inim

LPCB
LOST PREVENTION CERTIFICATION BOARD

CE

CPD CERTIFICATO CERTIFIED

Iris
Conventional fire detectors

991c/01	**ID100 - optical smoke detector**	0832-CPD-1447
991e/01	**ID200 - temperature detector**	0832-CPD-1449
991a/01	**ID300 - multicriteria detector**	0832-CPD-1445

For information regarding device placement, coverage and method of installation, refer to the established standard regulations and codes relating to automatic fire-detection systems. Iris series detectors are compliant with EN54-7: Smoke detectors – Point detectors using the scattered light principle, light transmission or ionization (ID100 and ID300 models only) and EN54-5: Heat detectors – point detectors (for ID200 and ID300 models only).

ATTENTION!

iris

Product description

Iris series detectors offer wide-spectrum detection of smoke particles generated by the majority of fires. They are suitable for most applications and provide first-rate early warning.

The EITK-DRV driver, supplied by INIM Electronics, allows you to change the operating parameters to suit specific environment conditions. This device permits easy programming and verification of contamination and performance. For further details, refer to "Using the EITK-DRV driver" section.

During standby status, these detectors have low current draw, $80\mu A$. However, in the event of alarm the current draw increases to a maximum of 40mA thus signalling the condition to the control panel.
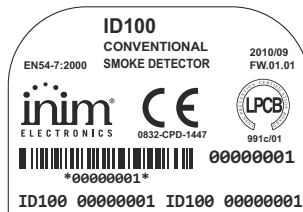
INIM Electronics offers three Iris series conventional fire-detectors, which can be identified by the technical specifications/serial number on the back of the detector.

ID100

Optical detector equipped with a reference chamber based on the scattered light principle (Tyndall effect). This detector must be installed in draught and obstacle free place which guarantees appropriate air-flow into the reference chamber.

The detector will trigger an alarm when the level of smoke inside the reference chamber reaches the following values:
- 0.08 dB/m (mode set via the EITK-DRV)
- 0.10 dB/m (mode set via the EITK-DRV)
- 0.12 dB/m (pre-set mode)
- 0.15 dB/m (mode set via the EITK-DRV)

ID100
CONVENTIONAL SMOKE DETECTOR
EN54-7:2000
2010/09 FW.01.01
inim ELECTRONICS
CE 0832-CPD-1447
LPCB 991c/01
00000001
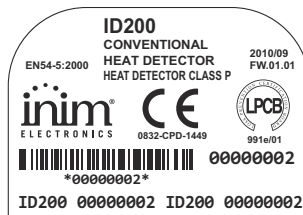00000001
ID100 00000001 ID100 00000001

ID200

Heat detector with heat-sensitive element capable of sensing the temperature within the protected environment.

The operating modes, programmable via the EITK-DRV are:
- "A1R" (pre-set); the detector signals alarm status when the temperature within the protected environment exceeds 58 °C or when the temperature undergoes anomalous changes.
- "B"; the detector signals alarm status when the temperature within the protected environment exceeds 72°C.
- "A2S"; the detector signals alarm status when the temperature within in the protected environment exceeds 58°C .
- "BR"; the detector signals alarm status when the temperature within the protected environment exceeds 72° or when it senses a rapid temperature rise.

ID200
CONVENTIONAL HEAT DETECTOR
HEAT DETECTOR CLASS P
EN54-5:2000
2010/09 FW.01.01
inim ELECTRONICS
CE 0832-CPD-1449
LPCB 991e/01
00000002
00000002
ID200 00000002 ID200 00000002

The operating modes of the "A2S" and "BR" are not certified.

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ID300

Optical-heat detector with heat sensitive element and optical smoke chamber. The combination of values provides (in accordance with the operating mode selected via the EITK-DRV driver) high immunity to nuisance alarms and an exceptionally sensitive detector which is capable of swift response to fires characterized by low smoke emission.

The operating modes, programmable via the EITK-DRV driver are:

ID300
EN54-7:2000   CONVENTIONAL   2010/09
EN54-5:2000   SMOKE/HEAT DETECTOR   FW.01.01
           HEAT DETECTOR CLASS P

inim® ELECTRONICS   CE   LPCB
           0832-CPD-1445   991a/01

00000003
00000003
ID300 00000003 ID300 00000003

- "PLUS" (pre-set); the detector signals alarm status when smoke in the protected environment exceeds the programmed threshold (programmed as described for the ID100 model) or when the temperature within the protected environment exceeds the programmed threshold (programmed as described for the model ID200). Furthermore, in the event of a rise in temperature within the protected environment, the sensibility of the smoke chamber will be increased. This operating mode, characterized by high sensitivity, allows detection of fires which produce a large amount of flames but low smoke emission (e.g. combustion of alcohol or similar highly-inflammable products).

- "OR"; the detector signals alarm status when smoke in the protected environment exceeds the programmed threshold (programmed as described for the ID100 model) or when the temperature within the protected environment exceeds the programmed threshold (programmed as described for the ID200 model). This operating mode, characterized by a medium-high sensitivity, allows detection of fires which generate a substantial amount of smoke (slow burning fires) and also fires which generate high temperatures with low smoke emission (chemical products).

- "AND"; the detector signals alarm status when the smoke and temperature in the protected environment exceed the programmed thresholds simultaneously (programmed as described for the ID100 model and ID200 respectively). This operating mode, characterized by a low sensitivity, lowers the false alarm rate and is useful in applications where either the smoke or heat values in the protected environment may increase without the risk of fire.

Given the limited response, consider the conditions in the protected environment carefully before selecting this operating mode.   *ATTENTION!*

- "SMOKE"; the detector assumes the characteristics of the ID100 model.
- "HEAT"; the detector assumes the characteristics of the ID200 model.

TECHNICAL SPECIFICATIONS	ID100	ID200	ID300
Power supply	10-30 Vdc		
Average current draw in standby	90μA	70μA	90μA
Average current draw in alarm	Max 40mA		
Current draw by the "R" output (internally limited)	Max 14mA		
Reference Standards for smoke detectors	EN54-7:2000+A1:2002 +A2:2006		EN54-7:2000+A1:2002 +A2:2006 and CEA4021
Reference Standards for temperature detectors		EN 54-5:2000+A1:2002	EN 54-5:2000+A1:2002 and CEA4021
Operating temperature	-5°C / +40°C		
Humidity (without condensation)	95% RH		
Height (standard base included)	46mm	54mm	
Diameter (standard base included)	110mm		
Weight (standard base included)	160gr		
Weight (without base)	91gr		

Installation

The detectors are supplied with protective covers which help to protect them against minor damage and dust contamination which may occur during the installation phase. The covers should not be removed until the system is ready to start up.   *ATTENTION!*

Iris series detectors should be used with one of the following compatible mounting bases:

- **EB0010**; standard base
 An example of installation using standard bases is shown opposite.

**The value of the EOL resistance depends on the type of control panel in use.**   *ATTENTION!*

- **EB0020**; relay base
  Appropriate when the detector is to be connected to an intrusion control panel or to a control panel using 4 wires. For the respective wiring instructions, refer to the leaflet supplied with the EB0020.

The two removable serial-number stickers should be taken off and one should be attached to the mounting base and the other to the installation layout.   *ATTENTION!*
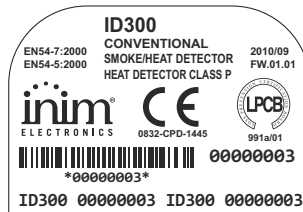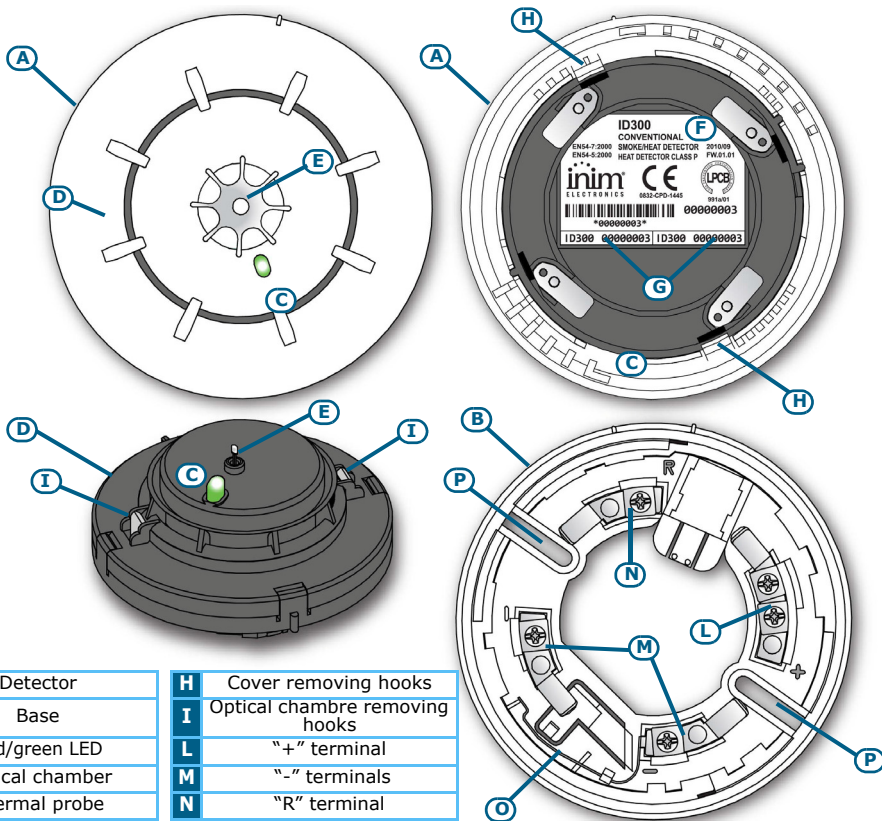
|				
A	Detector	**H**	Cover removing hooks
B	Base	**I**	Optical chambre removing hooks
C	Red/green LED	**L**	"+" terminal
D	Optical chamber	**M**	"-" terminals
E	Thermal probe	**N**	"R" terminal
F	Identifier sticker	**O**	Short-circuit reed
G	Technical specifications/ serial-number sticker	**P**	Screw locations
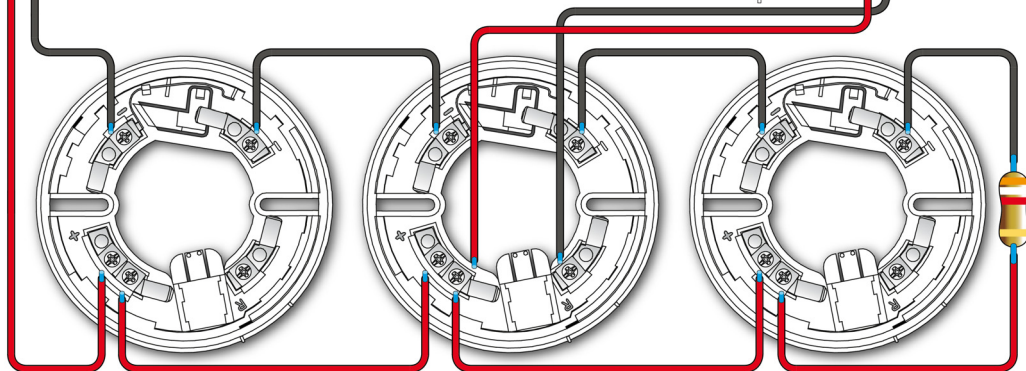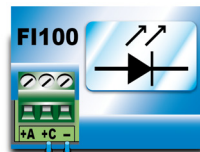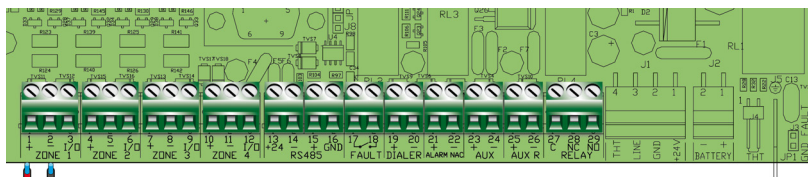
Once the base is located properly in its placement, place the detector unit onto the base and, with minimum force, turn it clockwise until notch "A" aligns with notch "B" (in order to attach the detector to the base); turn it still further until notch "A" aligns with notch "C" (in order to allow the base to engage with the detector contacts).

Testing and maintenance

After installation and during periodic maintenance inspections, you must carry out the following operations on each detector:

- **Check the LED**; if the LED blinks at 5 second intervals, the detector is in fault status. This may be due to dust contamination. If after cleaning, this condition persists, remove the faulty detector and replace it with a new one. The EITK-DRV driver will assist you in finding the cause of faults.
- **Optical smoke detector test**; smoke detectors should be tested immediately after installation and periodically during maintenance inspections in accordance with the established standard regulations and codes in force. To test smoke detectors, use an approved test aerosol strictly in accordance with the accompanying instructions.
  Ensure that the smoke inlet ports to the smoke detection chamber are not blocked. Check the contamination level of the smoke detection chamber via the EITK-DRV. If the contamination level is high, detach the detector from its mounting base and open the chamber then, using a small, soft-bristle brush or hand-held vacuum cleaner remove all dust particles from inside and around the smoke detection chamber and free the protection mesh from all contaminants.
- **Heat detector test**; using a suitable device (e.g. hairdryer), create heat in the vicinity of the detector, then work through the steps described in the device instruction sheet. During each periodic maintenance inspection, ensure that the heat element is intact and that is not obstructed by dust or paint. If it is, using a small, soft-bristle brush or hand-held vacuum cleaner remove all contaminants.
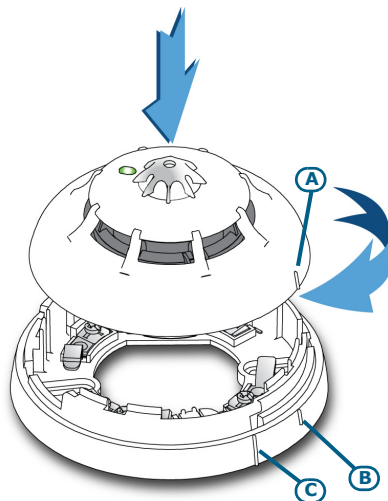
Operating mode

The bicolour LED (360° viewing) indicates the detector status.

- Green blinking at 30-second intervals: detector in standby status (i.e. operating properly).
- Green blinking at 5-second intervals: detector in fault status. Further details regarding the cause of the fault (high contamination level in the smoke chamber, detector component fault, etc.) can be obtained through the EITK-DRV driver.
- Red LED On solid: detector in alarm status.

The detectors have an output (terminal "R"), for the connection of an alarm repeater LED. This LED will activate when the detector it refers to triggers an alarm.

Using the EITK-DRV driver

The EITK-DRV driver allows you to change the operating parameters of the detectors, check the contamination level of the smoke chambers and also obtain accurate diagnostic data. It can operate through the USB port of a computer furnished with the relative software programme, or can function autonomously by way of the battery housed inside.

Each detector is capable of retaining memory (smoke and/or temperature depending on the model) of the 5 minutes prior to an alarm. Therefore, if an alarm occurs, it will be possible to obtain information regarding the onset of the fire by simply connecting the EITK-DRV driver to the detection line.

For further information and details regarding use of the EITK-DRV driver, refer to the respective handbook.

Warnings and limitations

Iris series detectors must be used exclusively with fully compliant, compatible control panels. Detectors may not provide timely warning of fire if coverage is limited by large obstructions (pillars, large machinery, etc.). When installing or working on a fire detection system, always refer to and comply with the established standard regulations and codes. Appropriate fire-risk assessment should be undertaken to determine the type of detectors required and their placements.

INIM Electronics reserves the right to change the technical specifications of this product without prior notice.