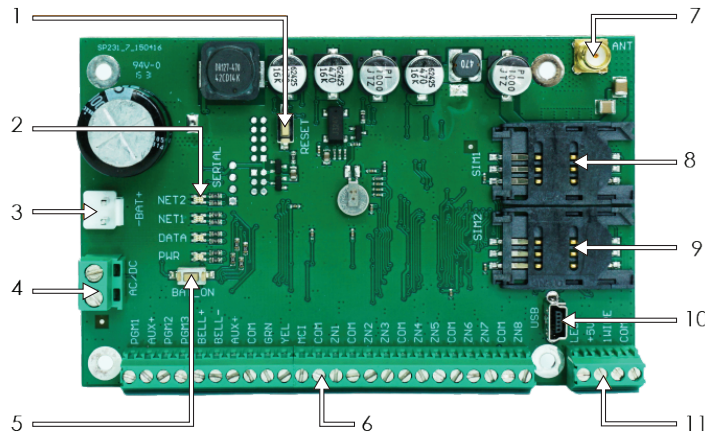## SP231 Quick Setup Guide

This quick setup guide will walkthrough the steps that are required to do in order to run a fully functional system based on its default settings. For full functionality, system installation and configuration refer to installation manual. The manual can be found at **www.trikdis.com**

1. Control panel structure

1. RESET button
2. Communication and operation light indication
3. Back-up supply terminal block
4. Main supply terminal block
5. BAT_ON button is designed for starting the control panel, when only DC voltage source is connected to the back-up supply terminal block
6. Terminal block for peripherals
7. GSM antenna terminal
8. SIM1 card holder
9. SIM2 card holder
10. USB port for configuration of the control panel operation parameters
11. 1-wire bus terminal block

2. Recommended installation procedure

System planning:
Draw the plan of premises and indicate the zones for installation of the mounting housing with a control panel, keyboard(s), indicators, equipment to be remotely controlled through the control panel or controlled automatically by the control panel.
Upon assessment of the premises, requirements set to their protection and properties of possible sensors, select the types of sensors, their number and places, where they should be fastened.

## 3. Control panel fastening in the mounting housing

The control panel circuit board shall be installed into the mounting housing equipped with the 40 VA reducing transformer with 500 mA fuse and place for a 12 V, 7Ah back-up supply battery.
Fasten the control panel into the selected plastic or metal mounting housing using plastic distance holders. Upon choosing the metal housing, ensure its grounding during installation. The used housing must comply with the requirements of Standard EN 60950 and EN 50131.

4. SP231 Circuit board dimensions
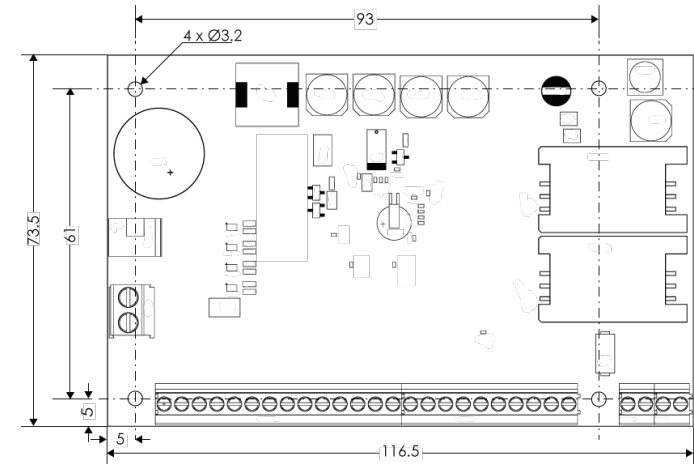
5. Equipment connection sequence
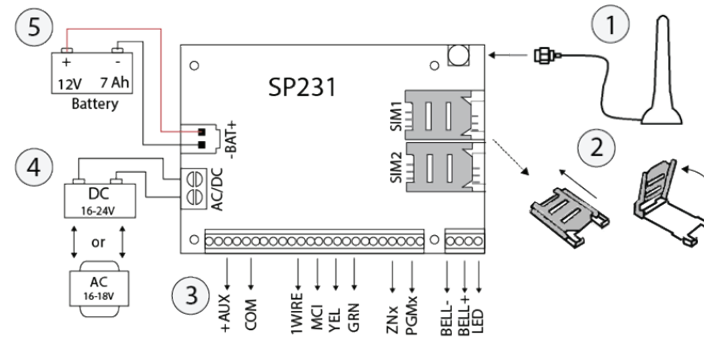
1. Connect the GSM antenna to the antenna terminal.
2. Insert the SIM card(s), which are already registered in the GSM network, into the SIM card holders. Ensure that PIN request function is disabled. Card holder SIM1 is the main card holder. The card inserted into SIM1 shall have a priority in operation, and SIM2 shall be operated only upon malfunction of SIM1.
3. Following the provided diagrams (7. Connection diagrams) and connection diagrams of every product intended for connection, connect the magnetic contacts of windows and doors, motion, fire and other sensors, indicators, keyboards, controlled devices. Wire the housing door tamper sensors and wall mounted tamper sensors to the control panel terminals.
4. Connect the main supply source wires to the control panel AC/DC terminals. Switch the main supply on. SP231 shall automatically recognise the correctly connected keyboards, expanders, interfaces, sensors to the 1-wire and YEL/GRN buses and shall register them in the system.
5. Install a back-up supply battery into the mounting housing. Connect its wires to the control panel back-up supply source terminals BAT+ / BAT–.

6. Alarm system operation testing

Upon completion of the alarm system installation, it shall be tested for correct operation.

Walk-test function
Operation of sensors and siren can be tested by carrying out a Walk-test function by using Trikdis Protegus SK130 or SK232 keyboards. The following shall be done:
   1. Press the button [OK].
   2. Enter installer (Installer) code (Default 000000).
   3. Press the button [TRB].
a. The buttons STAY and ARM shall start flashing and the alarm shall switch over to the testing mode.
b. Due to change of the zone statuses, the sirens and keyboard buzzer shall beep by informing about the zone operation.
c. If during testing the sensor fuse has been tampered or the protection mode is on, the testing mode shall terminate automatically.
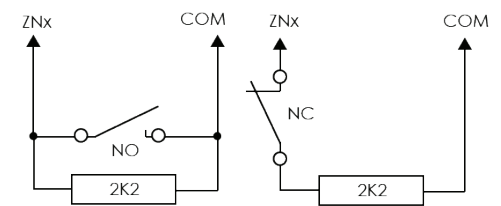To switch off the mode, repeat the procedure as switching it on.
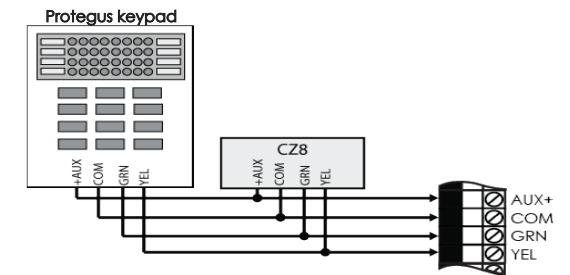
7. Connection diagrams

7.1. Connection of sensors

Default connection type: End of Line (EOL).
Default zone definitions:
ZN1 – Delay
ZN2 – Interior
ZN3 – Instant
ZN4 – Instant
ZN5 – Instant
ZN6 – Keyswitch
ZN7 – 24_hours
ZN8 – Fire

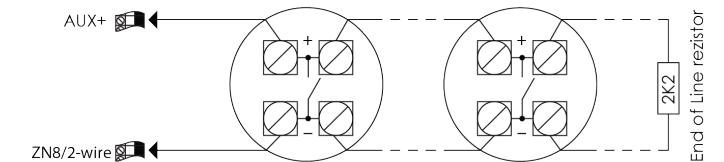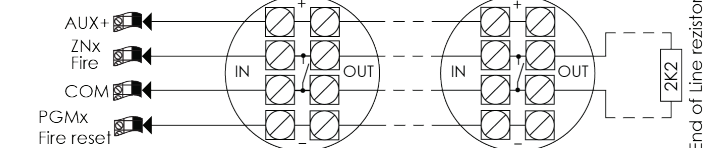### 7.2. Connection of keyboards, input expanders
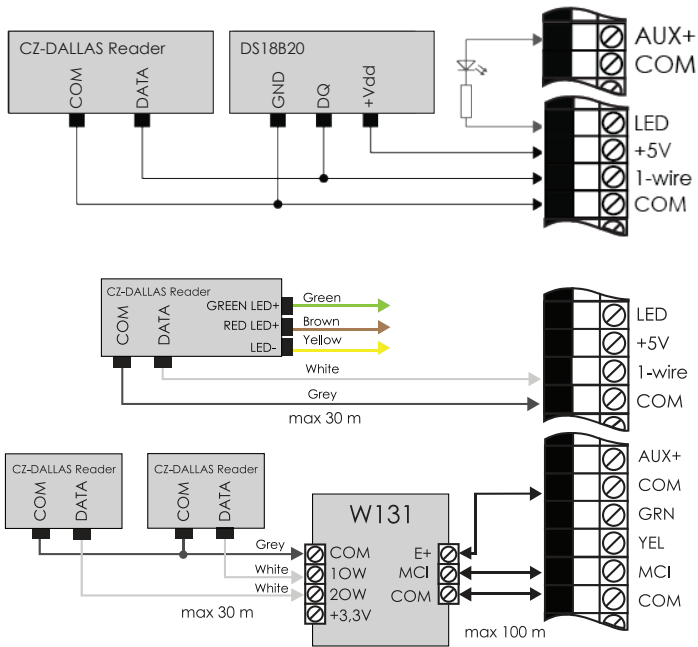

7.3 Connection of smoke detectors

2-wire

4-wire

//TRIKDIS   www.TRIKDIS.com   info@trikdis.lt
//TRIKDIS   www.TRIKDIS.com   info@trikdis.lt
//TRIKDIS   www.TRIKDIS.com   info@trikdis.lt

7.4. Connection of temperature sensors, iButton key readers

max 30 m

max 30 m   max 100 m

7.5. Connection of equipment terminals to PGM outputs

PGM default definitions:
1. Remote Control (Pulse, 3 sec)
2. Remote Control (Pulse, 3 sec)
3. Remote Control (Level)
4. Bell
5. System State
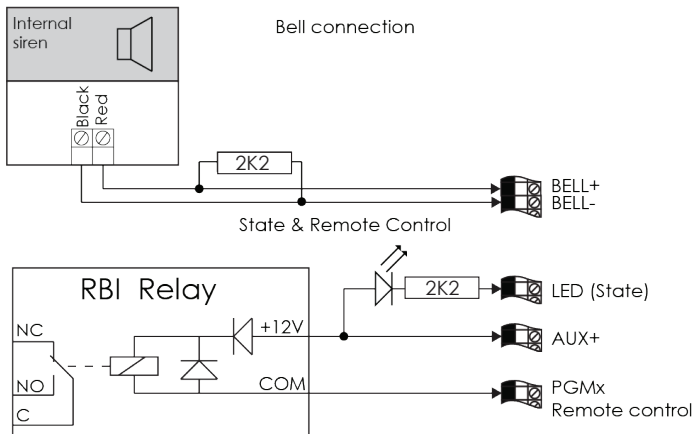
8 Configuring remote access

Connecting to Trikdis remote server allows to use Protegus mobile/web application to monitor and control alarm system, as well as to use remote control and configuration via TrikdisConfig software. In order to enable connection to the remote server follow the steps below:

1. Ensure that SIM card inserted into the control panel has enabled GPRS communication service. For information how to enable this service contact your GSM service provider.

2. Add phone number to the user list, because only from listed numbers it is available to use all SMS commands. SMS commands must be sent to the inserted SIM card's number.
Command to add new phone number:

CFG [SMS password]_01 _[USER Code] # [User Phone No.] #

CFG – beginning of SMS command, [SMS password] – six digit SMS password, 01 – command code, [User code] – user code, [User phone No.] – user phone number, # - symbol to end value, "_"– marks the space symbol in SMS message.

An example adding a phone number (+37061111111) to Master user, while using default SMS password (123456) and user code (1234) values:

"CFG123456 01 1234#+37061111111#"

3. Setup an inserted SIM1 card GSM network parameters. Command to set network parameters:

PSW XXXXXX _ 12 _ APN# LOGIN# PSW###

PSW XXXXXX – beginning of SMS command and its password, 12 – changing network parameters command, APN – gateway name (up to 50 symbols), LOGIN – user name (up to 29 symbols), PSW – user password (up to 29 symbols), # - symbol to end value.

Example: "PSW123456 12 gprs.net#web#web###"

If network does not have user name nor password, fields must be left empty.

Example: "PSW123456 12 gprs.net#####"

4. Connection to the remote server must be enabled in a control panel. Command to enable connection:

PSW XXXXXX _ 94 _ 1

PSW XXXXXX – beginning of SMS command and its password, 94 – connection to the remote server command, 1 – connection enabling value (0 – to disable).

Example: "PSW123456 94 1"

5. It is required to know IMEI address of control panel. IMEI address can be found on product package or it can be requested by SMS command:

PSWXXXXX _ 97 _ 5

PSW XXXXXX – beginning of SMS command and its password, 97 _ 5 – request about GSM field strength, modem IMEI number and control panel firmware version.

Example: „PSW123465 97 5"

Control panel SP231

Quick setup guide

Control panel kits

1.1 Control panel SP231

Control panel SP231 circuit board	1 pc.
Battery connection wire	1 pc.
Resistors 2.2 kΩ	16 pcs.
Plastic holder (fasteners)	4 pcs.
Stick-on GSM antenna ANT04 with 2.5 m length cable	1 pc.
Quick setup guide	1 pc.

1.2 Control panel SP231 KIT

Control panel SP231 circuit board embedded in the metal housing	1 pc.
Metal housing K01 with 40 VA transformer	1 pcs.
Resistors 2.2 kΩ	16 pcs.
Stick-on GSM antenna ANT04 with 2.5 m length cable	1 pc.
Battery connection wire	1 pc.
Tamper sensor	1 pc.
Terminal block with 0,5 A fuse	1 pc.

1.3 Control panel SP231 KITi

Control panel SP231 circuit board embedded in the metal housing	1 pc.
Metal housing K02 with Mean Well impulse supply source	1 pc.
Resistors 2.2 kΩ	16 pcs.
Stick-on GSM antenna ANT04 with 2.5 m length cable	1 pc.
Battery connection wire	1 pc.
Tamper sensor	1 pc.
Terminal block with 3,15 A fuse	1 pc.

Note: USB cable (Mini-B type), which is dedicated for control panel programming on-site is not included.