TRIKDIS

Wireless I/O expander iO-WL & iO-MOD
Installation manual

Content

Safety Requirements

The security alarm system should be installed and maintained by qualified personnel.

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

Disconnect power before making any electrical connections.

Changes, modifications or repairs not authorized by the manufacturer shall void your rights under the warranty.

Please act according to your local rules and do not dispose of your unusable alarm system or its components with other household waste.

1. Description

iO-WL wireless expander with iO-MOD RF module expands the number of inputs and outputs on G16 communicator using two – way wireless RF communication. This expander allows connecting and controlling remotely digital temperature sensors, heating, AC, gates or other equipment in the upgraded system.

Compatible Trikdis devices:
- Communicator G16
- Communicator G16T
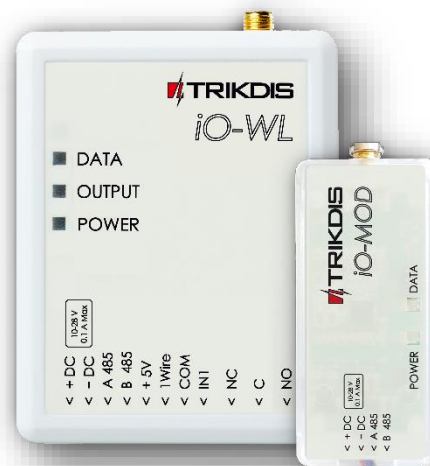- Communicator/controller CG17

Features

Connection

- Connection to communicator via:
  - ➢ Wireless connection via iO-MOD, or
  - ➢ RS-485

Communications

- Monitoring and Control:
  - ➢ Protegus Mobile/Web application, allowing user to remotely monitor and control alarm system
- Wireless operating range in the area of direct visibility up to 300 m
- Possible to connect 8 expanders to one communicator.
- The Signal Strength Indicator (SSI) allows installers, during installation, to view the radio transmission signal strength on wireless devices in real time.

1.1. Technical Parameters

Inputs and outputs
- 1 Wire bus for temperature sensors
- 1 selectable type input, type: NC or NO
- 1 relay output

Parameter	Description
Wireless I/O expander iO-WL:	
Transmission frequency	868 MHz
Modulation type	GFSK
Power supply	10-28VDC
Current consumption	50 mA (on standby) Up to 150 mA (while sending data)
Message encryption	Yes
Range in open space	Up to 300 m
Inputs	1, selectable type NC/NO
Relay output	Commutating up to 250 VAC, 4A max
Temperature sensors	1, DS18B20 or DS18S20
Operating environment	Temperature from -10 °C to 50 °C, relative humidity – up to 80% at +20 °C
Communicator dimensions	65 x 77 x 25 mm
iO-MOD RF module:	
Transmission frequency	868 MHz
Power supply	10-28VDC
Current consumption	50 mA (on standby) Up to 150 mA (while sending data)
Range in open space	Up to 300 m
Operating environment	Temperature from -10 °C to 50 °C, relative humidity – up to 80% at +20 °C
Communicator dimensions (with antenna)	12 x 3 mm

1.2. Light indication of operation

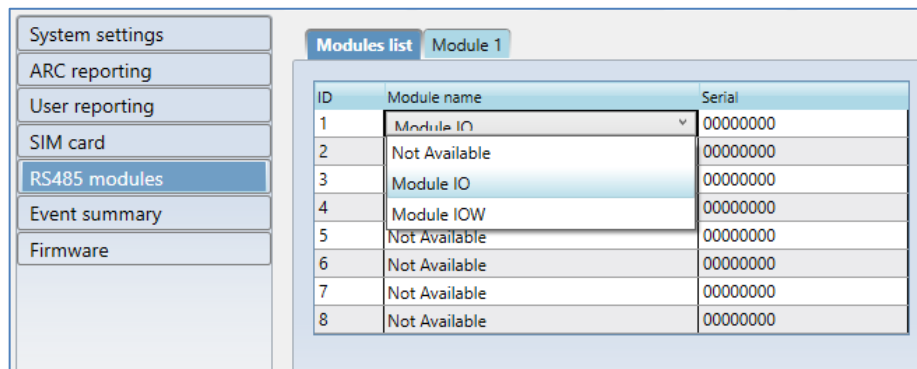| Indicator	Light Status	Description
Wireless I/O expander iO-WL:		
Power	Green solid	Power supply is on with sufficient voltage
	Yellow blinking	Operating is normal
Output	Green solid	Output relay reacted
Data	Green solid	Communication with communicator
	Yellow blinking	Indicates wireless connection strength (1 – 10 flashes)
iO-MOD RF module:		
Power	Green solid	Power supply is on with sufficient voltage
	Yellow blinking	Operating is normal
Data	Green blinking	Communication with communicator

2. Add iO-WL to communicator using TrikdisConfig

Note: To find more information on how to configure communicator with TrikdisConfig, see the communicator's installation manual.

1. *Power supply must be disconnected！*
2. Connect communicator to TrikdisConfig software using USB or remotely.
3. Go to **RS485 modules** windows.
4. Select module (module iO-WL) from modules list,
   a. Enter the serial six digit number (this number is mandatory for communication, it can be found on the device casing or packing box).
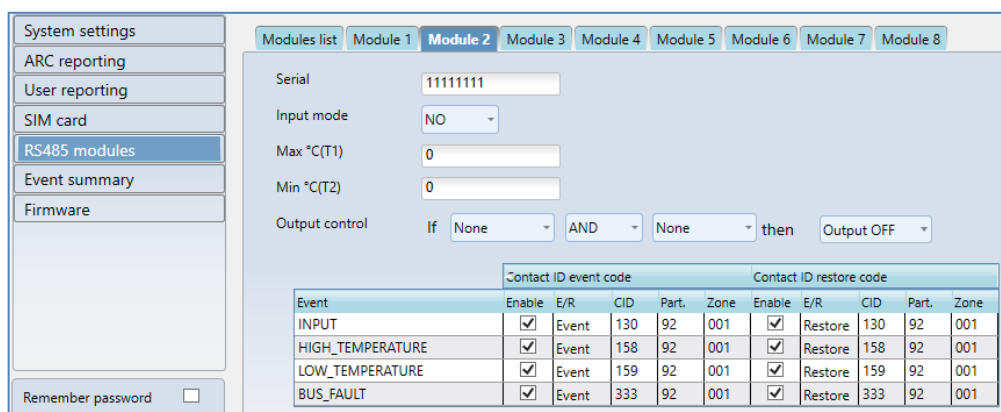
Note: if more than one module are used in the system, select them from the list and set their parameters.

5. New tab (Module x) for each module will appear.

2.1. Configure iO-WL module

In the tab Module x, configure parameters of the iO-WL module. Here, set input mode, temperature range for digital temperature sensor and output control settings.

- **Serial** – mandatory serial six-digit number (set previous step).
- **Input mode** – choose an input operation type (NC or NO) from the list.
- **Output control** – set output reaction when selected conditions occurs.
- **Event table** – if required enable/disable events, change type from Event to Restore, enter CID, Partition (Part.) and Zone codes.
- **If digital temperature sensor will be used, set parameters:**
  - **Max °C (T1)** – maximum allowable temperature value, above which an event will be reported. For such purpose event named **HIGH_TEMPERATURE** must be enabled.
  - **Min °C (T2)** – minimum allowable temperature value, below which the situation will be reported. For such purpose event named **LOW_TEMPERATURE** must be enabled.
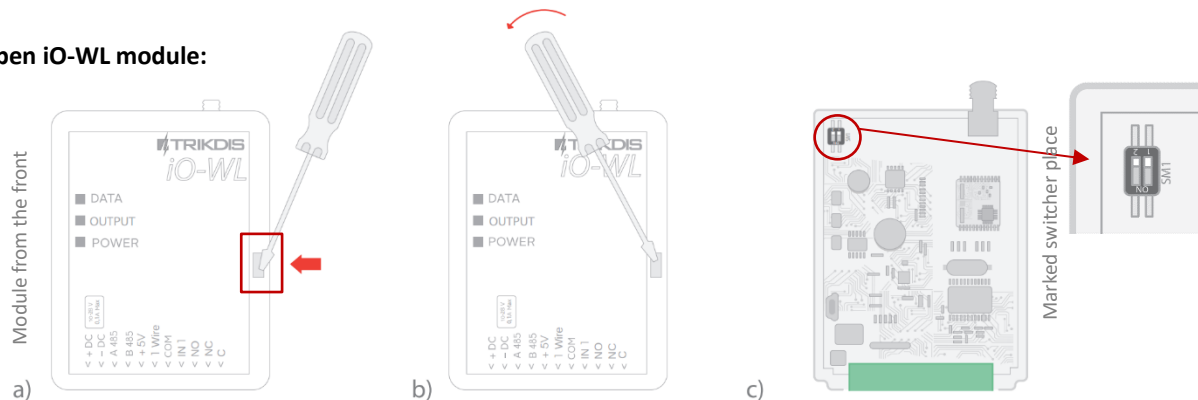
3. Set subsystem for iO-WL and iO-MOD

It is important to choose the same subsystems for both devices (iO-MOD and iO-WL), otherwise, connection would not be established between them. If nearby another RF system is installed, it is necessary that those systems would have different switcher positions, to ensure that communication would not be interfered.

To pair devices follow these steps:
1. Take of casings from devices (as shown in the pictures below).
2. Move both switches to the same position (places of switches is marked in the pictures c)).
3. Close devices and if modules is set not for first time - restart the device.
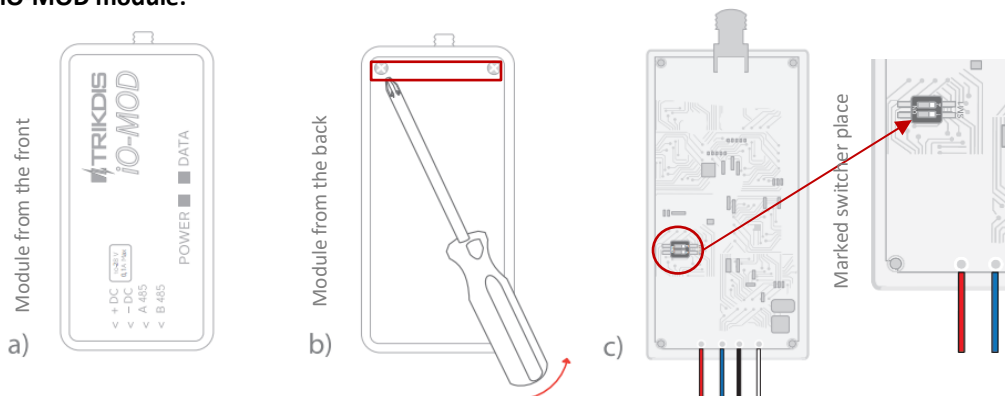
Open iO-WL module:

Use **flat screwdriver** to take of front cover. Put screwdriver's head to the marked slot.
Hold bottom casing part tightly.

Gently push screwdriver to the left side and front casing should easily take off.

Find a switcher (marked) and make sure, that iO-MOD and iO-WL switchers are set **in the same position.**
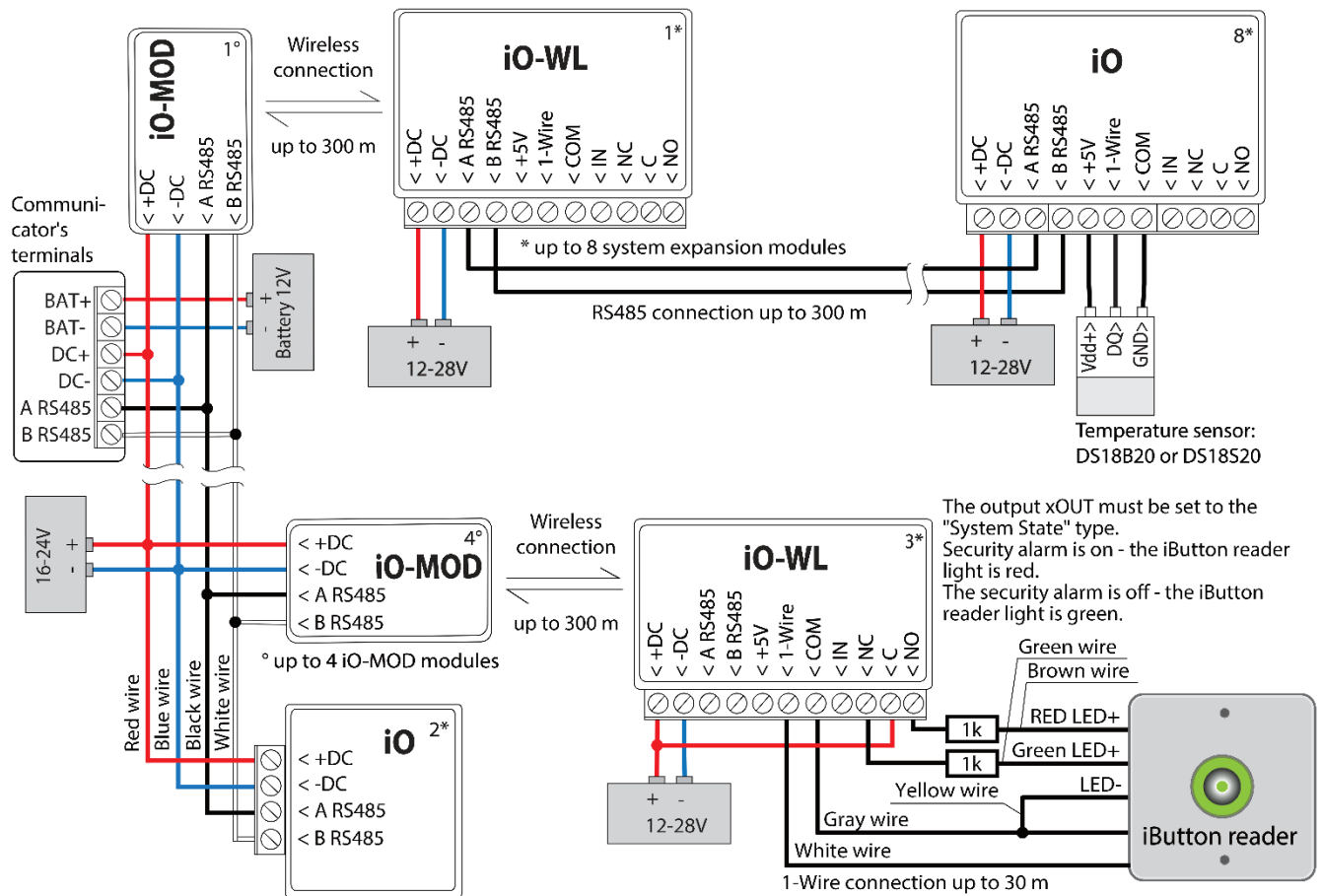
Open iO-MOD module:

Turn around module.

Use **cross screwdriver** to unscrew (counter clockwise) screws and then take of back cover.

DO NOT turn around module after taking back cover.
Find a switcher (marked) and make sure, that iO-MOD and iO-WL switchers are set **in the same position**.

4. Connect iO-WL module to communicator using diagrams bellow

Note:

- When connecting more than one sensor with longer than 0.5 m wires, it is recommended to use twisted pair cable (UTP, STP).
- Maximum four iO-MOD modules with their own subsystems can be connected to one communicator in one system.
- Maximum eight modules can be in one system.
- iButton reader compatible only with CG17 communicator.

Input connection types

NC, Normally Closed

NO, Normally Open