ACSP

Addressable multisensor smoke and heat detector

# DMP-400

Firmware version 1.00

Addressable optical smoke detector

# DRP-400

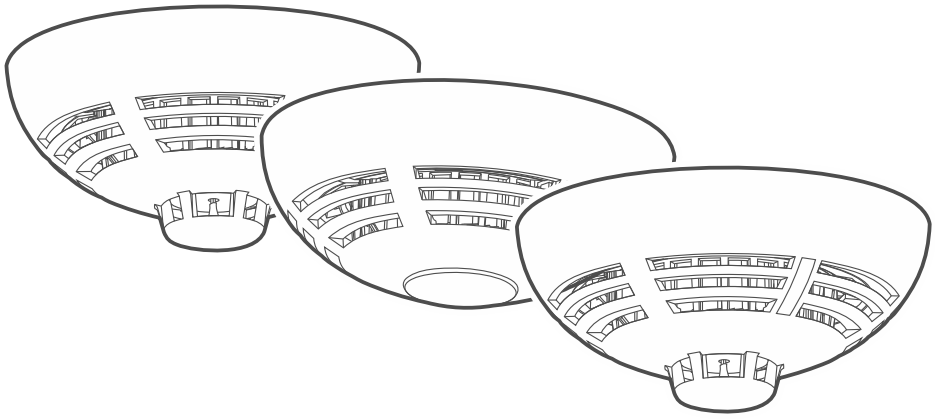
Firmware version 1.00

Addressable fixed temperature / rate-of-rise heat detector

# DCP-400

Firmware version 1.00

EN



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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.

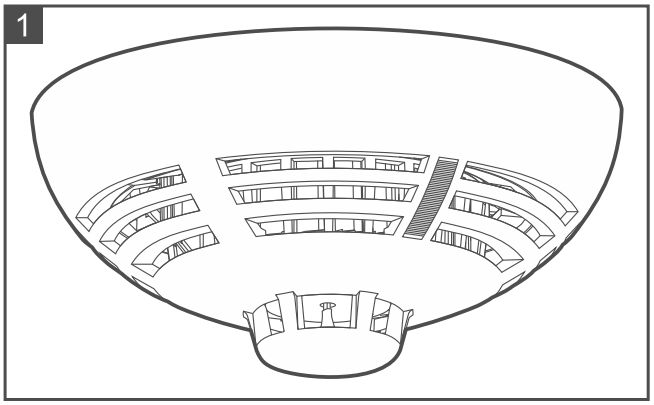
This manual covers the following detectors:

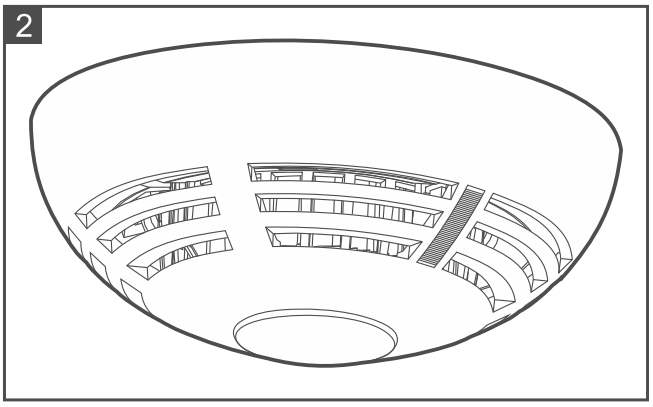
DMP-400 - addressable multisensor smoke and heat detector (Fig. 1);

DRP-400 - addressable optical smoke detector (Fig. 2);

DCP-400 - addressable fixed temperature / rate-of-rise heat detector (Fig. 1 – a red ring is painted on the detector enclosure to differentiate it from the DMP-400).

The detectors can detect the early stages of fire development when there is some visible smoke (DMP-400, DRP-400) and/or temperature rise (DMP-400, DCP-400). They are designed to be used in conjunction with the ACSP-402 fire alarm control panels.




# 1 Features

- Visible smoke sensor (DMP-400, DRP-400).
- Heat sensor (DMP-400, DCP-400).
- Detection of dirt buildup in the optical chamber (DMP-400, DRP-400).
- Smoke sensor sensitivity adjusted by the control panel (4 sensitivity levels).
- LED indicator.
- Double-sided short-circuit isolator.
- Power supply from the detection line.
- Installation on the DB-400 base by SATEL (sold separately).
- Ability to connect the WZ-110 remote indicator.
- Dust cover included.

# 2 Description

### Smoke detection (DMP-400, DRP-400)

The optical method is used for the detection of visible smoke. The detector automatically compensates for gradual changes in the optical chamber caused by deposition of dust. The detector informs the control panel about smoke detection and smoke concentration.

*In the case of the DMP-400 multisensor detector, the smoke sensor operating parameters are adjusted according to the temperature changes recorded by the heat sensor (thermistor).*

### Temperature detection (DMP-400, DCP-400)

The heat sensor operates according to the requirements of Class A1R (EN 54-5). The detector informs the control panel when the temperature exceeds 54°C or rises too fast (see: Table 1).

| Air temperature rate of rise | Lower limit of response time | Upper limit of response time |
|---|---|---|
| 1°C/min | 29 min | 40 min 20 s |
| 3°C/min | 7 min 13 s | 13 min 40 s |
| 5°C/min | 4 min 9 s | 8 min 20 s |
| 10°C/min | 1 min | 4 min 20 s |
| 20°C/min | 30 s | 2 min 20 s |
| 30°C/min | 20 s | 1 min 40 s |

Table 1. Rate-of-rise response time limits for the heat sensor.

### Fire alarm

The detector informs the ACSP-402 fire alarm control panel about smoke concentration / temperature. Based on this information, the control panel decides if the criteria for the alarm condition are met.

### Fire alarm signaling

The alarm is signaled by flashing of the red LED. This makes it easier to locate the detector. If the detector is mounted in a hard-to-reach location and the LED is not visible, it is recommended to connect the WZ-110 remote indicator to the detector. The indicator must be installed in a visible place.

### LED indicator

The LED indicates:

- fire alarm – flashing red,
- faulty detector – flashing yellow,
- test mode – flashing yellow,
- detector activation in test mode – flashing alternately red and yellow,
- supervision – flash every 24 seconds (optional).

### Detection of dirt buildup in the optical chamber

The detector is monitoring the state of the optical chamber. Deposition of dust in it may lead to malfunctioning of the device. When dirt builds up inside the optical chamber, it is signaled by the control panel.

## 3 Selecting a mounting location

- The detector is designed for indoor installation.
- The detector should be installed on the ceiling.
- Do not install the detector in places with high concentration of dust.

- In spaces where condensation of water vapor occurs, install the detector base on the PDB-100 industrial base by SATEL.
- Do not install the detector near heaters, cookers, fans or air-conditioner outlets.
- Do not install the detector in places where there is no unobstructed movement of air (e.g. in recesses, niches, etc.).

# 4 Installation

1. Place the detector in the base installed in the mounting location.
2. Turn the detector clockwise until you feel resistance.
3. If in the premises where the detector is installed, any work is being carried out that may cause dirt to build up in the optical chamber, put a plastic dust cover on the detector and leave it there until the work is finished.

# 5 Maintenance

The fire alarm system elements require regular maintenance. The periodic checks of the DMP-400 / DRP-400 / DCP-400 detectors 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.

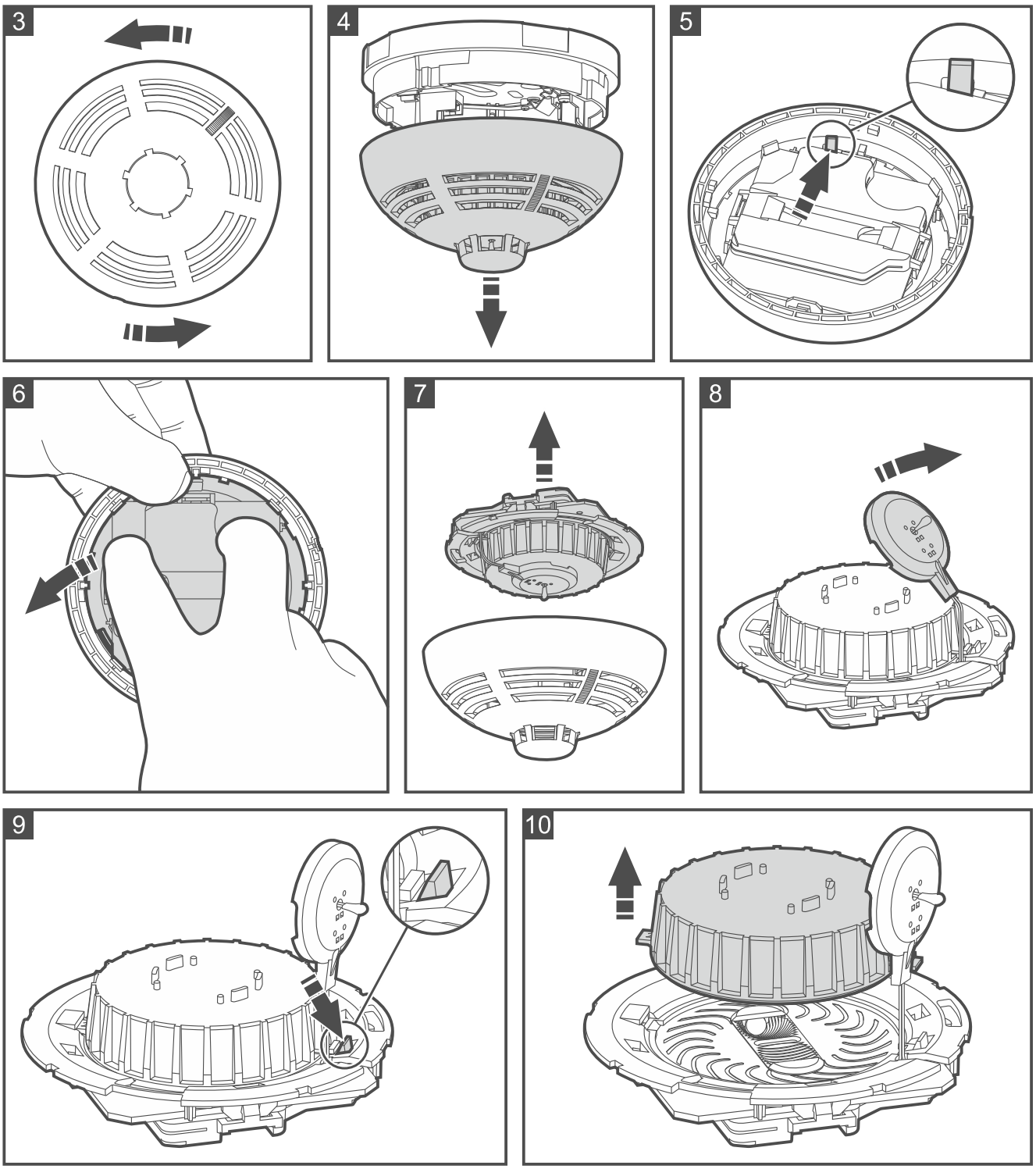
As part of maintenance, start a test in the control panel to make sure the detector is functional and detects smoke / temperature rise. To test the smoke sensor, use the smoke detector test spray. To test the rate-of-rise heat sensor, use the heat detector tester kit. Please go to the ACSP-402 control 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).

# 6 Cleaning the optical chamber

It is recommended to clean the optical chamber at least once a year. Deposition of dust in it may lead to malfunctioning of the device.

The following cleaning procedure applies to the DMP-400 detector. For the DRP-400 detector, in which no thermistor is installed, skip the steps 5 and 9.

1. Start the service mode in the control panel.
2. Turn the detector counter-clockwise (Fig. 3) and remove it from the DB-400 base (Fig. 4).
3. Pull the release lever to unlock the electronics module and turn it counter-clockwise (Fig. 5 and 6).
4. Remove the electronics module with the optical chamber (Fig. 7).
5. Remove the plastic element with the thermistor from the optical chamber cover (Fig. 8).
6. Release the mounting catch (Fig. 9) and remove the optical chamber cover (Fig. 10).
7. Using a soft brush or compressed air, clean the labyrinth in the cover, as well as the base of the optical chamber, paying attention to the recesses where LEDs are installed.
8. Replace the optical chamber cover.
9. Replace the plastic element with the thermistor on the optical chamber.
10. Secure the electronics module with the optical chamber in the cover and turn it clockwise.
11. Insert the detector into the DB-400 base and turn it clockwise.




# 7 Specifications

| | | |
|---|---|---|
| Supply voltage | | 18...26 VDC |
| Quiescent current consumption | DMP-400 | 0.5 mA |
| | DRP-400 | 0.45 mA |
| | DCP-400 | 0.45 mA |
| Alarm current consumption | DMP-400 | 0.7 mA |
| | DRP-400 | 0.7 mA |
| | DCP-400 | 0.6 mA |
| Class according to EN 54-5 (heat sensor) | | A1R |

| | | |
|---|---|---|
| Minimum static response temperature | | 54 °C |
| Maximum static response temperature | | 65 °C |
| Operating temperature range | | -25...+50 °C |
| Maximum humidity | | 93±3% |
| Enclosure dimensions | DMP-400 / DCP-400 | ø108 x 54 mm |
| | DRP-400 | ø108 x 46 mm |
| Weight | DMP-400 | 95 g |
| | DRP-400 | 94 g |
| | DCP-400 | 94 g |

The DCP-400 addressable heat detector 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-0882** for the construction product DCP-400 detector, confirming its compliance with the requirements of EN 54-5:2017+A1:2018 and EN 54-17:2005 + AC:2007.

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

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1438-CPR-0882

Declaration of Performance DOP/CPR/0882

EN 54-5:2017+A1:2018

EN 54-17:2005 + AC:2007

**Fire safety in construction works.**

**DCP-400 addressable, class A1R, spot type heat detector with built-in short-circuit isolator, for fire alarm systems used in buildings.**

Use – see the Declaration of Performance DOP/CPR/0882.

Technical specifications – see this manual.

The DRP-400 addressable optical smoke detector 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-0881** for the construction product DRP-400 detector, confirming its compliance with the requirements of EN 54-7:2018 and EN 54-17:2005 + AC:2007.

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

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1438-CPR-0881

Declaration of Performance DOP/CPR/0881

EN 54-7:2018

EN 54-17:2005 + AC:2007

**Fire safety in construction works.**

**DRP-400 addressable, spot type, optical smoke detector operating on light scattering principle, with built-in short-circuit isolator, for fire alarm systems used in buildings.**

Use – see the Declaration of Performance DOP/CPR/0881.

Technical specifications – see this manual.

The DMP-400 addressable multisensor smoke and heat detector 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-0890** for the construction product DMP-400 detector, confirming its compliance with the requirements of EN 54-7:2018, EN 54-5:2017+A1:2018 and EN 54-17:2005+AC:2007.

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

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1438-CPR-0890

Declaration of Performance DOP/CPR/0890

EN 54-7:2018

EN 54-5:2017+A1:2018

EN 54-17:2005 + AC:2007

**Fire safety in construction works.**

**DMP-400 addressable, class A1R, multisensor smoke and heat detector operating on light scattering principle, with built-in short-circuit isolator, for fire alarm systems used in buildings.**

Use – see the Declaration of Performance DOP/CPR/0890.

Technical specifications – see this manual.