MANUAL
StiCAN V3

V1.0

Breeze Energies

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Breeze

Contents

1. SAFETY PRECAUTIONS

- The instructions provided in this user manual must be strictly followed.
- Only adults who have read and understood this manual are authorized to perform configuration and installation work

1.1 GENERAL WARNINGS

- Do not touch connectors or cables while the device is operating - risk of electric shock. Always use insulated tools.
- Do not wear any metallic objects on your hands or wrists, such as watches, bracelets, etc.
- The device may only be installed and operated by qualified personnel.
- Do not open, modify, or interfere with the device design, this may result in damage and void the warranty.
- Avoid exposure to water, moisture, and extreme temperatures.
- Protect the device from mechanical shocks and strong vibrations.

1.2 TRANSPORT WARNINGS

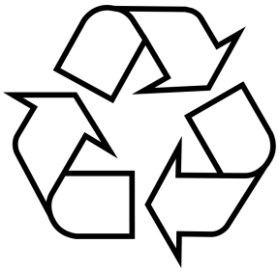
- Protect the module from moisture and direct sunlight during transport.
- Avoid storing or transporting it together with heavy objects that could damage the housing.

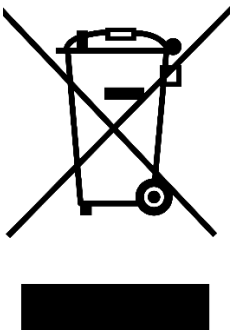
1.3 WARNINGS WHEN WORKING WITH ELECTRICAL DEVICES

- Before starting installation or disassembly, disconnect the device and the inverter from the AC power supply and the PV installation, and switch off the battery. Secure all power sources against being switched on again!
- **Prevent short circuits!** Exercise caution while working, especially near battery terminals - do not use uninsulated metal tools.
- Connect cables with the correct polarity: **red = plus (+)**, **black = minus (–).**

1.4 ELECTRONIC DEVICE DISPOSAL

- The module is subject to regulations concerning electrical and electronic waste (WEEE).
- The device must not be disposed of with household waste.
- At the end of its service life, the device should be delivered to a collection point for used electrical and electronic equipment.





2. WSTĘP

This manual contains information about the operation of the communication module between Ion Breeze batteries and hybrid inverters from various manufacturers. It includes details on operation, installation, and supervision. The manual does not provide detailed information on systems dependent on the battery system, such as the hybrid photovoltaic installation.

The purpose of this document is to provide clear, comprehensible, and practical guidelines that enable correct connection, configuration, and operation of the system. The manual has been prepared in such a way that it can be understood by anyone - regardless of their level of technical knowledge or experience.

The manual includes:

- a description of the device's functions and operation,
- guidelines for safe installation,
- wiring diagrams,
- instructions for start-up and initial configuration
- principles of operation and troubleshooting.

The contents of this manual may change or be updated as a result of product development. Information contained in the manual may be updated without prior notice. The most recent version of the manual is available at: https://breeze-energies.com/

2.1 DEVICE DESCRIPTION

The StiCAN communication module enables communication between Ion Breeze batteries and hybrid inverters from various manufacturers. The device serves as an information relay: it communicates wirelessly with the batteries and transmits the data to the inverter via a wired (CAN) connection.

Configuration of the device is possible through the Breeze BMS mobile app or via a desktop application (the configuration type depends on the battery model). **Proper configuration is essential for correct operation of the device.**

The Breeze StiCAN sends the inverter key information about the battery status, including:

- state of charge (SOC),
- charging and discharging current limits,
- pack voltage,
- cell balancing status,
- temperature.

2.2 PACKAGE CONTENTS

The StiCAN V3 package should include:

- StiCAN V3 device,
- Warranty card,
- Ethernet cable,
- Power connector with cables and ring terminals,

- USB-C/USB-A cable.

2.3 SYSTEM COMPONENTS

A system including the StiCAN device should consist of:

- ION BREEZE batteries,
- a hybrid or off-grid inverter that supports low-voltage batteries with BMS-CAN communication (the list of compatible inverters is provided in the **Technical Data** section).

2.4 TOOLS REQUIRED FOR INSTALLATION

For proper installation, the following tools are recommended:

- **Protective gloves and safety glasses** – for personal protection,
- Voltage tester or multimeter – to verify absence of voltage at device terminals, PV installation, and AC supply during installation,
- Smartphone with Android or iOS operating system and the **Breeze BMS** app installed,
- Windows computer with a USB port.

QR link: OS Android App

QR link: iOS App

3. TECHNICAL DESCRIPTION OF THE DEVICE

3.1 TECHNICAL PARAMETERS

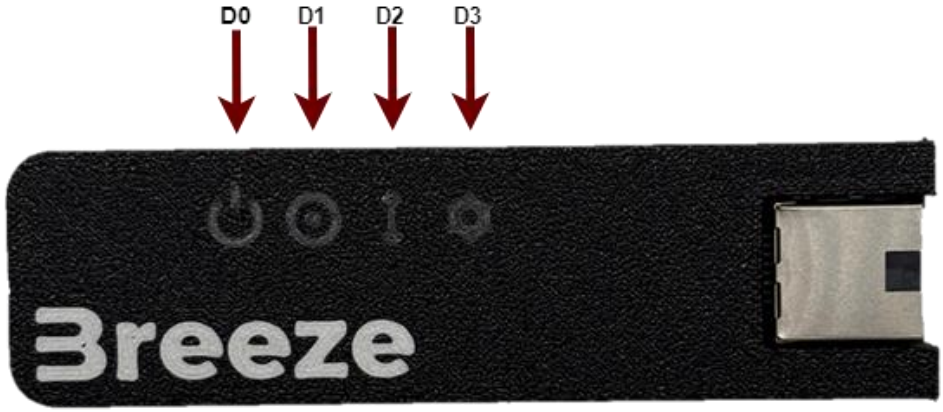
Parameter	Value
DC supply voltage	10V – 60V
Dimensions (W x S x G)	20mm x 27mm x 99mm
Weight	34g
Permissible ambient temperature during operation	0°C - 50°C
Protections	Against reverse polarity of the supply voltage
Power connector	Molex Micro-fit 3.0, 2 pin, latch type
Communication connector	RJ45
Maximum number of supported batteries	12*/63**
Effective wireless communication range	5m
Data update time	<7min* / <10s**
Approximate configuration time	<5min*/<1min**
CAN termination	Built-in

*** When configured via the configurator (for batteries manufactured before December 2024)**
**** When configured via the Breeze BMS application (for batteries manufactured after January 2025)**

3.2 HOUSING DESCRIPTION

The front of the device features 4 illuminated pictograms:

- **D0 – Red LED indicating correct device power supply**
- **D1 – White LED indicating normal operation**
- **D2 – White LED indicating communication**
- **D3 – White LED indicating entry into remote configuration mode**



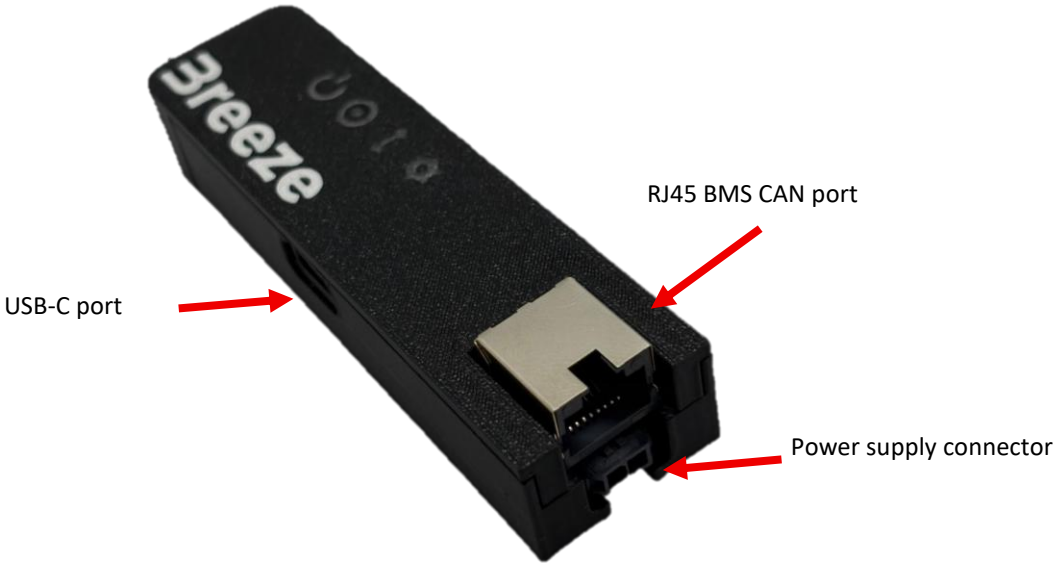
- LED **D0** is always lit when the StiCAN V3 is properly powered.
- LED **D1** is continuously lit during normal operation, i.e. while exchanging data between batteries and the inverter.
- LED **D2** is continuously lit when the device is correctly connected to a computer via the USB port.
- LEDs **D3** and **D2** light up simultaneously in wireless configuration mode (using the Breeze BMS app).
- In the event of an error or test mode, all LEDs light up simultaneously.

On the back of the housing, the device serial number and a pin for wireless connection are visible.

The serial number consists of a model number and an individual number for the specific device.

Example serial number:

Model number:	Individual device number:
0600102A	12345678



3.3 DEVICE OPERATION DIAGRAM

StiCAN collects information from each battery individually (through direct connection or scanning). The data is then processed (averaging SOC and voltage readings, summing current values and current limits). Processed information is sent to the inverter at a frequency of 1 Hz.

If a smartphone connects to a battery operating in the system, StiCAN no longer detects that battery and modifies current limits as if the given battery were not active.

3.4 COMPATIBILITY

The device has been tested and is compatible with the following inverters:

- Deye
- Victron

The device should also work with any hybrid inverter that supports CAN communication and the Pylontech protocol. If your inverter is not on the list but provides this type of communication, please contact our service team to verify compatibility.

The device is only compatible with ION BREEZE batteries

4. STEP-BY-STEP INSTALLATION

1. Unpacking and Verifying Contents

Before starting the installation, check that the package contains all required components.

The serial number and PIN can be found on the back of the device housing and on the packaging.

2. Power Supply Options

The device can be powered via:

- the battery connector,
- the USB connector (if available),
- the +12V connector (if available).

3. Configuration

a. Via Smartphonr

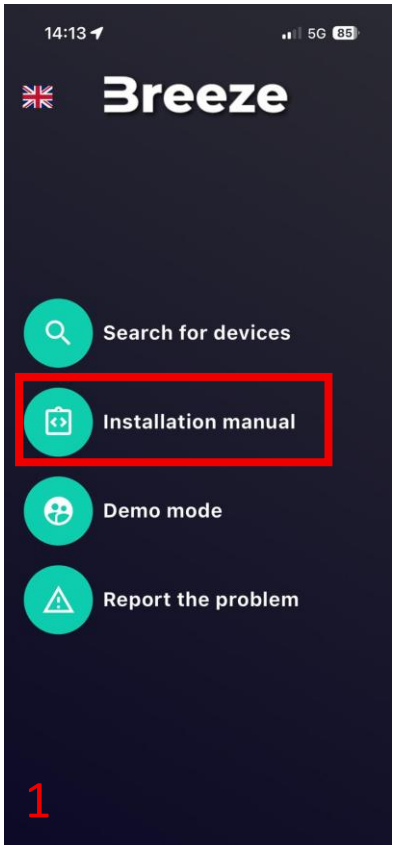
Begin by installing the **Breeze BMS** application and connecting the device to the power supply.

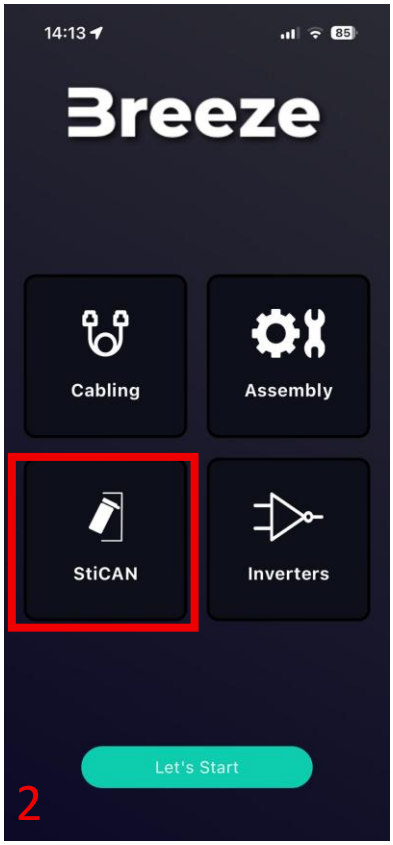
QR link: OS Android App

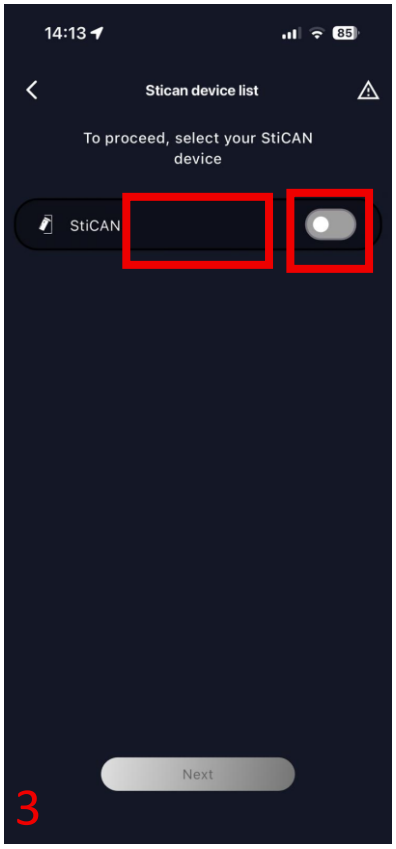
QR link: iOS App

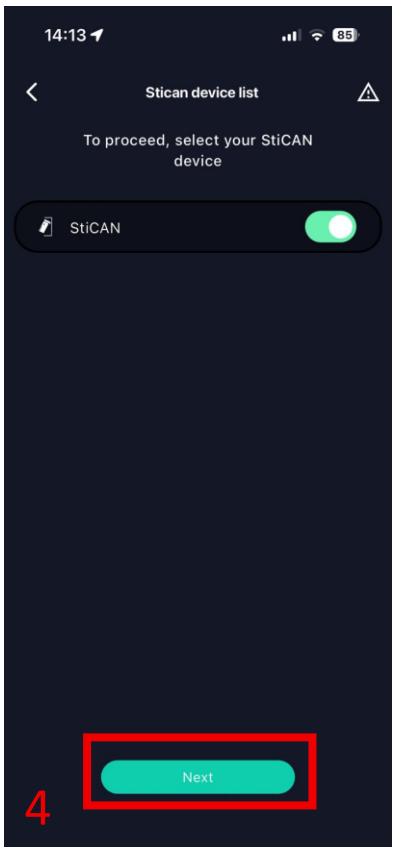
Open the app and follow the on-screen instructions:

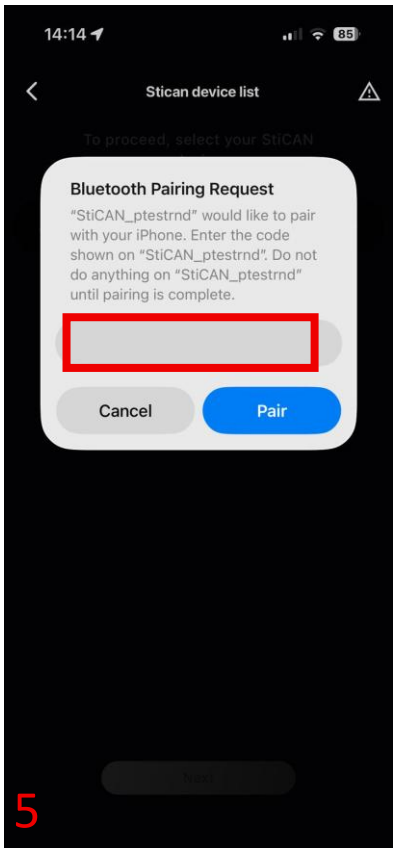
1. On the main screen, press **Installation Guide**.
2. The app will redirect to the instruction screen - select **StiCAN**.
3. The app will search for all nearby StiCAN devices. Next to each device name, its unique serial number will be displayed. Select the device to configure by tapping the switch next to its name.
4. Once selected, the **Next** button at the bottom of the screen will become active. Tap it.
5. The app will request the PIN shown on the back of the device. Enter the PIN and tap Connect.
6. After connecting, select the model of the inverter you are using.
7. In the next window, select the batteries you want to communicate with the inverter, then press **Configure**.
   StiCAN must detect the batteries you want to pair before proceeding.
8. After confirming the configuration, StiCAN is ready for operation. The final screen will display information on the configuration that must also be performed on the inverter.

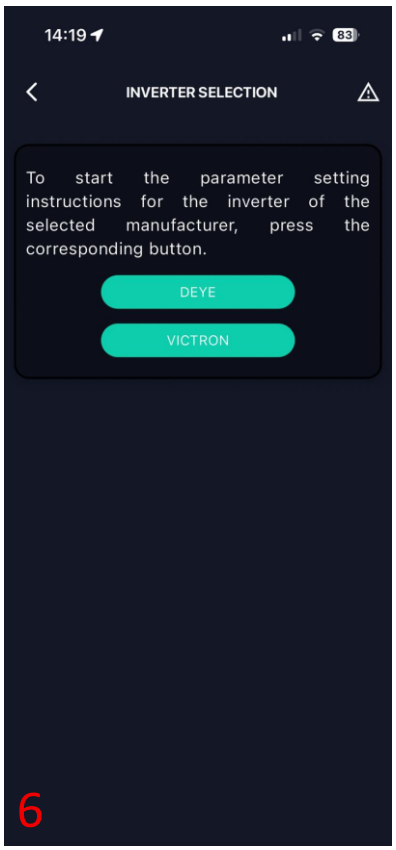

14:13
5G
Breeze
Search for devices
Installation manual
Demo mode
Report the problem
1

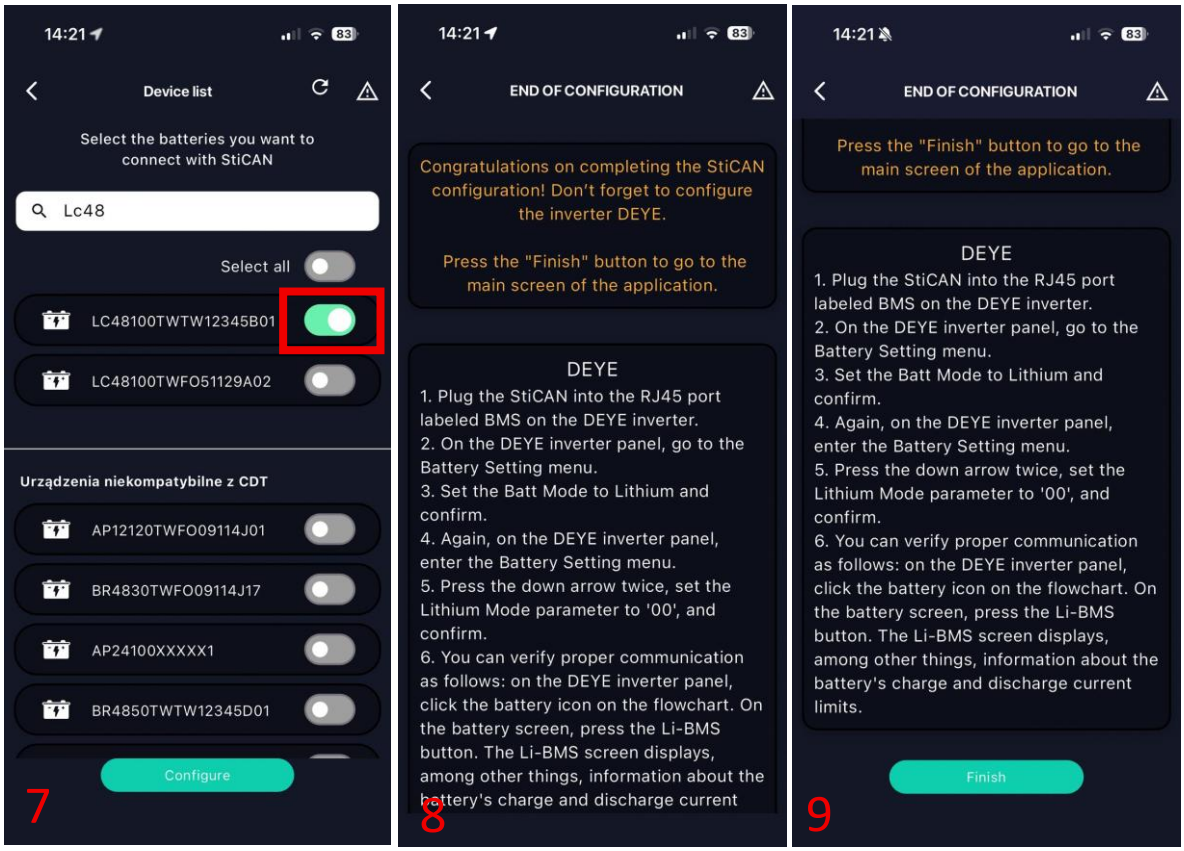

14:13
Breeze
Cabling
Assembly
StiCAN
Inverters
Let's Start
2


14:13
Stican device list
To proceed, select your StiCAN device
StiCAN
Next
3


14:13
Stican device list
To proceed, select your StiCAN device
StiCAN
Next
4


14:14
Stican device list
Bluetooth Pairing Request
"StiCAN_ptestrnd" would like to pair with your iPhone. Enter the code shown on "StiCAN_ptestrnd". Do not do anything on "StiCAN_ptestrnd" until pairing is complete.
Cancel
Pair
5


14:19
INVERTER SELECTION
To start the parameter setting instructions for the inverter of the selected manufacturer, press the corresponding button.
DEYE
VICTRON
6



b. **Via Computer**
(Enables communication with older batteries; slower communication.)

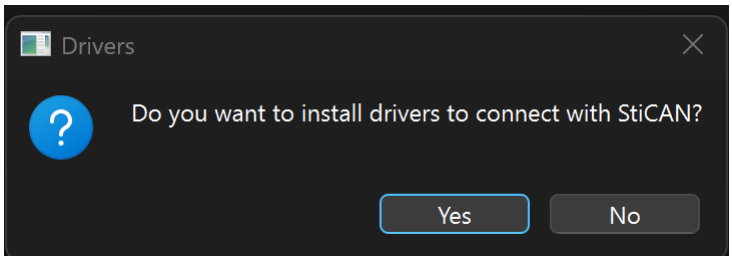
Download the StiCAN Configurator from the Breeze Energies website, under the “Breeze StiCAN” tab: https://breeze-energies.com/produkt/breeze-stican/

Materials to download

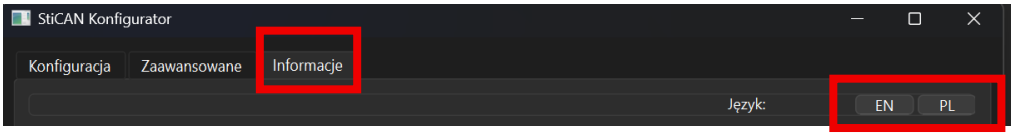
Manual | Warranty card | Configuration application - Widnows | Configuration application - Linux

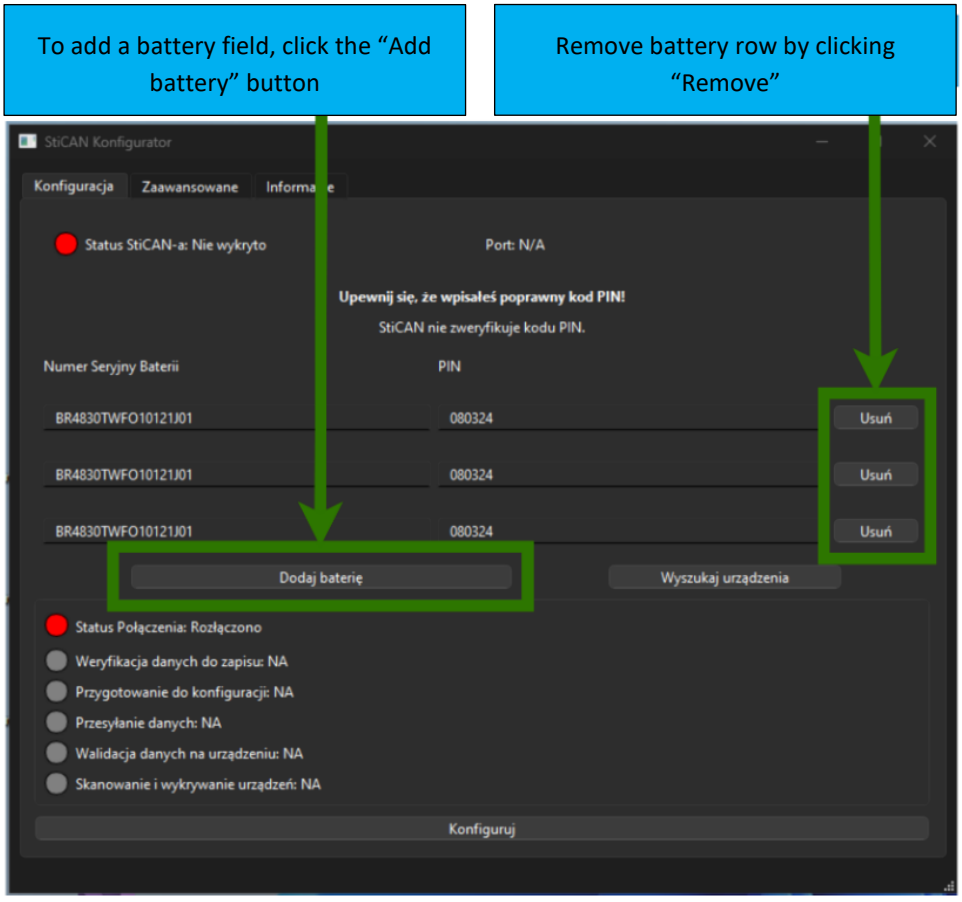
Configuration step by step:

1. Extract the downloaded file by right-clicking on it and selecting **Extract All…**, then confirm by pressing **Extract**. In the extracted folder, open the application file: KonfiguratorStiCAN_V125_Windows.exe.
2. If prompted, allow the installation of drivers. For first-time setup, drivers are required.



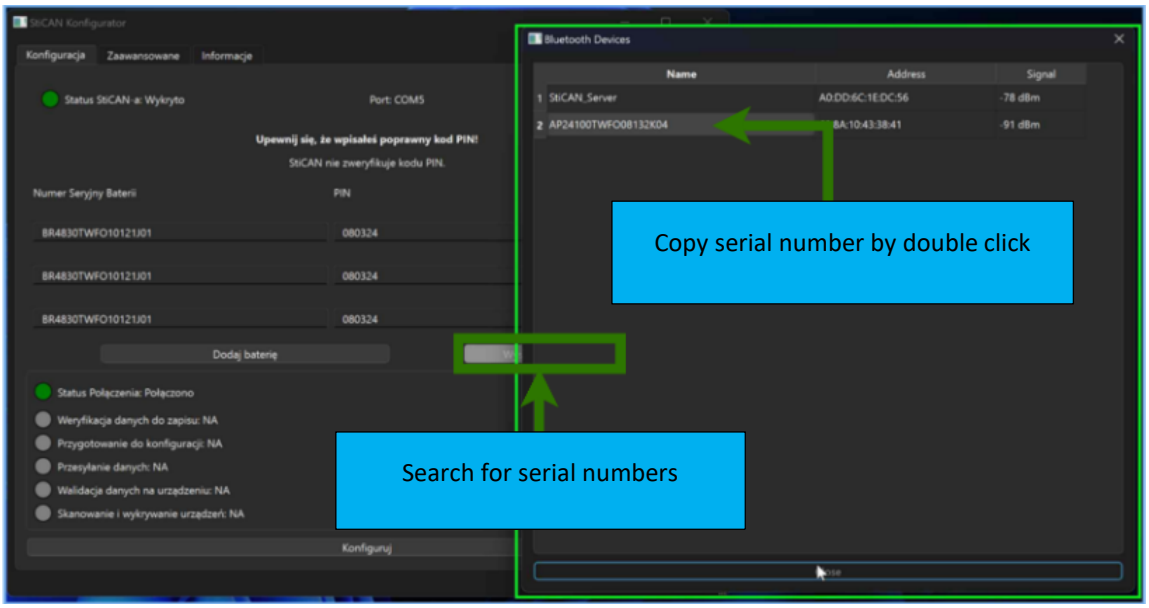
3. Once drivers are installed, the **StiCAN Configurator** will launch.
4. You can change the language as follows:



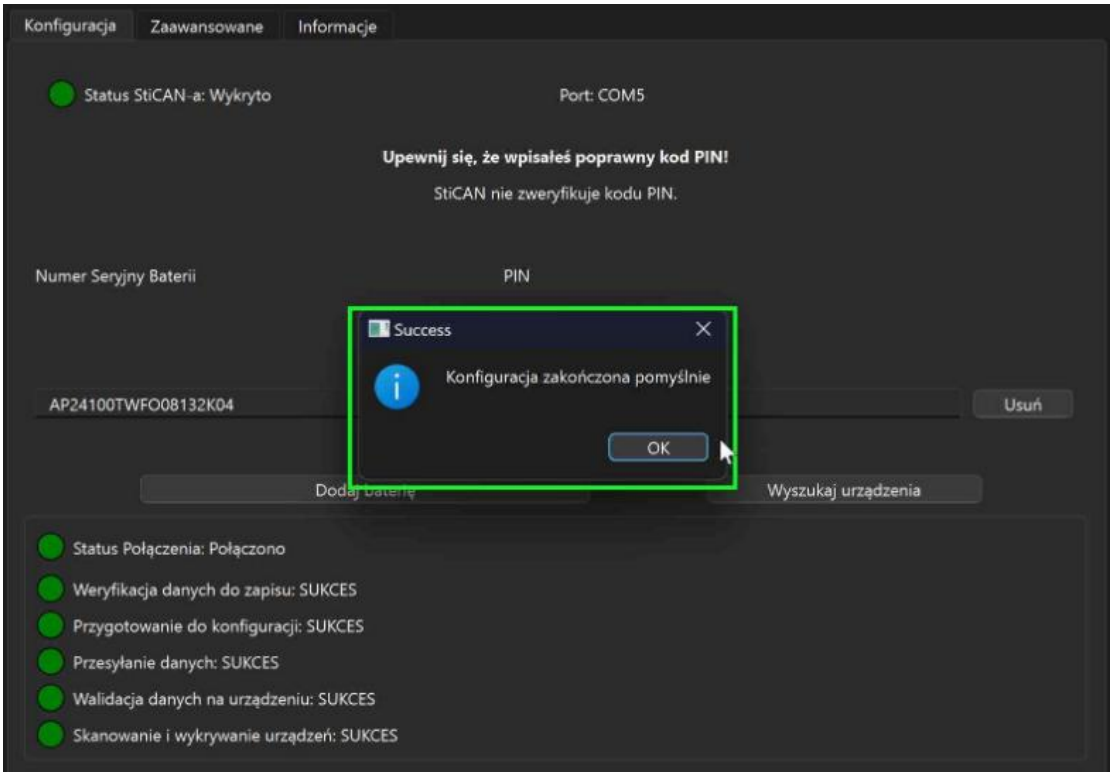


5. Enter or paste the Serial Numbers and PINs into the appropriate fields for each battery.
   - You can find the Serial Numbers and PINs on the battery nameplates.

- If the batteries are located near StiCAN, click **Search Devices** in the app to automatically detect Serial Numbers. They will be listed in the “Name” column, and can be copied by double-clicking them.



6. After entering all data, click **Configure**. Follow the on-screen instructions provided by the application. Once the process is complete, you will receive the message: *“Configuration completed successfully.”*



7. **Connecting to the Inverter and Testing Operation**
   - Connect the programmed device to the power supply.
   - Use an Ethernet cable to connect it to the inverter CAN-BMS port.

- On the inverter screen or in its application, verify that the data from the batteries is being correctly transmitted.
- Depending on the configuration method used, data update time may take up to 5 minutes.

Inverter Configuration

DEYE

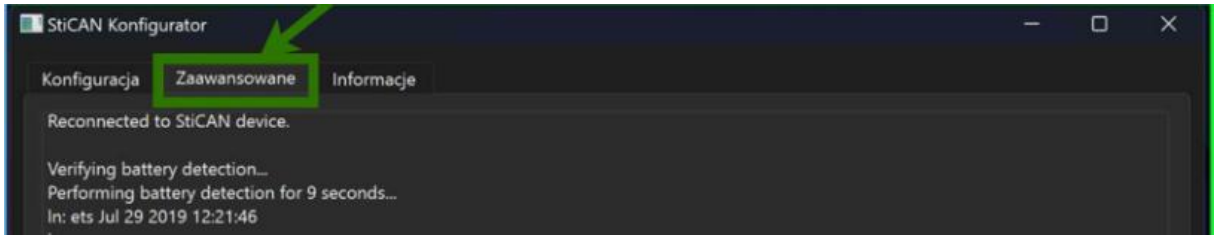
1. On the DEYE inverter panel, open the **Battery Setting** menu.
2. Set **Batt Mode** to *Lithium* and confirm.
3. Re-enter **Battery Setting**, press the down arrow twice, set **Lithium Mode** to *00*, and confirm.
4. To check configuration correctness:
    - On the inverter panel, press the battery icon and select **Li-BMS**.
    - The **Li-BMS** screen will display data such as charge/discharge current limits.

Victron

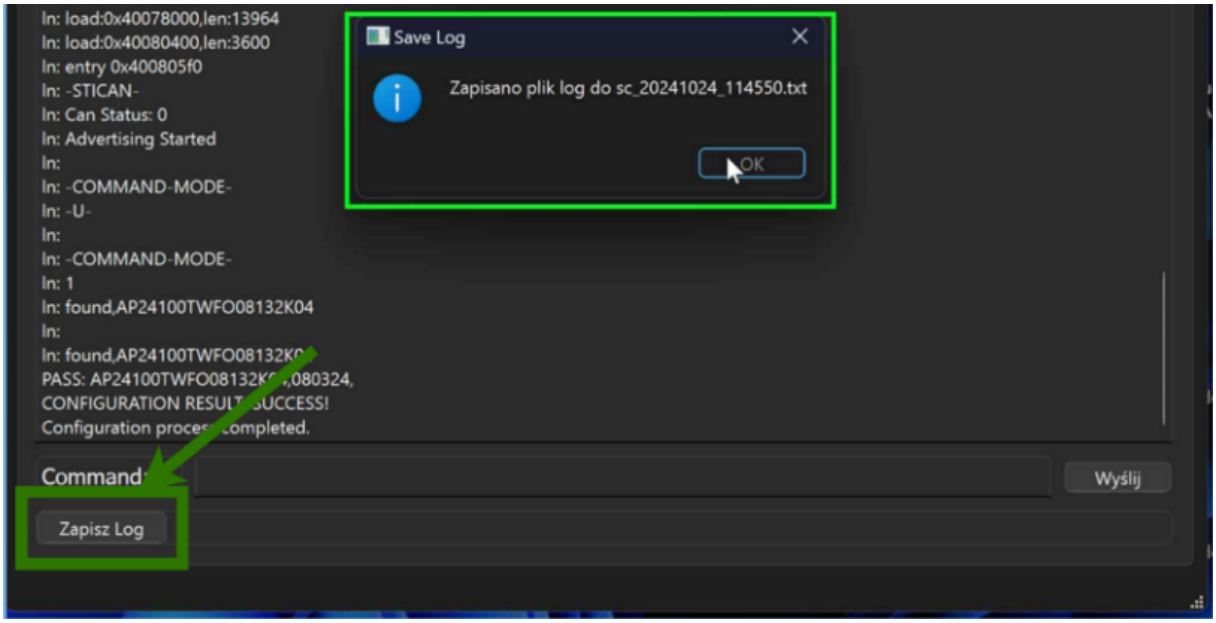
1. Connect the Breeze StiCAN device to the RJ45 port labeled as **VE.Can**.
2. Connect a terminator (supplied with the Victron GX device) to the second RJ45 **VE.Can** port.
3. Open the console of the Victron GX device (see instructions on victronenergy webpage):
    - Option I: via the **VRM platform → Remote Console**
    - Option II: via the **Victron Connect app (Android/iOS)** by connecting to the GX device's Wi-Fi network (SSID and password are on the device).
4. In Victron Connect, select the detected device and click **Remote Console**.
5. Configure settings as follows:
    - Enable CAN communication with Breeze StiCAN: **Settings → System setup → Battery monitor → CAN-bus BMS battery on CAN-bus**.
    - Enable CAN-bus parameter control: **Settings → DVCC → Enable DVCC**.
    - Share current parameters over CAN-bus: **Settings → DVCC → SCS - Sharing Current Sense**.
    - Share voltage parameters over CAN-bus: **Settings → DVCC → SVS - Sharing Voltage Sense**.
6. Verification:
    - On the Victron GX device panel, a new **BMS/Battery** device should now appear in the main menu.

Reporting Errors / Issues via the Application

1. Take a screenshot showing the error or issue.
2. In the application, go to the **Advanced** tab.



3. Click **Save Log**.
4. The log file will be saved in the same folder as the **StiCAN Configurator** application. The filename will be displayed in a notification.
5. Send an email to **serwis@breeze-energies.com** with the screenshot and log file attached.



5. OPERATION AND MAINTENANCE

The StiCAN device has been designed as a maintenance-free system and, once properly commissioned, should not require user intervention. It is recommended to periodically verify the communication status to detect any potential issues in the system.

5.1 RECOMMENDATIONS FOR DAILY OPERATION

- No daily actions are required.
- Occasionally, it is recommended to check the inverter display and the Breeze BMS application data to confirm correct data transmission and proper operation of all batteries.

5.2 UPDATES AND SERVICE

- If new software versions or device features become available, information will be provided by the distributor or manufacturer.
- In case of errors or suspected malfunction, contact an authorized service provider or distributor.
- Never open the device housing! There are no user-serviceable parts inside.

5.3 CLEANING AND MAINTENANCE

- The device housing may be wiped with a dry or slightly damp cloth.
- Do not use detergents, and do not spray the device with water or cleaning agents.

6. CONTACT

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https://systemrma.pl/reklamacje/obsluga/breeze/