iO expander
Installation manual

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Contents

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.

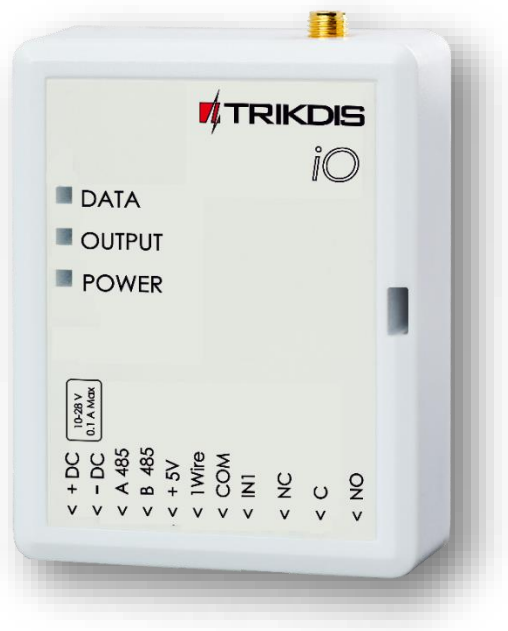
Please act according to your local rules and do not dispose of your unusable alarm system or its components with other household waste.

1. Description

iO input&output expander is designed to expand the number of inputs and outputs of compatible Trikdis devices. This expander allows connecting and controlling remotely heating, AC, gates or other equipment. You can also connect digital temperature sensors.

Compatible Trikdis devices:

- Communicator G16
- Communicator G16T
- Communicator/controller CG17



Features

Connection

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

Communications

- Monitoring and Control:
  - Protegus Mobile/Web application, allowing user to remotely monitor and control alarm system
- Possible to connect 8 expanders to one communicator.

Inputs and outputs

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

Configuration

- Quick and easy installation via G16 using TrikdisConfig
- 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

Parameter	Description
Power supply	10-28 VDC
Current consumption	50 mA
Message encryption	Yes
Inputs	1, selectable type NC/NO
Relay output	Commutating up to 250 VAC, 4 A max
RS485 bus length	CAT5 twisted pair, up to 1 km
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

1.2. Light indication of operation

Indicator	Light Status	Description
Power	Green solid	Power supply is on with sufficient voltage
	Yellow blinking	Operating is normal
Output	Green solid	Output relay reacted
Data	Green solidg	Communicating with communicator

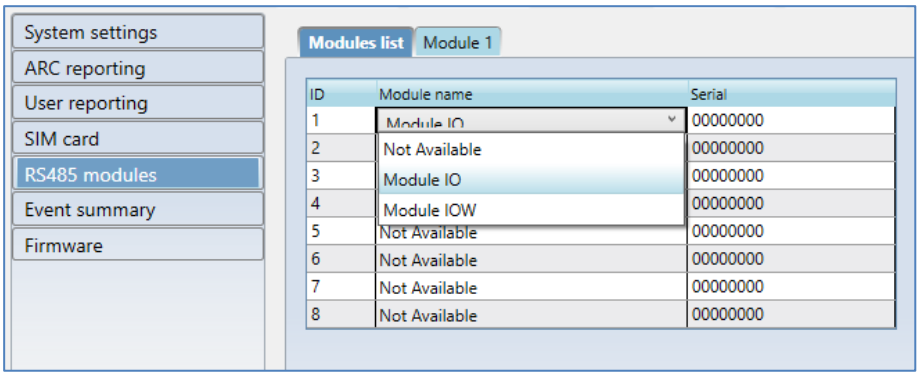
2. Add iO to communicator using TrikdisConfig

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

1. ***Power supply must be disconnected!***
2. Connect communicator to TrikdisConfig software using USB or remotely.
3. Go to the **RS485 modules** window.
4. Select module (module iO) 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).

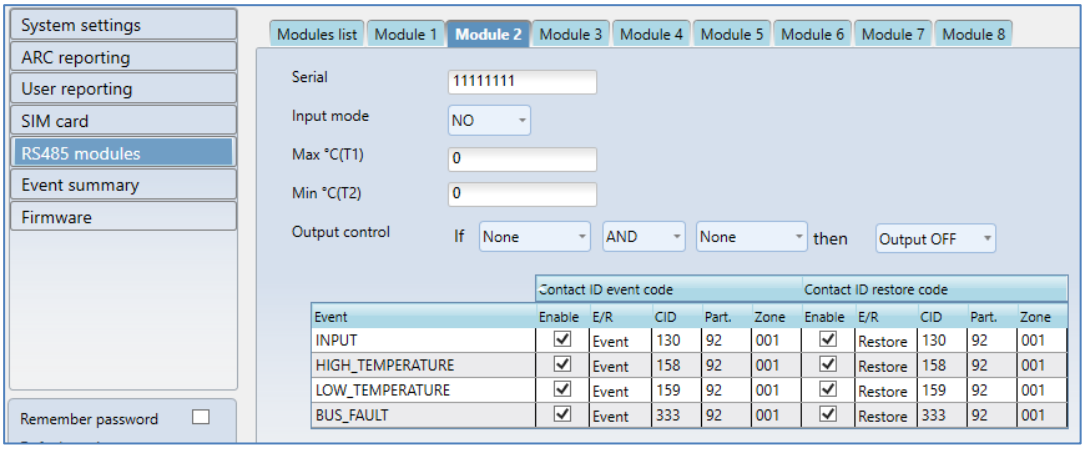
Note: if more than one module are used in the system, select them in the list and set their parameters.

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



2.1. Configure iO module

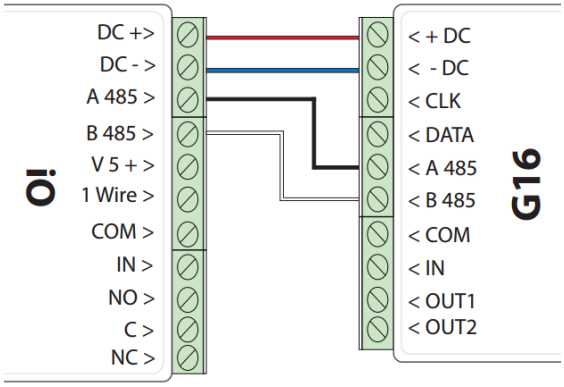
In the tab Module x, configure parameters of the iO module. Here, set input mode, temperature range for digital temperature sensor and output control settings.



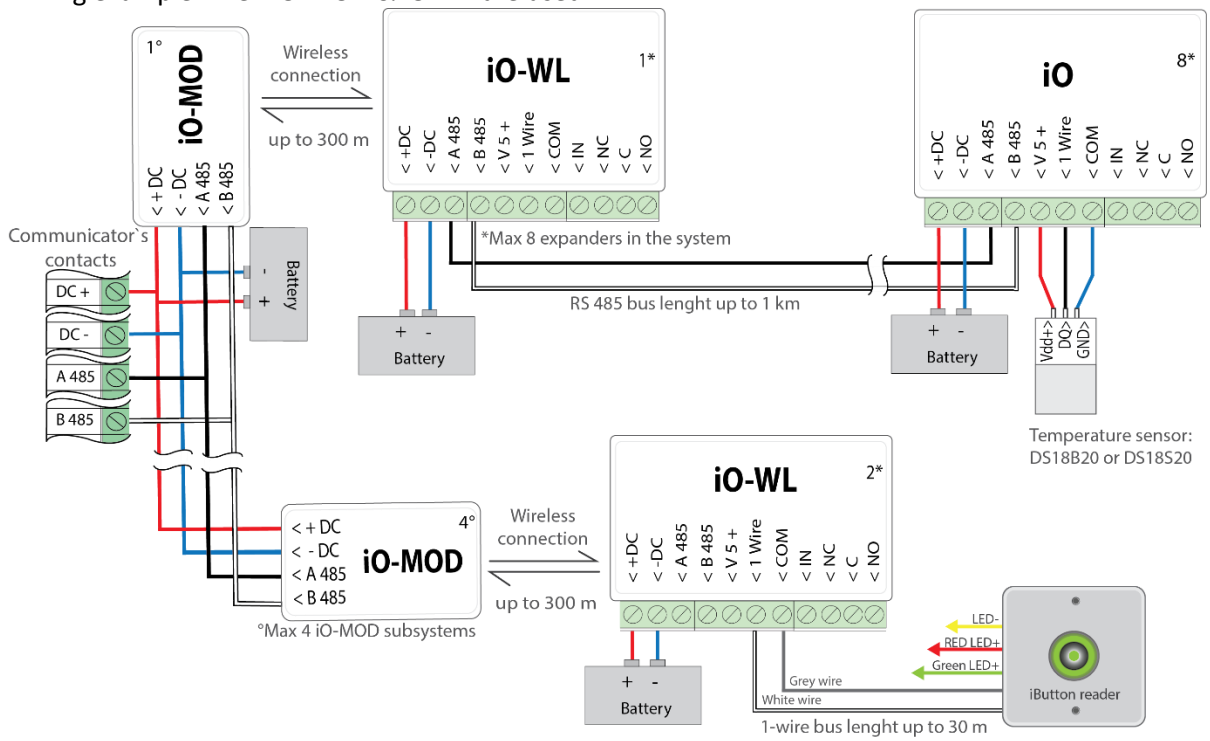
- **Serial** – mandatory serial six-digit number (set previous step).
- **Input mode** – choose an input operation type (NC or NO) from the list.
- **Output control** – set output reaction when selected conditions occur.
- **Event table** – if required enable/disable events, change type from Event to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

3. Wire iO module to communicator using diagrams bellow

- Connecting iO directly to G16 communicator:



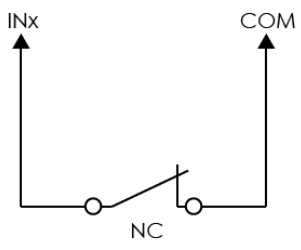
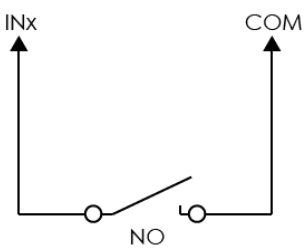
- Wiring example when iO-MOD & iO-WL are used:



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:

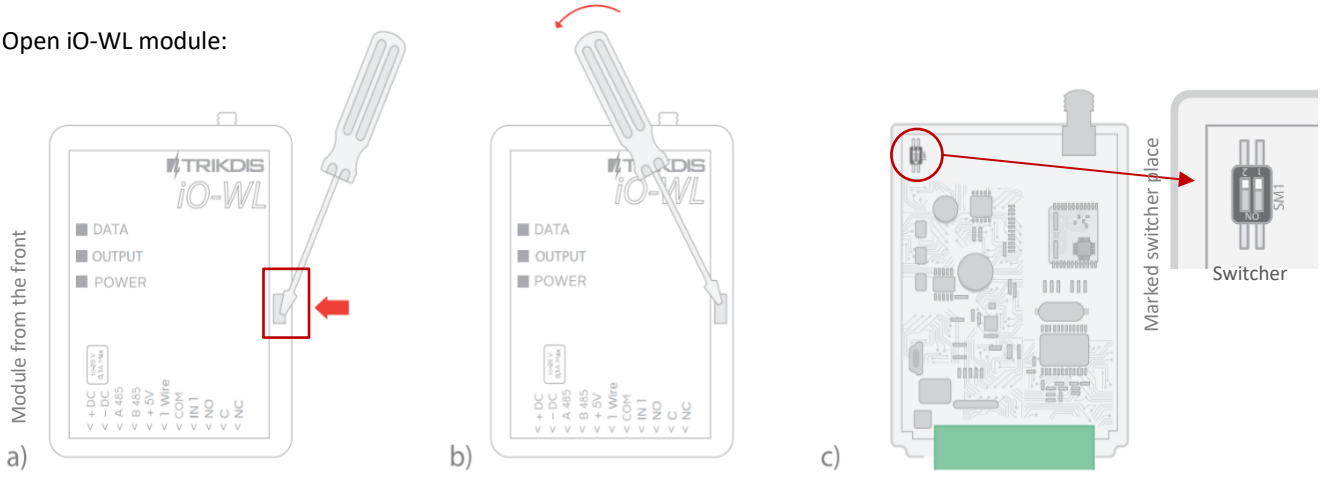
NC, Normally Closed	NO, Normally Open
	

3.1. Set subsystem if iO-WL or/and iO-mod are used

It is important to choose the same subsystem for both devices (iO-MOD and iO-WL), otherwise, connection would not be established between them. To pair devices follow these steps:

1. Take of devices casings (as shown in the pictures below).
2. Move both switches to the same position (places of switches is marked in the picture c)).
3. Close devices and if modules is set not for first time - restart the device.

Open iO-WL module:

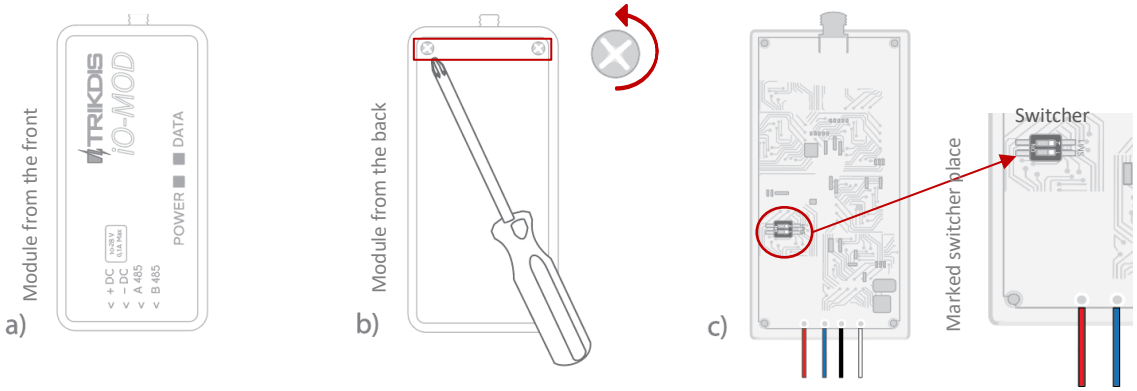


Use **flat screwdriver** to take of front cover. Put screwdriver's head to the marked slot.
Hold bottom casing part tightly!

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

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