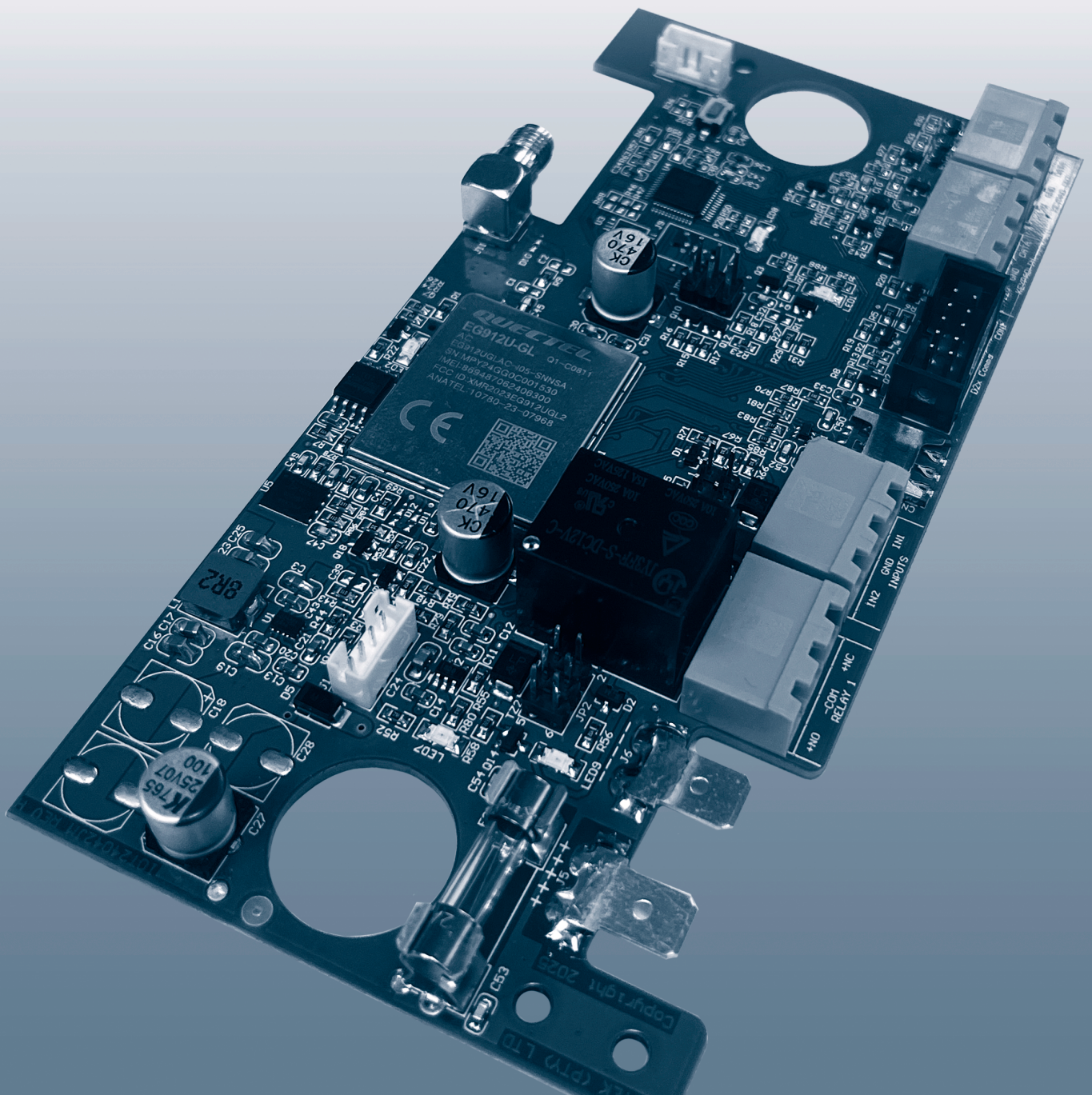




NEMTEK Connect Device Gateway 4G

Instruction Manual



Foreword

Thank you for choosing our product. The **NEMTEK Connect Device Gateway 4G** is designed and manufactured to provide many years of reliable use, if installed and maintained correctly. The guidelines provided in this manual will assist you with the basic operation and maintenance of your unit. Currently this product is designed and manufactured in South Africa for South African and international markets. More information on our products and general information is available on our website at: <http://www.nemtek.com>

The **NEMTEK Connect Device Gateway 4G** provides connectivity to your supported NEMTEK devices by allowing for connectivity to the **NEMTEK Connect** platform. Together with the **NEMTEK Connect App**, you can remotely monitor and control your NEMTEK devices, as well as receive notifications and alerts.

Supported Nemtek Devices

The **NEMTEK Connect LDGW** (also referred to as the **NEMTEK Connect Device Gateway 4G**) works with the following Nemtek products:

- **Wizord 2i***
- **Wizord 4i***
- **Merlin 4**
- **Merlin Stealth M15S, M18S, M25S, M28S**
- **Druid D13, 15, 18**
- **Druid D114**
- **Druid D25, D28**
- **Agri150, Agri200**

Note: This list may be changed without prior notice. Please see the hardware installation section for more details on how to set up your specific device.

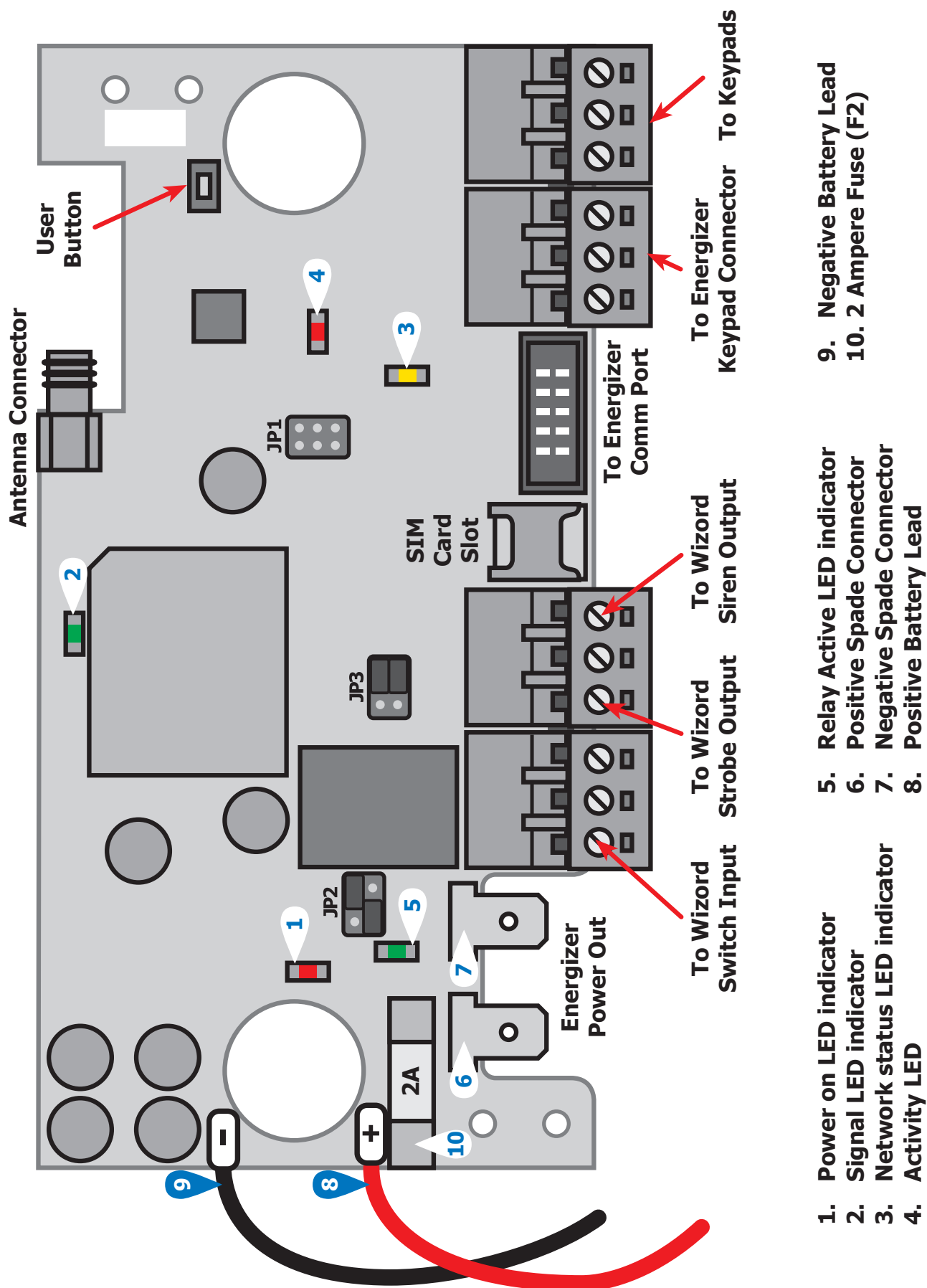
* For any Wizord energizer manufactured before 2019, a hardware update may be required.

Hardware Overview

The **NEMTEK Connect LDGW** features:

- **4G LTE CAT 1 Modem**
- **Support for 2G GSM GPRS networks**
- **Nano SIM Card slot**
- **SMA (Female) Connector, supports many SMA (Male) LTE Antennas**
- **D2x comms support for Nemtek Druid D2x range**
- **Keypad bus support for Nemtek Druid D1x, Merlin and Merlin Stealth ranges**
- **IO support for Nemtek Wizord Range**

Board Connections



Hardware Installation

- The **NEMTEK Connect LDGW** has been designed to be installed onto the battery brace inside of the enclosure of a supported NEMTEK energizer.

Please Note: For Agri energizers the **NEMTEK Connect LDGW** is placed on mounts at the top of the Agri casing that are behind the main Agri PC board. The main board has to be removed before the LGDW board can be installed.

- To install the LDGW, unplug the energizer from mains and disconnect the energizer's battery leads from the battery. You may need to remove the battery brace to get better access to the battery terminals to remove and plug in the cables onto the battery terminals.
- Plug the energizer battery leads directly into the **Battery Power Out** terminals of the LDGW board. Be careful to ensure you connect the correct polarity wires to the correct terminal. Make sure the terminal connectors are plugged in completely and firmly onto the battery terminals on the board.

Please Note: For Agri energizers the LDGW power leads are connected at the top of the Agri main PC board.

- Connect the furthest away battery wire to the battery. This is usually the negative terminal and wire, unless the battery is orientated differently. Take care to ensure you connect the correct polarity wires to the correct battery terminals. Do not connect the second wire yet, as this will apply power to both the LDGW and energizer.
- Make sure the battery is firmly in place and screw the battery brace back over the battery. Be sure that no wires or obstacles are between the battery brace and the battery and that the battery brace goes over the battery without any force, otherwise this may cause a crack in the battery which could cause a leak of battery acid.
- Align and screw in the LDGW board on the battery brace. Two screws are supplied for this purpose.
- Screw in the antenna. If your antenna has a lead, make sure it is routed outside of the enclosure via the appropriate cable management ports, be careful to not get the cable caught on the enclosure edge when screwing the lid back on.
- Connect up the LDGW to your energizer as is necessary (see following section for details for each of the supported Nemtek products).
- Once everything is wired up and setup, plug in the second lead to the battery to power up the system. Screw the lid of the enclosure back into place and plug the energizer back into the mains. Reconnect the mains supply.

Network Status & Signal Strength LEDs

Network Status LED

The LED is on a 1 second interval per blink repeated every 20 seconds.

- 1 blink: Power on
- 2 blinks: Selecting SIM
- 3 blinks: Selecting network type
- 4 blinks: Waiting for network registration
- 5 blinks: Connecting to internet
- 6 blinks: IP Address acquired
- 7 blinks: Connected to the server
- Rapid blinking: Indicates checking for / downloading an update

Please refer to Board Connections on page 2 for the location of the Network Status LED, item 3.

Signal Strength LED

Once the LDGW has established connection to a cell tower the signal strength indicator will flash. The flash will occur in conjunction with the 5th flash indicating connection to a cell tower.

The LED will flash 1-4 times.

- 1 blink: Weak signal
- 2 blinks: Fair signal
- 3 blinks: Good signal
- 4 blinks: Excellent signal

Please refer to Board Connections on page 2 for the location of the Signal LED indicator, item 2.

NEMTEK Connect Mobile Application

The **Nemtek Connect LDGW** can be accessed and managed remotely by downloading the **NEMTEK Connect Mobile Application**.

Scan the QR Code to go to **connect.nemtek.com/app**

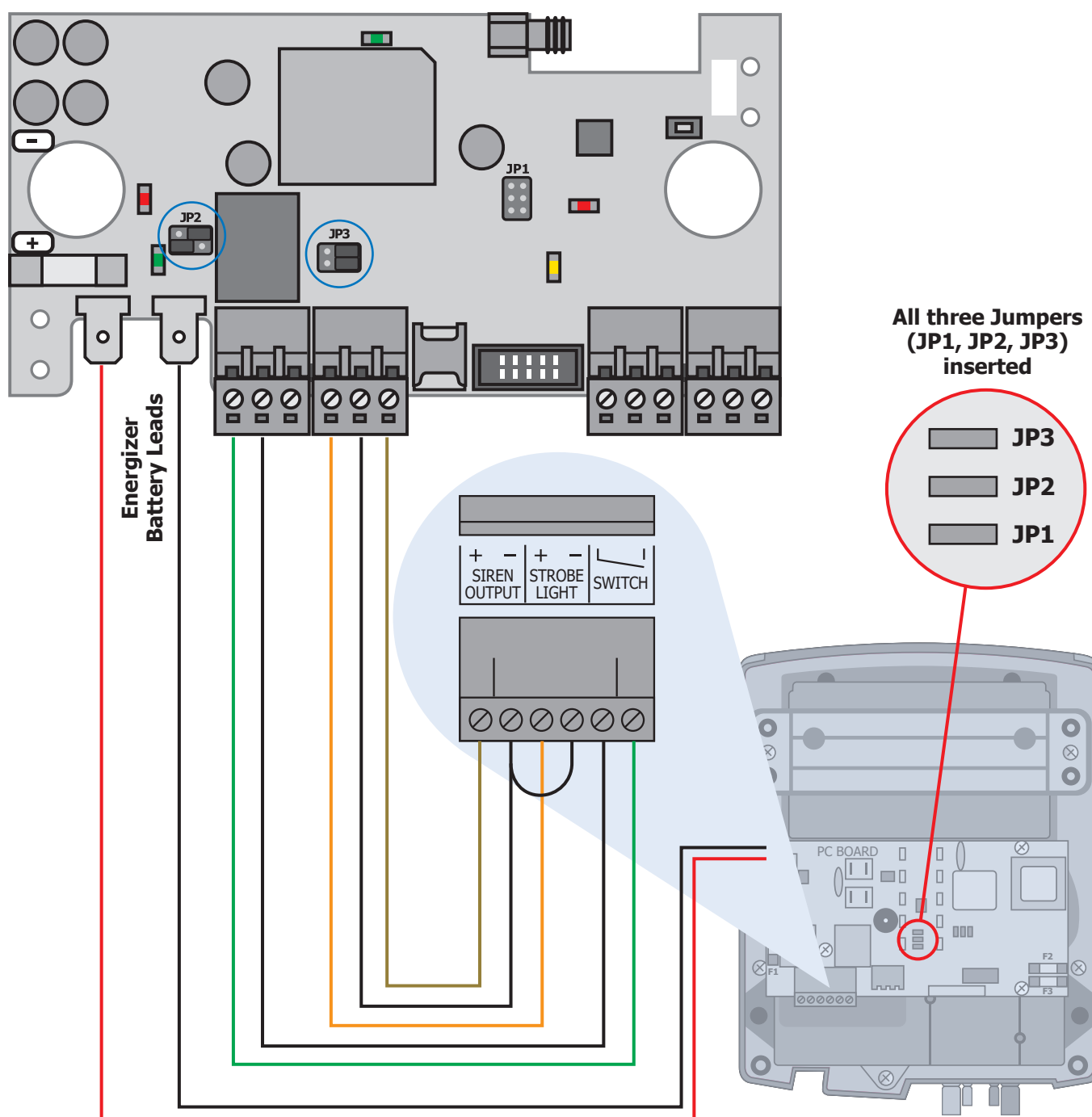
The app is available for Android, Apple and Huawei operating systems.



Connecting to Supported Nemtek Products

Connecting to a Wizord Energizer

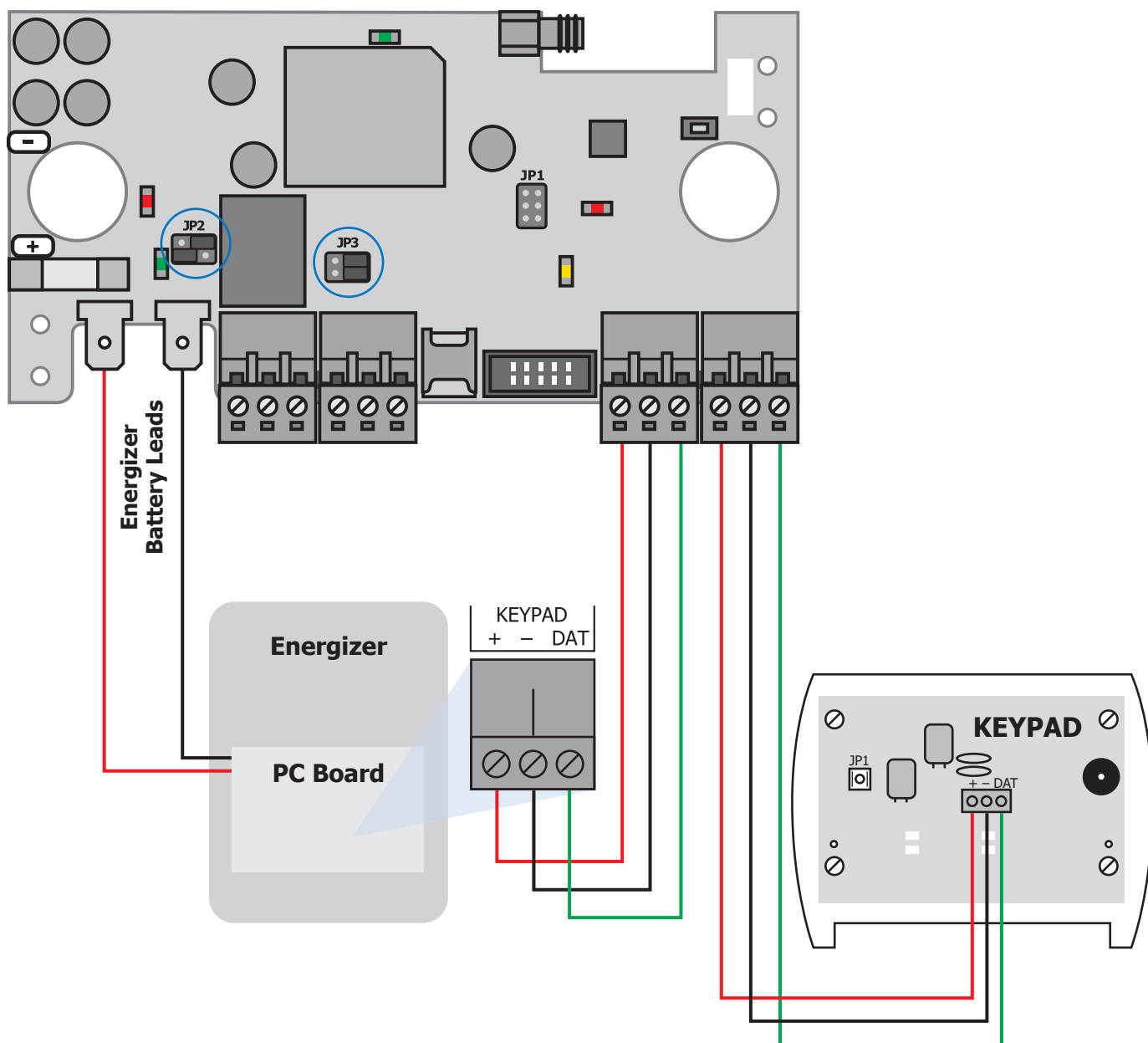
Both Nemtek Wizord 2i and Wizord 4i Energizers are supported by the **NEMTEK Connect LDGW**. Update the Wizord energizer's jumper configuration by making sure the jumpers **JP1**, **JP2** and **JP3** are all inserted, then set **JP2** and **JP3** on the **NEMTEK Connect LDGW** as indicated in the diagram below. In this mode, the state of the Wizord energizer is controlled by the **Switch Input**, the state of the energizer is indicated on the **Strobe Output** and the alarm is indicated on the **Alarm Output**.



Connecting to Supported Nemtek Products

Connecting to a Keypad Energizer

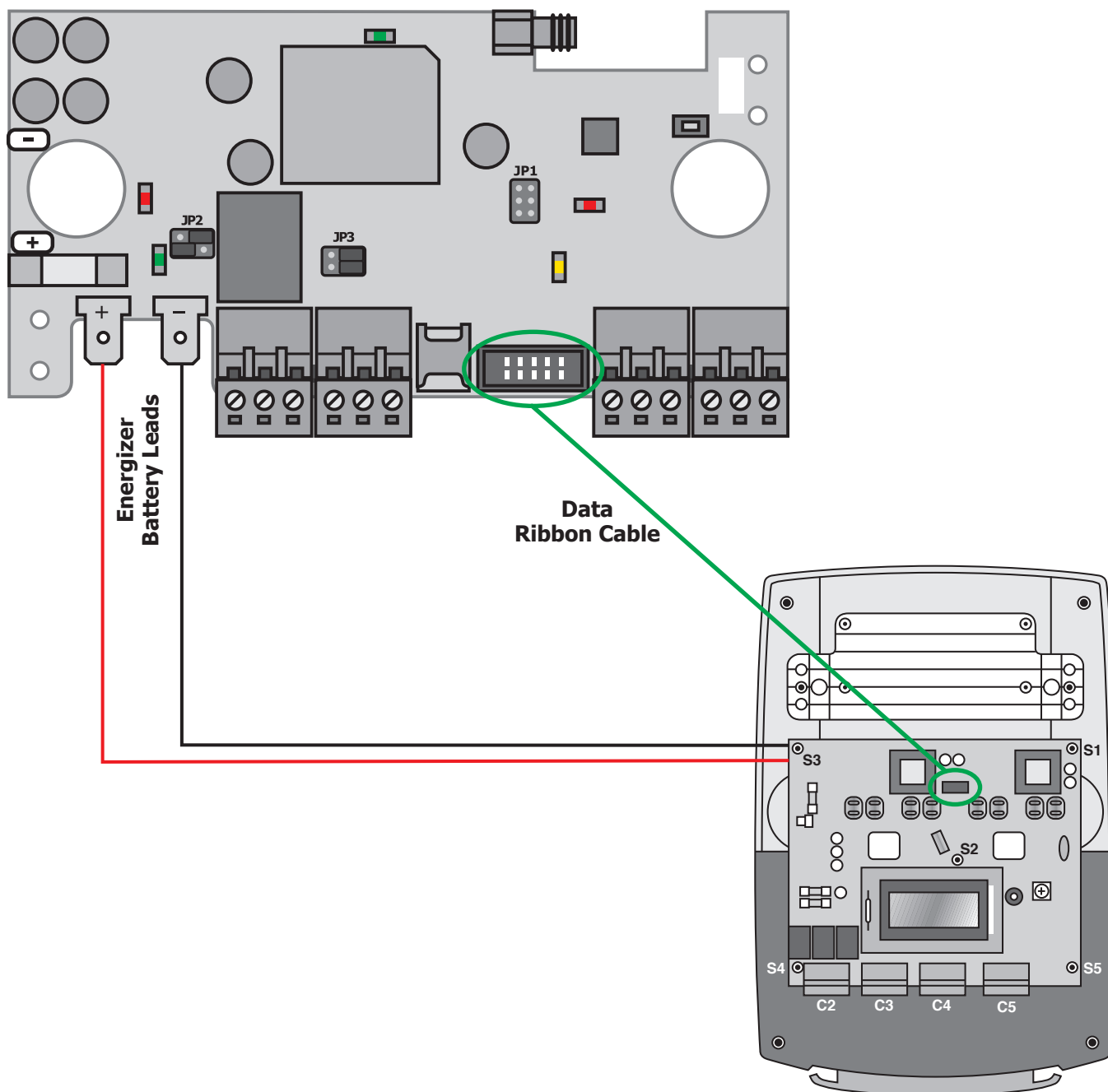
- The following NEMTEK energizers are supported by the **NEMTEK Connect LDGW** over the Keypad Bus: Merlin 4; Merlin Stealth M15S, M18S, M25S, M28S; Druid 13, 15, 18, 114
- To setup the keypad interface, connect a comms cable to the keypad connector of the energizer to the **Keypad IN** connector of the LDGW. Next connect any external keypads, if you have any, to the **Keypad OUT** connector on the LDGW.
- When using the LDGW with the keypad bus connection, you can still use the NEMTEK keypads to monitor and control your energizer.



Connecting to Supported Nemtek Products

Connecting to a Druid D2x Energizer

- The Druid D2x (D25 and D28) is connected to the **NEMTEK Connect LDGW** via the data ribbon cable included.
- Connect the ribbon to the relevant connectors on the LDGW and the energizer.
- Set the energizer up to network address number 1 using the keypad. This is done by entering programming mode (**INSTALLER_PIN*0#**) and the address change command (**5101*#**), then exit programming mode (***#**).



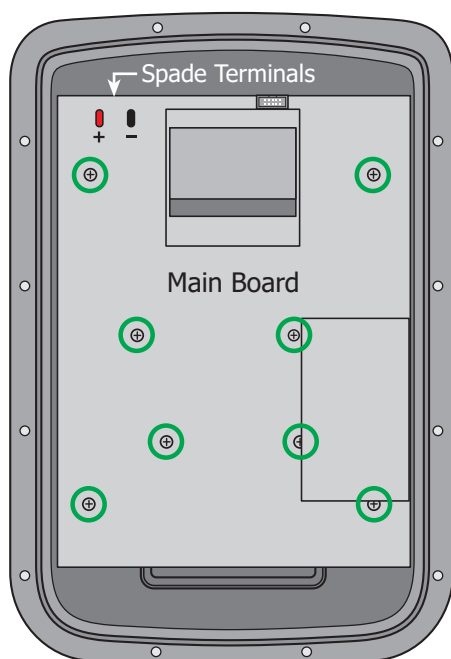
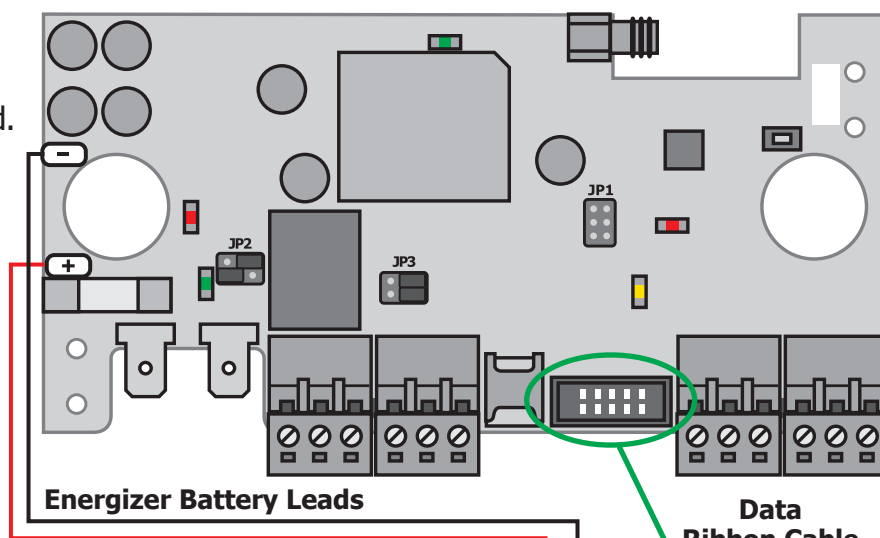
Connecting to Supported Nemtek Products

Connecting to an AgriXXX Energizer

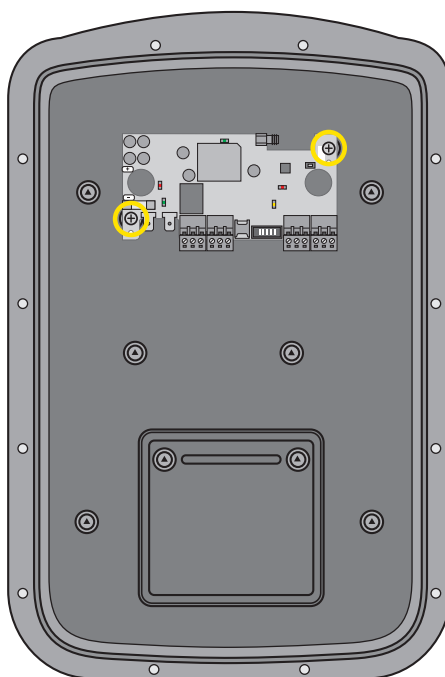


WARNING: High Risk of Electrocution. The AgriXXX Energizer series delivers high energy output, which poses a significant risk of serious injury or death from electrocution, even when the unit is powered off. Only licensed, trained, and certified professionals should handle the installation, maintenance, or adjustment of this equipment. **For further assistance or to arrange for professional installation, please contact your local Nemtek branch.**

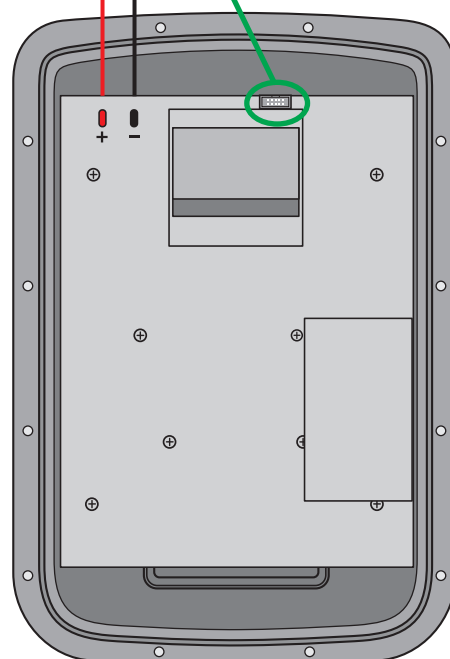
- Before installation, use an external 12V power source to configure the gateway, if configuration is required.
- Open the energizer enclosure by unscrewing the 8 screws on the rear of the enclosure.
- The AgriXXX (150 and 200) is connected to the **NEMTEK Connect LDGW** via the data ribbon cable included.
- Connect the ribbon cable to the relevant connectors on the LDGW and the energizer as shown below. The LDGW board is placed on mounts at the top of the Agri casing that are behind the main Agri PC board. The main board has to be removed before the LDGW board can be installed.
- Reinstall the main PC board and close the energizer enclosure. Take care to ensure the spade terminals mate up correctly with the transformer under the main PC board.



Remove 8 screws to take out the main board.



Mount the LDGW board.



Remount the main board.

Connecting to Supported Nemtek Products

External SIM Support

We have introduced the ability to make use of the SIM card slot on the **NEMTEK Connect LDGW**. This slot will allow a user to insert and use their own external SIM card. The primary reason for this feature is to allow functionality in areas and countries where there is no coverage for the currently supported network providers of the Chip SIM.

The SIM card slot only supports the "Nano" SIM card size.

- Ensure the **NEMTEK Connect LDGW** is completely powered off
- Insert the external nano SIM into the SIM card slot on the **NEMTEK Connect LDGW** (see board diagram on page 2)
- Reconnect and power up the **NEMTEK Connect LDGW**
- Check the status of the network connection by observing the Network status LED blinks pattern - 5 Blinks indicate that the **NEMTEK Connect LDGW** has connected to the cell network
- If it is the first time you are inserting this external SIM into the board, you will need to send the configuration SMS to setup the network provider's APN settings
- The format of the configuration SMS is as follows: APN:xxx;USER:yyy;PASS:zzz;RESET
Replace xxx with the APN, yyy with the username and zzz with the password
- Once the SMS is received, the board should reset
- Check the network connection status by observing the network status LED flashing pattern
If setup successfully, the LED should blink 7 times

Notes:

- Depending on the product code a chip SIM may still be included with the **NEMTEK Connect LDGW** boards.
- External SIM will need to be managed by the user ensuring the SIM has sufficient data/airtime/credits available to operate.
- When an external SIM is inserted in the SIM slot of the **NEMTEK Connect LDGW**, it will be prioritized over the chip SIM.
- In order to use the chip SIM, the external SIM needs to be removed, there is no automatic switch over to the chip SIM.
- An external SIM will not work automatically; APN settings must be configured manually.

GUARANTEE & DISCLAIMER

The NEMTEK Connect DGM, manufactured by NEMTEK (Pty) Ltd, is guaranteed for a period of two years from date of sale against defects due to faulty workmanship or materials. NEMTEK will, at its discretion, either repair or replace a product that proves to be defective. NEMTEK guarantees that the product, when properly installed and used in line with the specification as determined by NEMTEK from time to time, will execute its function of generating a suitable potential.

NEMTEK (Pty) Ltd does not guarantee that the operation of the product will be uninterrupted and totally error free. Faulty units must be returned to one of the NEMTEK Group outlets. The buyer shall pay all shipping and other charges for the return of the product to NEMTEK or NEMTEK Security Warehouse. Specifications may be altered without prior notification.

LIMITATION OF GUARANTEE

The guarantee does not apply to defects resulting from acts of God, modifications made by the buyer or any third party, misuse, neglect, abuse, accident or mishandling.

EXCLUSIVE REMEDIES

The remedies provided herein are NEMTEK (Pty) Ltd's sole liability and the buyer's sole and exclusive remedies for breach of warranty. NEMTEK shall not be liable for any special, incidental, consequential, direct or indirect damages, whether based on contract, tort, or any other legal theory. The foregoing guarantee is in lieu of any and all other guarantees, whether expressed, implied, or statutory, including but not limited to guarantees of merchantability and suitability for a particular purpose.

COMPANY PROFILE

The NEMTEK Group of Companies manufacture and distribute intelligent electronic agricultural fencing systems, security and perimeter control systems and have been involved in the security industry since 1990. We have our own research and development team, designing and manufacturing a full range of globally competitive electric fence energizers and related products. NEMTEK is continually updating its products according to South African and international standards in order to ensure the highest quality products and continuous customer satisfaction.



LDGW 08/25 Rev.1.0