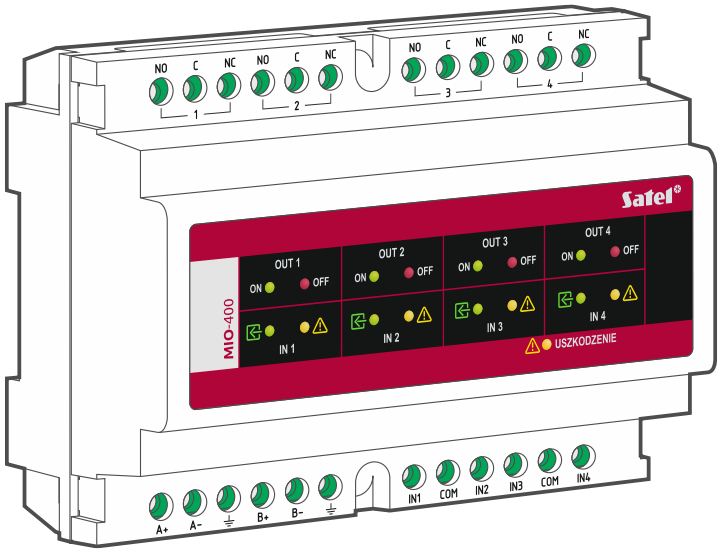
ACSP

Conventional input / output module

MIO-400

EN

Firmware version 1.00



CE CNBOP-PIB

mio-400_en 11/26

Satel®

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IMPORTANT

The device should be installed 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.

The following symbols may be used in this manual:

- note,
- caution.

The MIO-400 module is used for:

- supervision of fire protection equipment or fire protection systems and other devices,
- control of fire protection equipment or fire protection systems and other devices.

It is designed to operate in the detection line of the ACSP-402 addressable fire alarm control panel.

1. Features

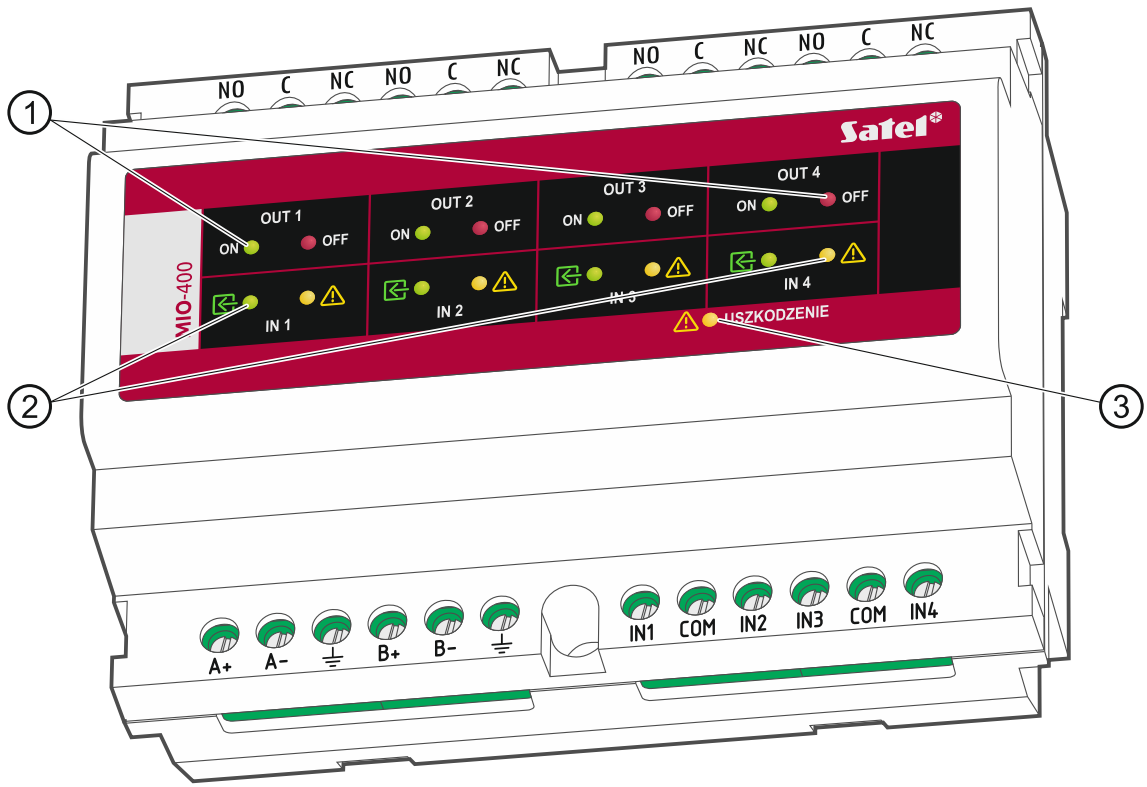
- 4 inputs:
  - selection of input polarity: NO or NC,
  - programmable input type,
  - detection of short circuit or open circuit.
- 4 relay outputs:
  - programmable output type,
  - capability to control electrical devices powered with 230 VAC,
  - resistive, inductive or capacitive load switching.
- Double-sided short-circuit isolator.
- Power from the detection line.
- LEDs to indicate:
  - input state,
  - output state,
  - faulty input,
  - faulty module.
- Mountable on 35 mm DIN rail.

2. Description

Terminals

NO - relay output normally open contact.
C - relay output common contact.
NC - relay output normally closed contact.
A+, A- - detection line input.
⏚ - terminal for connecting the cable shield.
B+, B- - detection line output.
IN1...IN4 - inputs.
COM - common ground.

1



LEDs

(1) LED indicators of the relay outputs state:

ON [green] – ON when relay is active,

OFF [red] – ON when relay is inactive,

(2) LED indicators of the inputs state:

[green] – ON when input is active,

[yellow] – ON when input is faulty.

(3) LED [yellow] – ON when module, relay output or input is faulty.

The LEDs are disabled to reduce the module's current consumption. For information on how to enable them for diagnostics purposes, please refer to the fire alarm control panel manual.

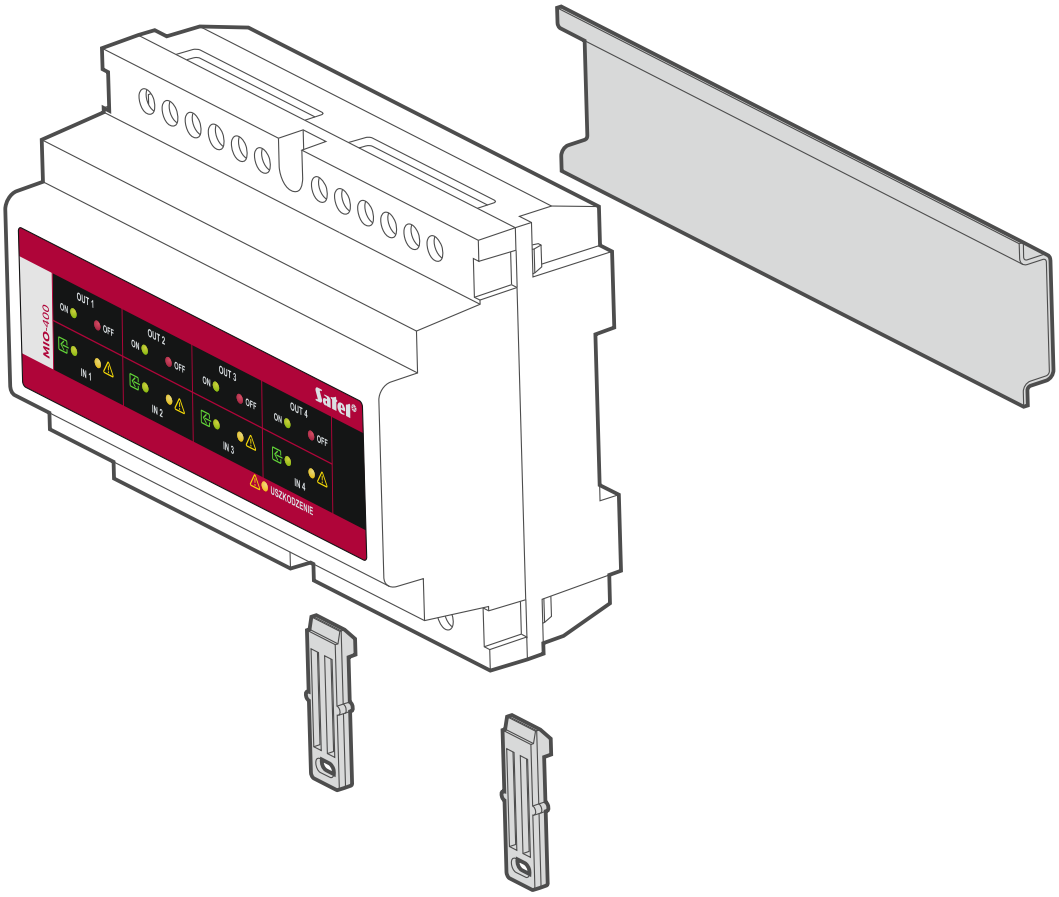
3. Installation

Disconnect power before making any electrical connections.

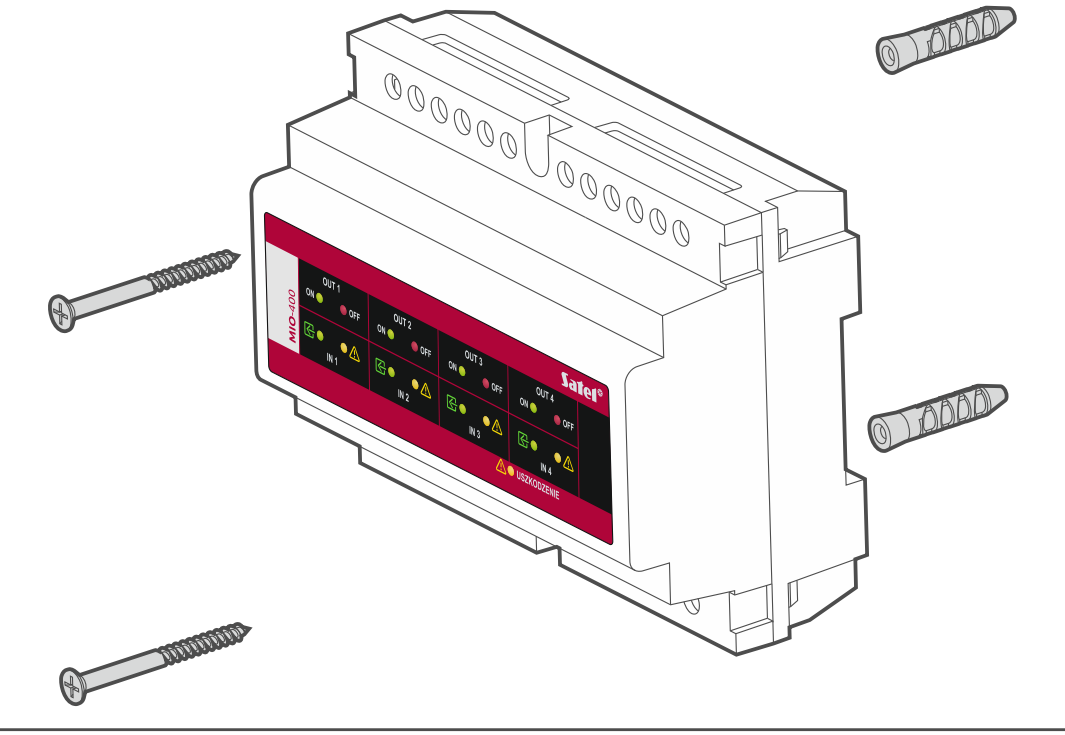
The module is designed for indoor installation, in spaces with normal air humidity.

1. Mount the module on DIN rail (see: Fig. 2) or attach it to the wall using screws (see: Fig. 3). If the module is to be screwed to the wall, select appropriate wall plugs (different for concrete or brick wall, different for plaster wall, etc.).

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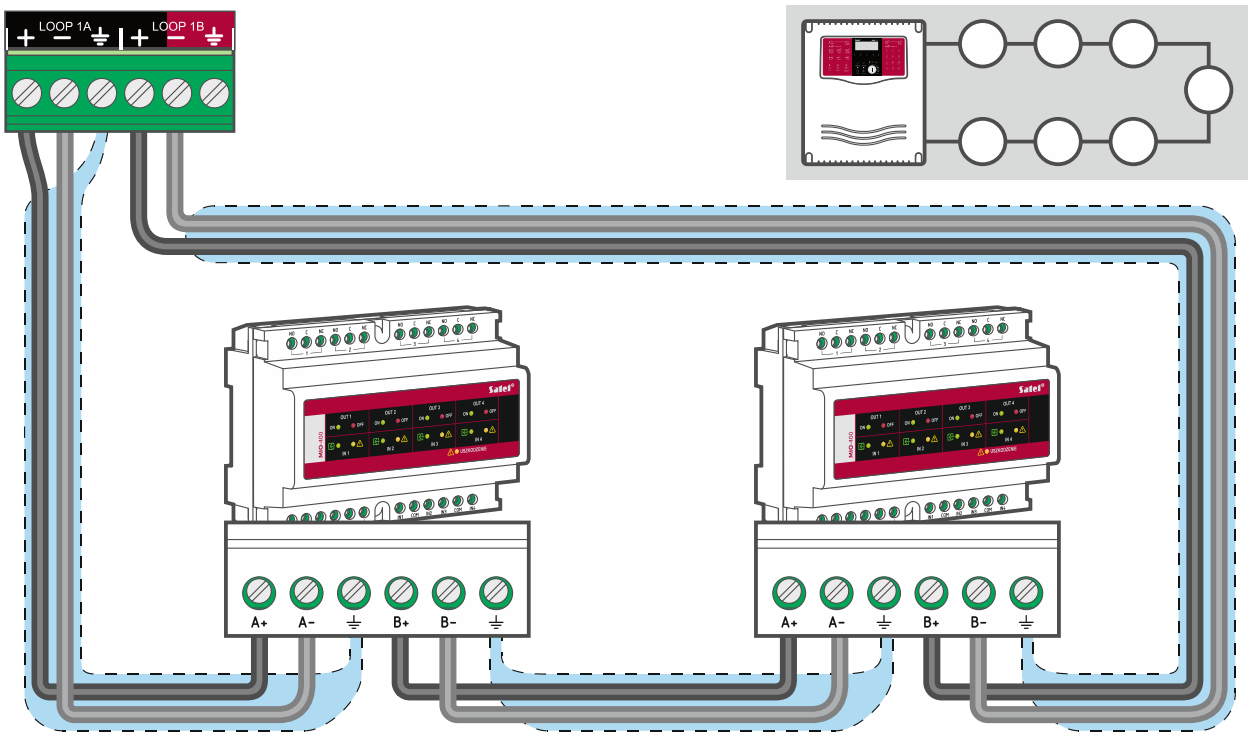
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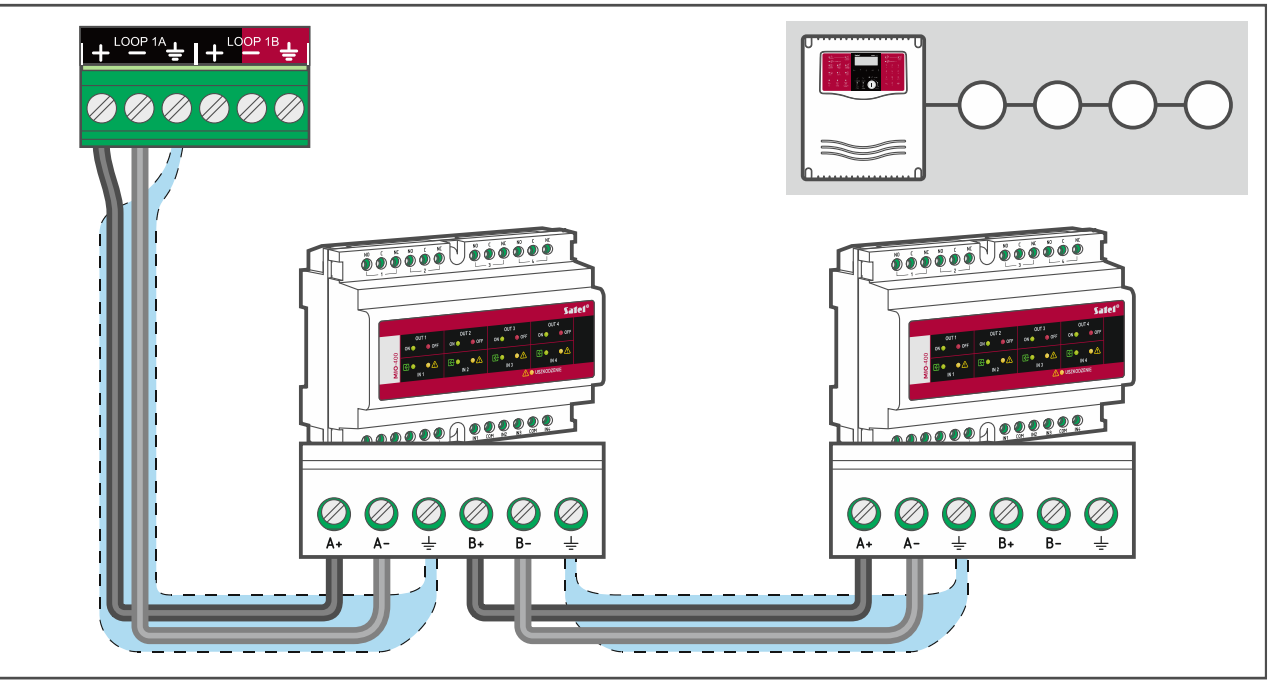
2. Connect the detection line wires to the module (Fig. 4 – loop; Fig. 5 – radial circuit). To terminals A+ and A-, connect the wires from the control panel / previous device. Connect the wires to terminals B+ and B- to connect the module to the next device / control panel. For radial circuits, if the module is the last device in the circuit, do not connect the wires to terminals B+ and B- (Fig. 5). Connect the cable shields to the E / ⏚ terminals.

3. Connect the devices to inputs. Fig. 6 shows how to connect the devices on the example of the IN1 input. The circuit should be terminated with a 10 kΩ resistor. Connect a 1 kΩ resistor in series with the device contact. Each of the inputs can be disabled in the control panel program if unused (there is no need to screw the resistor then).
4. Connect the devices to relay outputs.

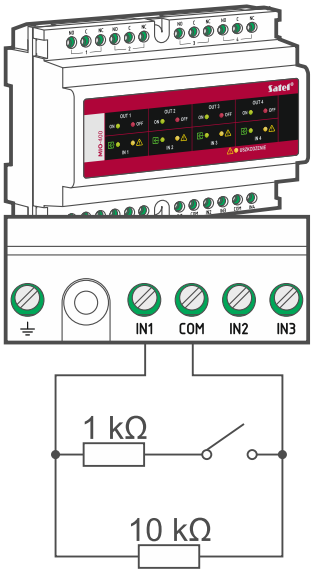
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4. Maintenance

The fire alarm system elements require regular maintenance. The periodic checks of the MIO-400 module should be carried out at least every 6 months. In spaces where working conditions are difficult (e.g. dust, aggressive environment that may cause corrosion, etc.), the periodic checks should be carried out more often.

As part of maintenance, start a test in the control panel and make sure the module inputs and outputs are working. Please go to the ACSP-402 control panel manuals to find out how to start the test. Start of the test and test activation of devices will be registered in the control panel event log. During the test, make sure the device is in its right place (e.g. it has not been swapped with another device).

5. Specifications

Supply voltage ..... 18...26 VDC
Quiescent current consumption ..... 0.60 mA
Alarm current consumption ..... 0.75 mA
Relay outputs (resistive load) ..... 16 A / 230 VAC
Operating temperature range ..... -10°C...+55°C
Maximum humidity ..... 93±3%
Dimensions ..... 122 x 93 x 58 mm
Weight ..... 225 g

The MIO-400 conventional input / output module conforms to the essential requirements of the EU Regulations and Directives:

CPR 305/2011 Regulation of the European Parliament and of the Council of 9 March 2011 laying down harmonized conditions for the marketing of construction products and repealing the Council Directive 89/106/EEC on construction products;

EMC 2014/30/UE Electromagnetic Compatibility Directive;

LVD 2014/35/EU Low Voltage Directive.

The CNBOP-PIB Certification Body in Józefów issued the Certificate of Constancy of Performance **1438-CPR-0853** for the construction product MIO-400 conventional input/output module, confirming its compliance with the requirements of EN 54-18:2005 + AC:2007 Input/output devices and EN 54-17:2005 + AC:2007 Short-circuit isolators.

The Certificate and the Declaration of Constancy of Performance can be downloaded from the **www.satel.pl** website.

CE

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1438

1438-CPR-0853

DOP/CPR/0853

EN 54-18:2005 + AC:2007
EN 54-17:2005 + AC:2007

Fire safety in construction works. Module used for:

- **supervision of fire protection equipment or fire protection systems and other devices,**
- **control of fire protection equipment or fire protection systems and other devices.**

Declaration of Performance DOP/CPR/0853

Use – fire safety

Technical specifications – see this manual.