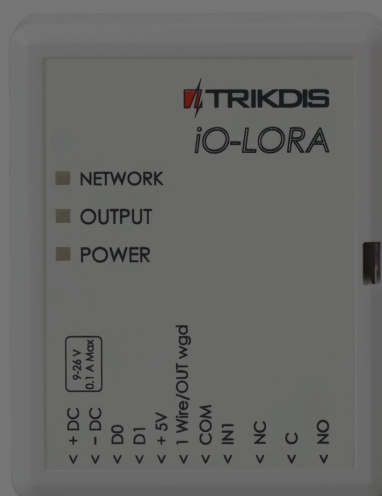


# iO-LORA Wireless Expander



## 1. Description

iO-LORA wireless expanders with RF-LORA transceiver increase the number of inputs and outputs of the "FLEXi" SP3 control panel using two-way RF communication.

Compatible with the SP3 security control panel, GATOR Cellular and GATOR WiFi gate & door access controllers. Temperature sensor (1 pcs.) and readers of contact ("iButton") keys can be connected to the iO-LORA expander. The PGM output (relay) of the expander can be remotely controlled (on/off) by various electrical devices. iO-LORA has one digital input.

### 1.1 Features

#### Communication:

- Line-of-sight wireless range up to 5000 m.
- Up to 8 *iO-LORA* wireless expanders can be connected to the "FLEXi" SP3 control panel.

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Accept

Reject



- 1 input, of selectable type: NC, NO.
- 1 output (relay).

Connection: - The iO-LORA wireless expander is connected to the "FLEXi" SP3 control panel via the RF-LORA transceiver.

## 1.2 Specifications

Parameter	Description
Transmission frequency	4F modification: 433,3 - 434,7 MHz / 8F modification: 867 - 869 MHz
Modulation type	LORA
Power supply voltage	9-26 V DC
Current consumption	Up to 50 mA (stand-by) / Up to 100 mA (short-term, while sending)
Report encryption	Yes
Range in open space	Up to 5000 m
Input	1, selectable type: NC, NO
Output	1, relay, 250 V AC, 4 A
Temperature sensor	1, Maxim®/Dallas® DS18S20, DS18B20
Operating environment	Temperature from -20 °C to +50 °C, relative humidity - up to 80% at +20 °C
Dimensions	62 x 77 x 25 mm
Weight	80 g

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### 1.3 Expander elements



### 1.4 Purpose of terminals

Terminal	Description
+DC	Power terminal (9-26 V DC positive)
-DC	Power terminal (9-26 V DC negative)
D0	Not used
D1	Not used
+5V	Positive 5 V power terminal for "1-Wire" devices
1Wire / OUT wgd	"1-Wire" data bus terminal („OUT wgd“ – not used)
COM	Common negative terminal
IN1	1 input, of selectable type NO, NC (factory setting: NO)
NC	Relay terminal NC

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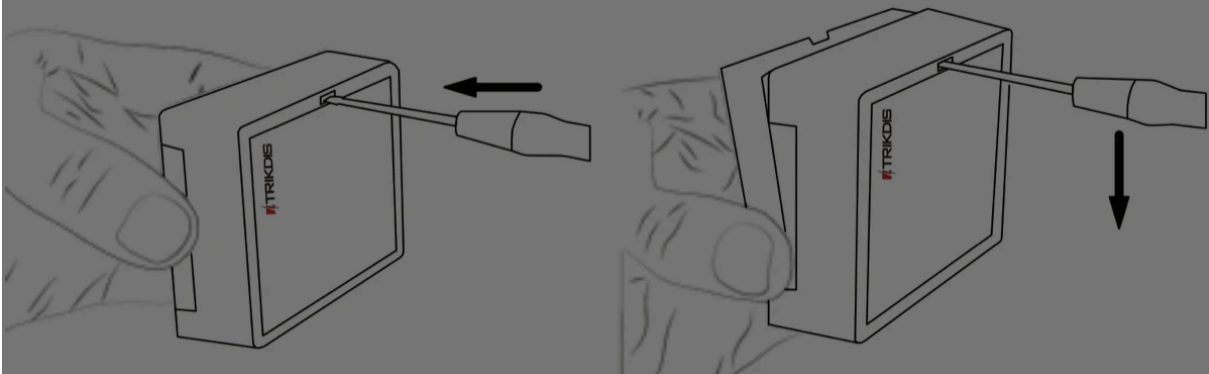
## 1.5 LED indication of operation

Indicator	Light status	Description
NETWORK	Off	No RF signal
NETWORK	Green blinking	RF signal level from 0 to 10. Sufficient strength is 4.
OUTPUT/KEY	Green solid	Relay output activated
OUTPUT/KEY	Yellow solid	Dallas contact key activated
POWER	Off	No supply voltage
POWER	Green blinking	Normal supply voltage level
POWER	Yellow blinking	Low supply voltage level ( $\leq 11.5$ V)

## 2. Wiring schematics

### 2.1 Fastening

1. Remove the top lid.

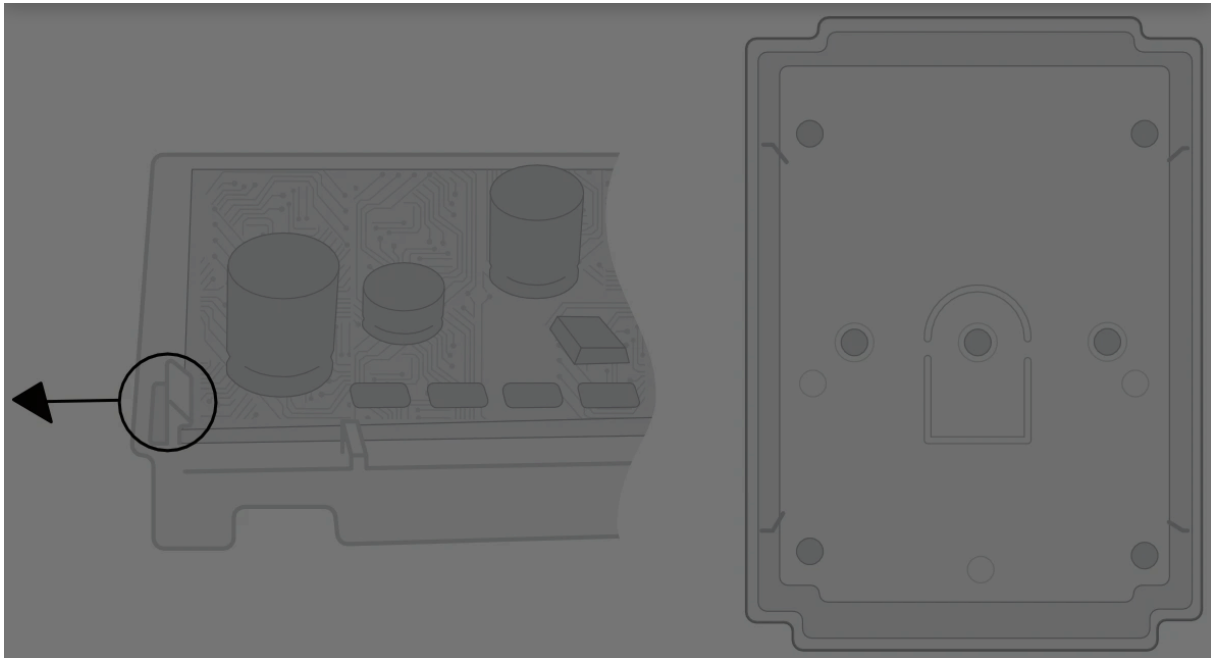


2. Remove the PCB board.
3. Fasten the base of the case in the desired place using screws.
4. Reinsert the board.
5. Close the top lid.

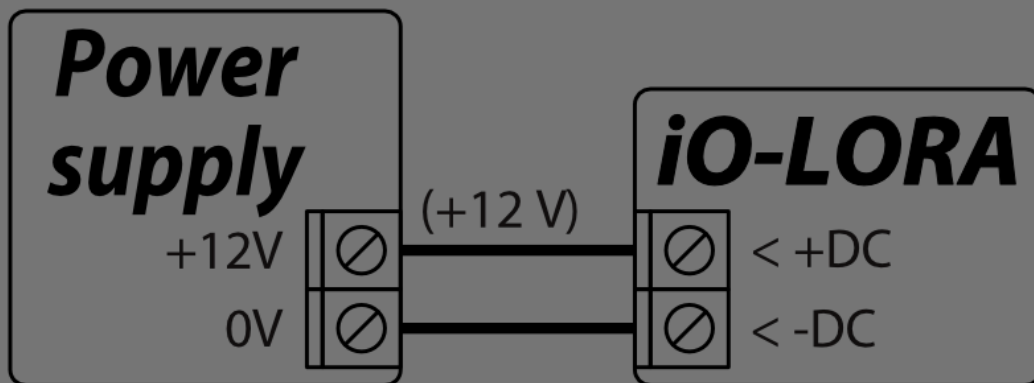
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## 2.2 Schematic for connecting the power supply



## 2.3 Schematic for connecting input

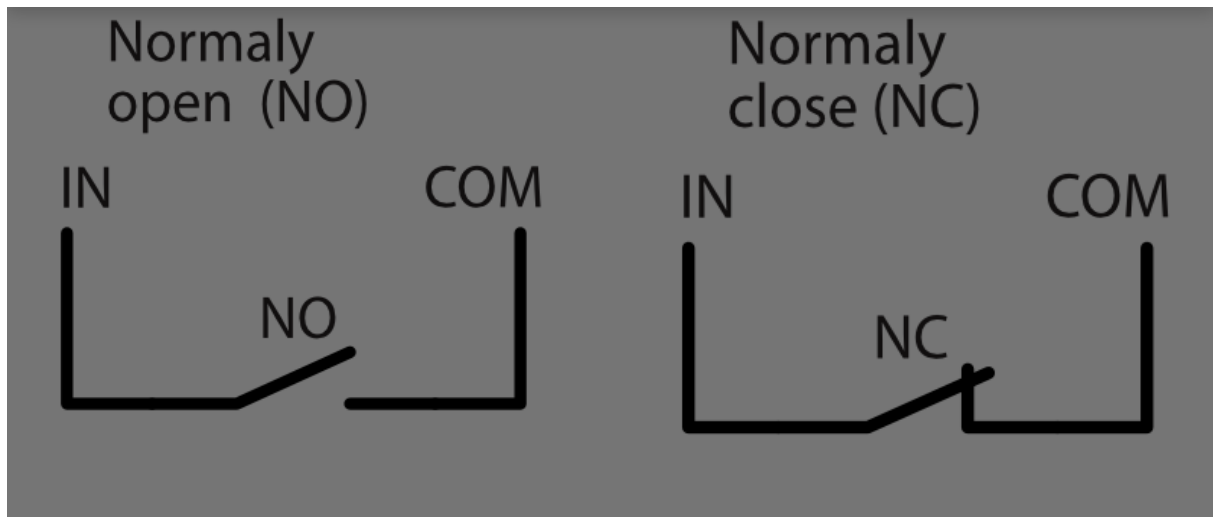
iO-LORA has one input. Input type can be set: NC, NO.

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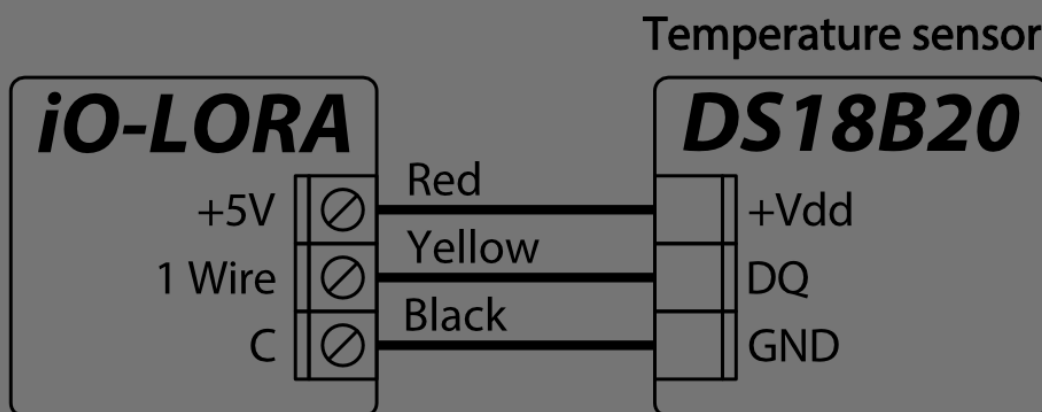




## 2.4 Schematic for connecting a temperature sensor

Temperature sensors should be connected according to the given schematic.

Maxim®/Dallas® DS18S20, DS18B20 temperature sensor (1 pcs.) can be connected to the *iO-LORA* wireless expander. / If a wire longer than 0,5 meters is used to connect a temperature sensor, we recommend using twisted pair cable (UTP4x2x0,5 or STP4x2x0,5). / The „+5V” terminal on the board is for supplying devices connected to the "1-Wire" data bus with 5 V DC voltage.



The maximum output current is 0,2 A. The output is protected from overload. If the maximum allowed current is exceeded, the power will automatically be switched off. The

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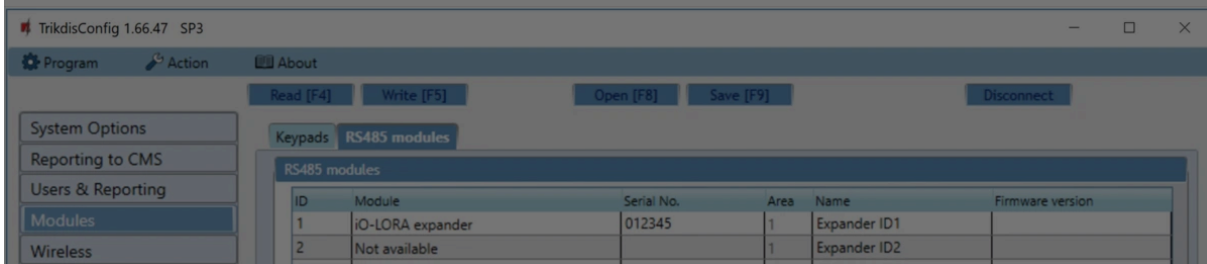
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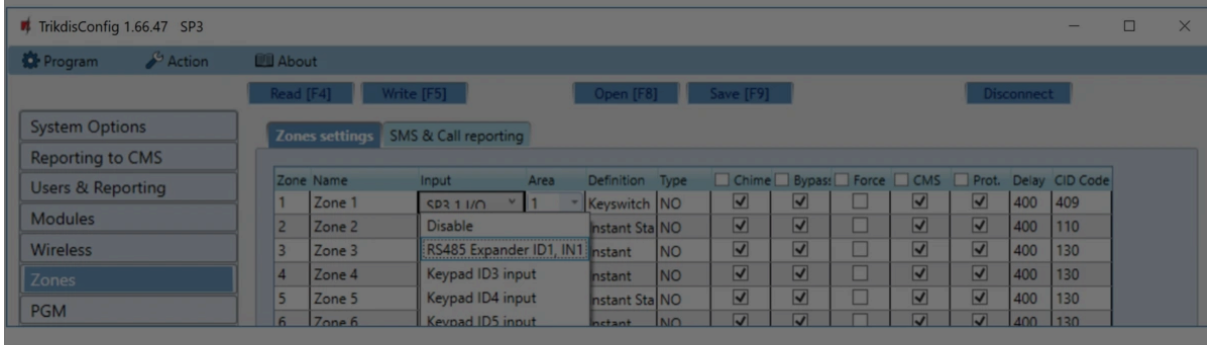


### 3. Security control panel "FLEXi" SP3

1. An RF-LORA transceiver must be connected to the "FLEXi" SP3 control panel.
2. Turn on the power supply of the "FLEXi" SP3 control panel.
3. Turn on the power supply to the iO-LORA wireless expander.
4. Launch ***TrikdisConfig***.
5. Connect the "FLEXi" SP3 to a computer using a USB Mini-B cable or connect to the "FLEXi" SP3 remotely.
6. Click the button **Read [F4]** for the program to read the parameters currently set for the "FLEXi" SP3 control panel. If a window for entering the Administrator code opens, enter the six-symbol administrator code.
7. In the "**Modules**" list, select "**iO-LORA expander**".
8. In the "**Serial No.**" field, enter the serial number of the module iO-LORA.



9. In the "**Zones**" tab, make settings for the expander's input.



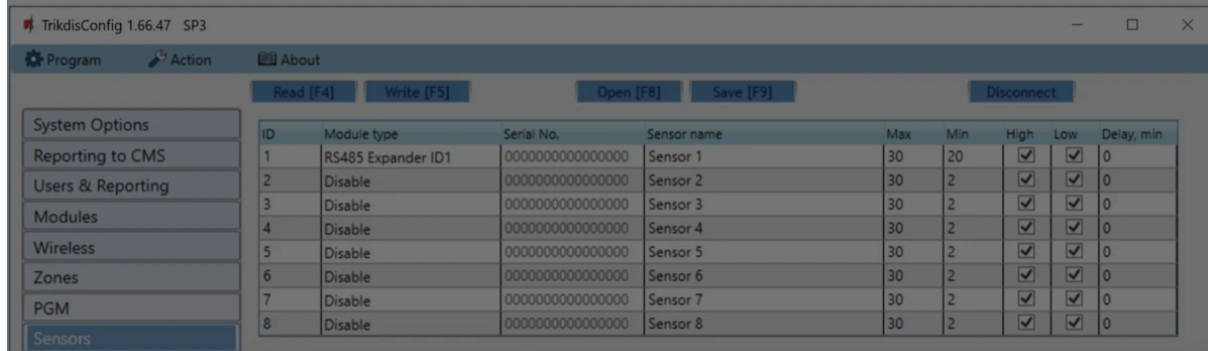
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11. Temperature sensors will be included in the **"Sensors"** list if a temperature sensor is connected to the iO-LORA expander.



12. Once configuration is complete, click the **Write [F5]** button.

13. Wait for the updates to finish.

14. Click the **"Disconnect"** button and disconnect the USB cable.


## 4. Safety precautions

The iO-LORA wireless expander should only be installed and maintained by qualified personnel.

Please read this manual carefully prior to installation in order to avoid mistakes that can lead to malfunction or even damage to the equipment.

Always disconnect the power supply before making any electrical connections.

Any changes, modifications or repairs not authorized by the manufacturer shall render the warranty void.

 Please adhere to your local waste sorting regulations and do not dispose of this equipment or its components with other household waste.

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