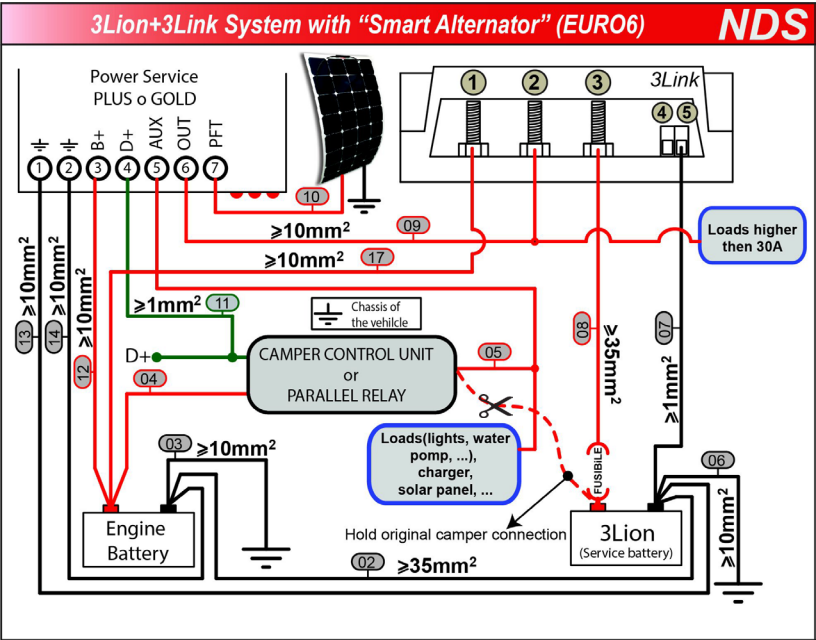
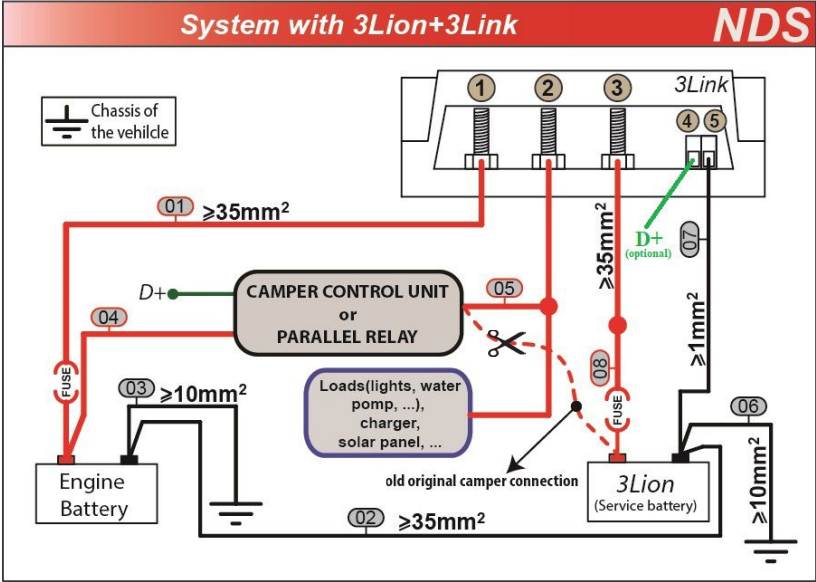
The original, electrical system of the motorhome can be represented in a basic manner by a relay that connects the engine battery (and thus the alternator) to the service battery when the vehicle has the engine switched on (i.e. the alternator is in operation and signal D+ is active). Below there is a representation:



The installation of the 3Lion + 3Link is very simple, just intercept in the original system of the vehicle, the cable that goes from the service battery to the control unit or to the battery combining relay which in the figure " *Original system of the camper* " is identified by number 05. Disconnect cable 05 from the service battery positive terminal, and connect it to pin 2 of the 3Link .

Make other connections as shown below. In case of use with "Power Service PLUS/GOLD" select the charging curve **C** (in case of engine without smart alternator) or **D** (with Smart Alternator) on the Power Service PLUS/GOLD. It is advisable to install the D+

signal to the 3Link, for an optimal operation of the device.



For connecting the cables to pins 1, 2 and 3 of the 3Link, it is strongly recommended that you use the terminals for M8 screws (DO NOT use the "fork" type) to ensure a perfect and secure connection between the cable and the contact of the 3link, as in the following figure. The cable lug must be placed between the 3Link aluminium plate and the washer, just as shown in the figure below



For connexions 01, 02 and 08, it is recommended to use 35mm^2 cross-section cables, if the length of the connexion is less than or equal to 1 meter. If the length of the connexion exceeds 1 meter, it is recommended the use of cables with a cross-section of 50mm^2 . It is also advisable to install a 200A fuse on cables 01 and 08.

Tighten the terminals firmly to screws 1, 2, and 3 of the 3Link, with the supplied nuts and washers. All the loads in the camper (battery chargers, inverters, solar panel regulators, lights, etc.) must be connected on the pin 2 of the 3Link, the positive terminal of the 3Lion battery must have only one connection ending on the pin 3 of the 3Link.

Connections 03, 04, 05 and 06 are usually already present within the vehicle. If not present, it is recommended to use cables with a section greater than or equal to 10mm^2 .

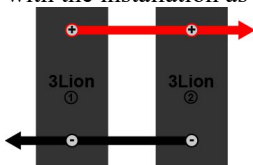
Connection 07 can be done with cable with cross-section between 1mm^2 and 2.5mm^2 . As soon as the ground cable is connected to the 3Link, the system becomes operational.



Charge completely just after installing the system or after doing any maintenance on it otherwise the SOC on the display will not be real. When it is fully charged, the display will show 100% on the battery state of charge (SOC) display.

Close the 3Link cover by threading the two tabs on the back into the appropriate base seats; tighten the 2 screws supplied into the holes at the front corners of the cover.

When installing 2 3Lion batteries in parallel, use only one 3Link and place the 2 3Lion batteries in parallel with cables of a cross-action of at least 35mm^2 and place them as close to each other as possible. Proceed with the installation as shown below.

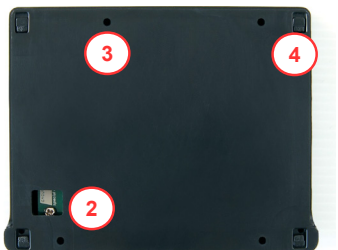


4.3 DISPLAY INSTALLATION

Front View:



Rear view:



NUMBER	FUNCTION
1	Touch screen display
2	Hole for passage of communication cable
3	4 Holes for fixing the cover to the wall
4	System to fix the display frame to the cover

1. Remove the display frame.



A) Slide the display frame upwards with respect to the back cover



B) Lift the lower part of the display frame




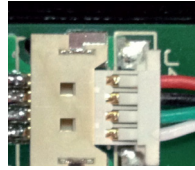
C) Slide the display frame downwards with respect to the cover and release it.

2. Position the back cover on the wall chosen for installation. Take the point references where the holes for the fixing screws (diameter 3mm) and the communication cable passage hole (minimum diameter 7.2mm) are to be made.
3. Drill the holes and screw the back cover to the wall using the supplied screws. Be careful that once tightened, the screws do not protrude beyond the countersinks.



4. Pass the communication cable through the specially-drilled hole and insert it gently into the connector on the display circuit board.

 **DO NOT FORCE THE CONNECTOR. The connector has an obligatory direction that must be followed.**



5. Attach the display to the back cover:



The 3Link touch screen allows you to interact with the device by easily selecting various functions.

To properly use the touch screen, follow the instructions below:



Do not exert too much pressure on the surface of the display with your fingers and do not use sharp objects. Doing so may damage the device or cause it to malfunction.



Do not put the display in contact with other electrical devices. Electrostatic discharges can cause malfunction.



Do not put the surface of the display in contact with water. The touch screen may not work properly in the presence of moisture or if exposed to water and other liquids.



For best performance, touch the touch screen with your fingertip.

You can use plastic stylus pens for a more accurate touch on the display, but it is important that they do not have a sharp tip which can damage the surface.

5. OPERATION

The 3Lion + 3Link system allows the automatic management and display the battery status. Through the display, it is possible to interact with the system and to see all the information such as voltage, current (recharge with positive "+" sign and discharge with negative

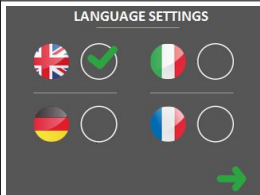
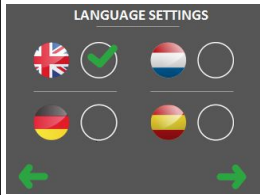
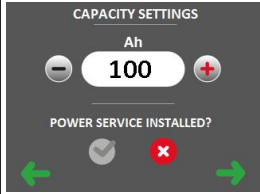


"-"sign) and state of charge. The state of charge (SOC) is indicated by coloured lines ranging from red, indicating that the battery is low, to green, indicating that the battery is charged.

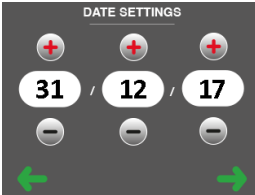
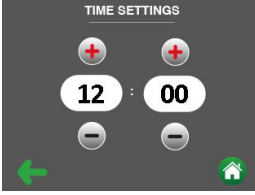
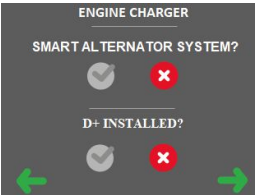
The advanced 3Link BMS, when the alternator is operating, activates the battery charge intelligently, obtaining maximum current up to 75A (depending on the alternator characteristics), resulting in a reduction of charging times, and therefore, greater autonomy during stops. All without overloading the cell system, which is actually excluded when it is charging, from the passing of current to the 3Lion.

The amount of current that can be charged to the battery is closely related to the type of alternator installed on the vehicle. The higher its power, the greater the amount of current that the 3Link can draw from it. Alternator powers below 120A are not recommended, as the fast recharge of the battery will not be fully exploited.

The charge by alternator is NOT active, if the vehicle is EURO6 with "Smart Alternator". In this case it is necessary to follow the installation scheme "System with 3Lion+3link with Smart Alternator (EURO6)" and select the checkbox on "Smart Alternator" from the "Settings" menu, as described below.

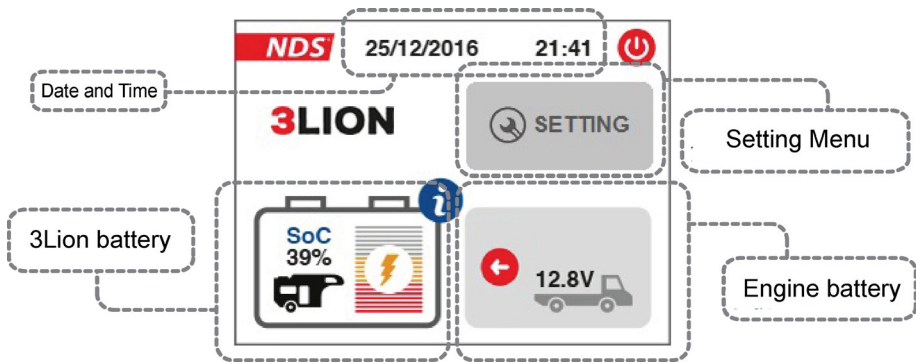
Immediately after all connections have been made, the system starts up and the display shows several screens for setting the system parameters as follows


SCREEN	MEANING AND FUNCTIONS
	<p><i>Setting the language.</i> Click on the desired flag and then on the arrow to confirm your choice.</p>
	<p><i>Setting the language.</i> Click on the desired flag and then on the arrow to confirm your choice.</p>
	<p><i>Setting the capacity.</i> The number below the letter Ah indicates the capacity setting of the battery or the battery pack. Click on the keys   until you reach the desired value. In the case of a battery pack (i.e. multiple 3Lion batteries in parallel), enter the total capacity of the pack (that is, the sum of the Ah of each battery).</p>

	<p>Setting <i>the date</i> . Click on the keys until the desired value is reached, taking into account that the first number to the left indicates the day, the central number indicates the month, and the number on the right indicates the last two digits of the year.</p> <p>To confirm your choices, click on the arrow ; to go back, click on the arrow .</p>
	<p>Selecting <i>the time</i>. Click on the keys until the desired value is reached, taking into account that the number on the left indicates the hours, and the number to the right indicates the minutes.</p> <p>To confirm your choices, click on the icon . To go back, click on the arrow .</p>
	<p><i>Setting the alternator type.</i> The upper part of the screen allows to select the type of alternator. Click on the checkbox (which immediately after the click, turns green), if the vehicle is EURO6 with "Smart Alternator". Otherwise click on the .</p> <p><i>Selector D+ Connection.</i></p> <p>The bottom part of the screen enables the 3Link to acknowledge if the D+ of the vehicle is connected. If the D+ is connected, please click on the symbol (it becomes green immediately after the click). If absent, please click on .</p> <p>It is advisable to install the D+ signal for an optimal operation of the 3Link.</p> <p>To confirm your choices click on the left arrow , to go back, click on the right arrow.</p>

The system settings screens are displayed at the start and each time you press and hold for at least 3 seconds the "Setting" key.

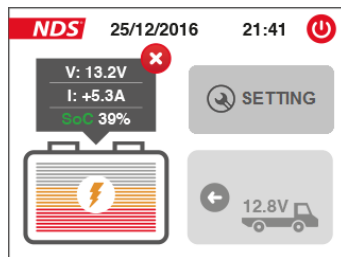
Once the key has been pressed, the main screen appears as shown below.



 The state of charge (or SOC) indication as soon as the system is installed is purely indicative, it becomes operational as soon as a first full charge of the 3Lion is performed. When it is fully charged, the display will show 100% on the battery state of charge (SOC) display.

In the lower left part of the screen, it is possible to see all information about the 3Lion battery. Specifically, the battery state of charge is reported in 2 modes: textual, as percent value of the SOC, and graphically with coloured notches inside the battery symbol. The notches are coloured red, orange and green indicating respectively a complete discharge, a partial charge or a full charge of the battery. When the 3Lion is in charging mode, a thunderbolt is displayed overlapping the coloured notches.











Pushing on the battery symbol, the 3Lion battery indications change shape as shown in the following example.



In fact, the voltage and current values for the 3Lion are displayed. The current have negative values if the battery is discharging and positive values if the battery is charging. In the latter case, the thunderbolt symbol is displayed on the notches of the battery. You can keep this view active by clicking on the "Setting" button and then checking the following phrase: "Always show V and I".

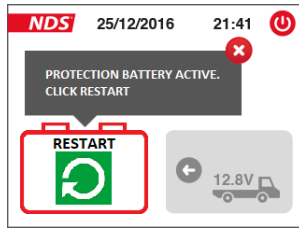
The engine battery indicator box always shows the voltage value of the battery, and if the system is being charged by the alternator, the icon of the arrow turns red.

Below there is a summary of the icons shown on the display:

ICON	MEANING AND FUNCTIONS
	Shuts off the screen. If the screen is off, just click on any part of it to turn it back on.
	It allows you to decrease the value of the parameter in use.
	It allows you to increase the value of the parameter in use.
	When displayed, it indicates that the 3Lion battery is charging. If the icon  does not become red then charging comes from a source other than the alternator (such as solar panels, network chargers, etc.).
	Indicates that the alternator is not charging the 3Lion battery .
	Indicates that the alternator is charging the 3Lion battery .
	Enables you to advance the system parameter setting sequence and/or to confirm your choices.
	Allows you to return to the previous step of the system parameter setting sequence.
	Allows you to change system settings. If you press it briefly, you can set the display mode. If you press it for a long time, you can set the date, time, the Ah of the 3Lion, language.

In order to preserve battery from discharging, after 2 minutes of inactivity the display will decrease its brightness. After 15 minutes, it will shut off. Just touch it to turn it on and resume normal use.

The system is protected against excessive discharge or overload, however, it is recommended that the battery voltage does not fall below 10.5V and does not exceed 15V. If the 3Lion voltage is less than 11.5V, charge the battery immediately. If the display shows the 0V value of the 3Lion battery, it is probable that the internal protection system (BMS) intervene to avoid the excessive discharge. The system displays the following alarm:



You must charge the battery to restore normal use. This can be done by connecting an external battery charger, or by pressing on the screen at the green button inside the 3Lion battery icon. In this case, the system connects the 3Lion battery to the motor for a few seconds.

Before storing the 3Lion, it is recommended that you turn off the display. It is also recommended to leave the battery fully charged. If the 3Lion is not used for a long time, even if the self-discharge is very low (less than 3%/month battery only, and less than 10A/month, 3Lion system), it is advisable to check at least once every two months that the remaining amount of charge is greater than 90% and that the voltage is greater than 12.8V. Otherwise, fully charge the battery.

5.1 CHARGE

It is recommended to use LiFePo4 lithium battery chargers. However, you can use a mains battery charger for AGM/GEL batteries, checking that the maximum voltage supplied by it does not exceed 14.5V. The charger must NOT perform any desulfation action. The use of battery chargers for flooded lead acid batteries, although they can completely charge 3Lion batteries, can reduce their life. If you have a configurable charger, set the CC/CV (constant current/constant voltage) option, by setting the current value equal to or less than 0.5C, or 50A for the 3L-100, 3L-100B, 3L-100-P models, and 75A for the 3L-150-P model, and the end-of-charge voltage value to 14.4V.

When the battery is fully charged (the display shows 100%), it is recommended that you disconnect or turn off the charger. In the case of alternator charge, this is automatically managed by the 3Link. In fact, 3Lion batteries do not need maintenance like lead-acid batteries.

It is recommended to recharge the 3Lion battery with temperatures between 0°C and 45°C. The system has an internal sensor that constantly monitors the ambient temperature. If it is outside the range shown above, an alarm such as the one shown below will appear on the screen.



In this case, the system prevents the charge only by alternator. The alarm stops being displayed when the temperature returns within the range of 0°C/45°C.

52 DISCHARGE

3Lion allow a higher discharge than the current supported by the internal BMS. Please refer to the following table.

DISCHARGE CURRENT*	MAXIMUM DISCHARGE TIME		
	L100/L100B	L100P	L150P
100A	55 MINUTES	60 MINUTES	90 MINUTES
125A	25 MINUTES	50 MINUTES	70 MINUTES
150A	5 MINUTES	20 MINUTES	25 MINUTES
175A	2 MINUTES	9 MINUTES	10 MINUTES
200A	30 SECONDS	30 SECONDS	30 SECONDS

* Measurements performed at an ambient temperature of 20 °C, and starting temperature of the lithium battery of 20 °C.

It is recommended to discharge the *3Lion* battery with temperatures between -20°C e +60°C.

6. OPERATION CHECK

Once the system is installed, you can test its functionality by performing the following tests:

- 1) With the engine switched off, and with all the equipment powered off, check that the voltage shown on the display relative to the 3Lion battery, is equal to the voltage measured with the tester positioned on the 3Lion poles (tolerance of $\pm 0.15V$).
- 2) With the engine switched off, and with all the equipment powered off, check that the voltage shown on the display relative to the engine is equal to the voltage measured with the tester positioned on the engine battery poles (tolerance $\pm 0.15V$).
- 3) With the engine switched off, turn on some pieces of equipment on the vehicle, and check that a negative current is displayed on the display. With the ammeter clamp,

placing it on the wire out of pole 3 of the 3Link, it is also possible to verify that the current shown on the display is the same as the current displayed on the instrument (tolerance $\pm 10\%$).

- 4) With all equipment powered off, turn on the engine and verify that the engine battery voltage rises to between 13.8V and 14.8V. If voltage remains below 13.8V, the engine battery is likely to be discharged and/or the alternator has an abnormality or, if a positive current is shown on the display, it indicates that the 3Lion battery is charging and, in this case, skip to step 5.
- 5) If the 3Lion battery is not fully charged, and if the check in step 4 has been successful, check the display for a positive current, and check that the arrow pointing to the engine battery turns red. With the ammeter clamp, placing it on the wire out of pole 3 of the 3Link, it is also possible to verify that the current shown on the display is the same as the current displayed on the instrument (tolerance $\pm 10\%$).

7. VERIFIABLE PROBLEMS

If the 3Lion battery has a voltage between 0V and 10V (resulting voltage, also detected on pins 2 and 3 of 3Link), it may be possible that the BMS protection inside the battery is working. This protection occurs for three main causes:

- 1) Battery voltage falls below 10V (e.g. due to excessive discharge).

In this case, provide the 3Lion with a charging source (for example, via external charger, alternator, etc.).

- 2) The battery voltage exceeds 15V (e.g. due to an anomaly of the charger, or because of some piece of electronic equipment in the system that enters a voltage greater than 15V). As soon as the 3Lion detects a voltage below 15V will start working as usual.

- 3) The battery is overheated.

You have to wait for the internal temperature of 3Lion to drop below the safety threshold. It is difficult to estimate the reactivation time, as it depends on external conditions and the degree of overheating.

- 4) The indication of the amount of available charge (SOC) does not seem to be accurate or has suddenly indicated a value of less than 5%. Run a full charge of 3Lion, where full charge means 100% shown on the battery state of charge (SOC) display.

8. TECHNICAL CHARACTERISTICS

Technical characteristics of the 3Lion				
Model	3L-100	3L-100B	3L-100-P	3L-150-P
Rated tension	12.8Vdc	12.8Vdc	12.8Vdc	12.8Vdc
Nominal capacity 25 °C	100Ah	100Ah	100Ah	150Ah
Nominal energy 25 °C	1280Wh	1280Wh	1280Wh	1920Wh
Cell number	4	4	4	4
Chemistry	LiFePO4	LiFePO4	LiFePO4	LiFePO4
Recommended maximum discharge current	100A	100A	150A	150A
Maximum discharge current supported	200A/10 seconds	200A/10 seconds	300A/10 seconds	300A/10 seconds
End-of-discharge voltage	10V±0.1V	10V±0.1V	10V±0.1V	10V±0.1V
Maximum recommended charge current	50A/0.5C	50A/0.5C	50A/0.5C	75A/0.5C
Maximum supported charge current	100A/1C	100A/1C	100A/1C	150A/1C
End-of-charge voltage	14.4V±0.2V	14.4V±0.2V	14.4V±0.2V	14.4V±0.2V
Number of cycles estimated 80% DOD	2500*	2500*	2500*	2500*
Operating temperature discharge	-20 °C/+60 °C	-20 °C/+60 °C	-20 °C/+60 °C	-20 °C/+60 °C
Operating temperature charge	0°C/+45°C	0°C/+45°C	0°C/+45°C	0°C/+45°C
Storage temperature	0 °C/+40 °C	0 °C/+40 °C	0 °C/+40 °C	0 °C/+40 °C
Self-discharge	<3%/month	<3%/month	<3%/month	<3%/month
Humidity	Max 95%	Max 95%	Max 95%	Max 95%
Connection of poles	M8	M8	M8	M8
Battery-only weight	13.8Kg	13.3Kg	13.8Kg	20.2Kg
Battery-only dimensions	327x172h227mm	337x175h190mm	327x172h227mm	485x172h241mm
Weight with packaging	14.3Kg	13.8Kg	14.3Kg	20.7Kg
Dimensions with packaging	375x210h260mm	375x210h260mm	375x210h260mm	525x210h280mm

* The number of cycles is purely indicative as it depends on several factors such as environmental conditions, discharge depth, charge/discharge current, and so on.

Technical characteristics of the 3Link	
Working voltage	12V (9V-18V)
Average consumption	3mA @ 12V @ active device, 1mA @ 12V @ device in standby mode
Maximum current supported	200A
Working temperatures	-20 °C/+65°C
Maximum current, AUX output	30mA
Current range	-200A/+ 200A ± 10%
Battery tolerance voltage Engine battery 3Lion	± 5%
Dimensions	125x123x47mm
Weight	480g
3link box + display dimensions	175x135h67mm
Box weight including display and accessories	785g
Technical characteristics of the display	
Technology	TFT 2.83" 262k Colours with touch screen
Average consumption	76mA @ 12V maximum brightness. 7mA @ 12V stand-by
Type of connexion	7m cable with low profile connector
Operating temperature	-10°C/+70°C
Dimensions	100x80x11mm
Weight	55g



Rohs



9. WARRANTY

The manufacturer assures proper operation of the 3Link and the 3Lion battery and undertakes to make free replacement of parts that deteriorate due to construction defects within 36 months of the purchase date, as evidenced by the validation information sheet (to be completed in each of its parts and returned to the manufacturer within 30 days of the date of purchase). Disadvantages resulting from incorrect installation and use, tampering, negligence, or failure to comply with the installation, use and storage requirements are excluded from the warranty. Furthermore, the manufacturer disclaims any liability for any direct or indirect damages.

The warranty becomes effective as of the date of sale or registration of the vehicle in the case of a first installation.

With the act of purchase or registration of the vehicle, together with the warranty card, the customer receives this certificate to be filled out in every part by the seller. The warranty certificate must be kept and filed for each dispute. Failure to submit the certificate and absence of or tampering on the 3Lion and/or the 3Link non detachable coupon with the serial number shall invalidate the warranty.

In the event of a 3Lion and/or 3Link failure, the customer may contact an Authorized Centre or contact NDS Energy S.r.l. directly. In case of replacement, the warranty period remains as the initial date indicated on the warranty certificate.

If the customer decides to make further verifications by third-party technicians, the customer shall bear the related costs without making any claims to NDS Energy S.r.l.

The returned product, although under warranty, must be shipped carriage paid and shall be returned carriage forward. The warranty certificate is valid only if accompanied by a payment receipt or delivery document.

For any dispute, the Court of Pescara shall have jurisdiction.

Model 3Lion:		3Lion serial number:	
3Link serial number:		Display serial number:	
Purchase date:			

Surname:		Name	
Nation:			
Street:		N°.	
Locality:		Province:	
ZIP code:		Phone:	

Stamp and signature of the seller	<p>I authorize the processing of my personal data under the Decree Law June 30, 2003 N° 196</p> <p>-----</p> <p>(customer's signature)</p>
-----------------------------------	--

To be returned in enclosed envelope to:
NDS Energy s.r.l. - Via G. Pascoli, 169 - 65010 Cappelle sul Tavo (Pe) Italy,
or send via email to:
commer@ndsenergy.it

NDS ENERGY S.r.l.
Via G. Pascoli, 169 – 65010 Cappelle sul Tavo (PE)
Italy
Phone: +39 085 4470396 – Fax: +39 085 9507049
www.ndsenergy.it - commer@ndsenergy.it



ALL THE ENERGY YOU NEED
TUTTA L'ENERGIA CHE TI SERVE



0027_MANB_3LINK_GB10

NDS ENERGY S.R.L.

VIA PASCOLI, 169

65010 CAPPELLE SUL TAVO (PE) ITALY

TEL.: +39 085 4470396

FAX: +39 085 9112263

WEB: WWW.NDSENERGY.IT

EMAIL: CUSTOMER@NDSENERGY.IT



LIKE US: FACEBOOK.COM/NDSENERGYSRL