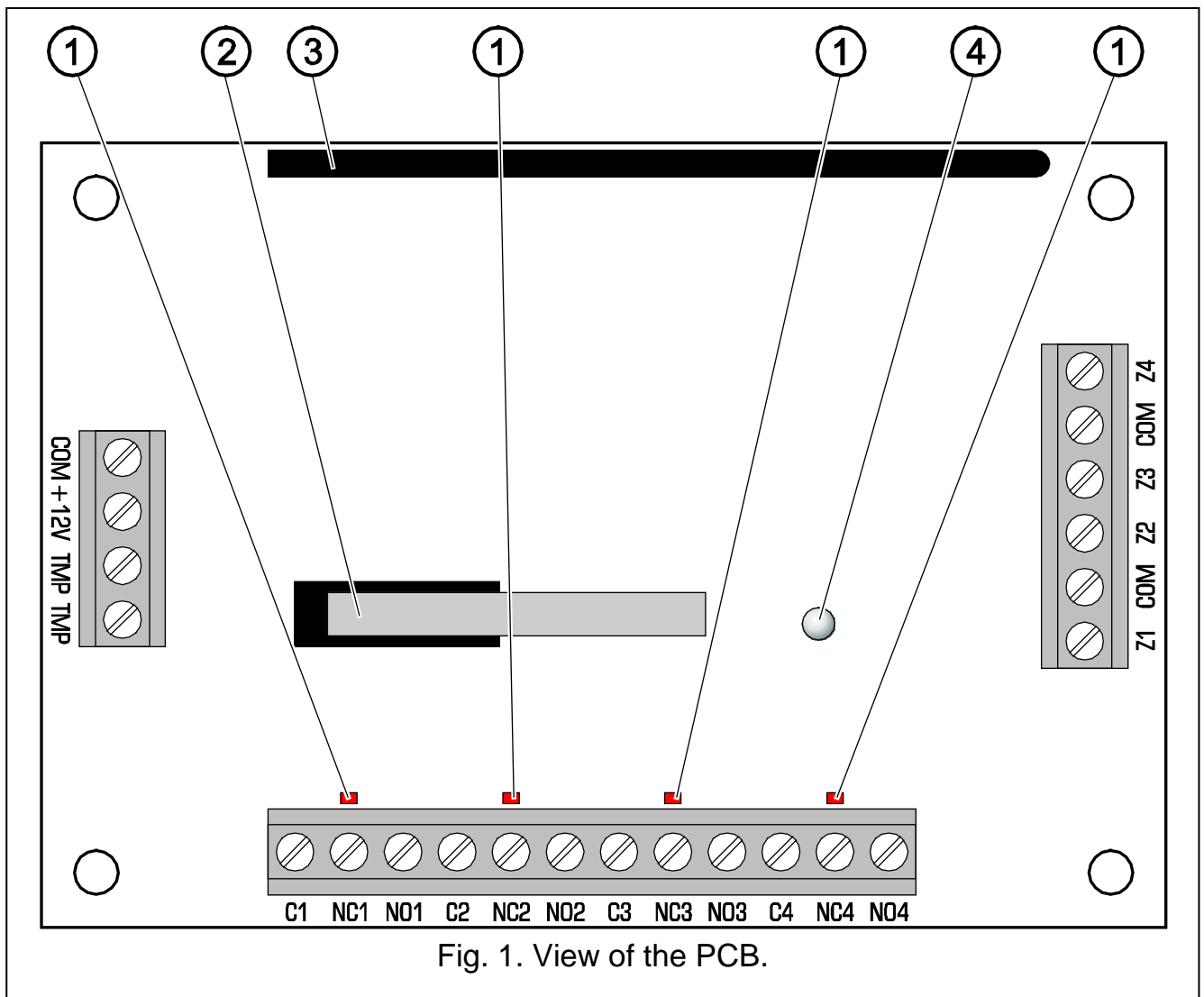


The ACX-200 expander of hardwired zones and outputs is designed for operation as part of the ABAX two-way wireless system. It is supported by the ACU-100 controller with firmware version 1.05 or later and by the INTEGRA 128-WRL control panel. 4 zones and 4 outputs enable hardwired equipment (detectors, sirens, etc.) to be connected to the wireless system. The expander zones can be configured similarly to the hardwired ones. The expander outputs are relay type outputs. The ACX-200 expander occupies 4 positions on the list of devices which can be operated by the ACU-100 controller and by the INTEGRA 128-WRL control panel. It is supplied with direct voltage 12 V ( $\pm 15\%$ ).

## 1. Description of the PCB



Explanations for Fig. 1:

1 – **LED indicators**. Indicate the status of outputs. ON when the output is active.

- 2 – **tamper contact**. Responds to opening of the housing.
- 3 – **antenna**.
- 4 – two-color **LED indicator**. The green color indicates that the expander is running. Short red flashes indicate communication with the ACU-100 controller or the INTEGRA 128-WRL control panel.

Description of terminals:

- COM** – common ground.
- +12V** – supply input.
- TMP** – tamper contact terminals.
- C1...C4** – common terminal of the relay output (C1 – output 1, C2 – output 2, etc.).
- NC1...NC4** – terminal normally closed to the common terminal of the relay output (NC1 – output 1, NC2 – output 2, etc.). The terminal opens when active.
- NO1...NO4** – terminal normally isolated from the common terminal of the relay output (NO1 – output 1, NO2 – output 2, etc.). When active, the terminal is closed to the common terminal.
- Z1...Z4** – zone.

## 2. Installation

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**All electrical wiring connections may only be made with the power supply disconnected.**

**Prior to permanently mounting the expander, check the level of signal received from the expander by the ACU-100 controller or by the INTEGRA 128-WRL control panel and, if necessary, change the place of installation so as to select the optimum location with respect to communication.**

The ACX-200 expander of hardwired zones/outputs should be installed indoors, in spaces with normal air humidity. The electronics board is mounted inside the **OPU-1 A** plastic housing.

1. Open the housing.
2. Make cable inlets in the rear panel of the housing for power cables and cables connecting the expander with hardwired devices.
3. Prepare a temporary source of 12V DC power supply and add the ACX-200 expander to the wireless system (see the ACU-100 controller manual, INTEGRA 128-WRL control panel installer manual or VERSA control panel installer manual). Placed on the electronics board is a sticker with the 7-digit serial number which is to be entered when registering the expander in the system.
4. Select the place where the ACX-200 expander is to be installed and attach it there temporarily. It is recommended that the expander be installed at a high position. Thus you can obtain a better range of radio communication, while avoiding the risk of the expander being accidentally covered by personnel moving around the premises.

5. Check the level of signal received from the expander. Change the place of installation, if necessary.
6. Having obtained the optimum signal level, install the expander permanently.
7. Connect the tamper contact to one of the expander zones. Program this zone as the tamper zone. You can also connect the tamper contact in series with a 2EOL configured device (detector), connected to one of the expander zones.
8. Connect the wire devices to the expander zones and outputs.


**Notes:**

- *The cables (for power supply, connection between the expander and hardwired devices, etc.) should not be run in the immediate vicinity of the antenna, since it may cause radio interference.*
  - *In EOL configuration, the 2.2 k $\Omega$  resistor should be used, and in 2EOL configuration – two 1.1 k $\Omega$  resistors.*
9. Close the housing.
  10. Configure the expander, as required (e.g. specify what type of detectors and in what configuration will be connected to the zones and define sensitivity of the zones). For information related to configuration of the ACX-200 expander, please refer to the ACU-100 controller manual and the INTEGRA or VERSA control panel programming manuals.

**Note:** *The EN50131-3 standard requires that zones must react to signals lasting more than 400 ms. It means in case of the ACX-200 expander that no values exceeding 300 ms should be entered when programming the sensitivity (the higher the value, the lower the sensitivity).*

### 3. Specifications

Working frequency band.....	868.0 MHz ÷ 868.6 MHz
Radio communication range.....	up to 150 m (in open area)
Supply voltage.....	12 V DC $\pm$ 15%
Current consumption, standby.....	130 mA
Current consumption, maximum.....	135 mA
Relay outputs rating.....	1 A / 24 V (resistive)
Security grade according to EN50131-3.....	Grade 2
Environmental class according to EN50130-5.....	II
Working temperature range.....	-10°C...+55°C
Maximum humidity.....	93 $\pm$ 3%
Complied with standards..	EN 50130-4, EN 50130-5, EN 50131-1, EN 50131-3, EN 50131-5-3
Housing dimensions, OPU-1 A.....	126x158x32 mm
Weight.....	223 g
Name of certification body.....	Telefication

<b>DECLARATION OF CONFORMITY</b>		<b>CE1471</b>
<b>Product:</b> ACX-200 – Hardwired zone/output expander of ABAX system.	<b>Manufacturer:</b> SATEL sp. z o.o. ul. Schuberta 79 80-172 Gdańsk, POLAND tel. (+48 58) 320-94-00 fax. (+48 58) 320-94-01	
<b>Product description:</b> Hardwired zone/output expander, designed to work together with the ABAX wireless system components within the 868.0MHz – 868.6MHz frequency band, supplied from 12V DC power source. Device is intended for installation in intruder alarm systems.		
<b>The product is in conformity with the following EU Directives:</b> R&TTE 1999/5/EC		
<b>The product meets the requirements of harmonized standards:</b> R&TTE: ETSI EN 300 220-1: v.1.3.1; ETSI EN 300 220-3: v.1.1.1 EMC: ETSI EN 301 489-1 V1.6.1; ETSI EN 301 489-3 V1.4.1 Safety: EN60950		
<b>Notified body participating in the conformity assessment:</b> Identification No.: 1471		
Gdańsk, Poland 2007-01-11	Head of Test Laboratory:  Michał Konarski	
The latest EC declaration of conformity and product approval certificates are available for downloading on website <a href="http://www.satel.pl">www.satel.pl</a>		

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