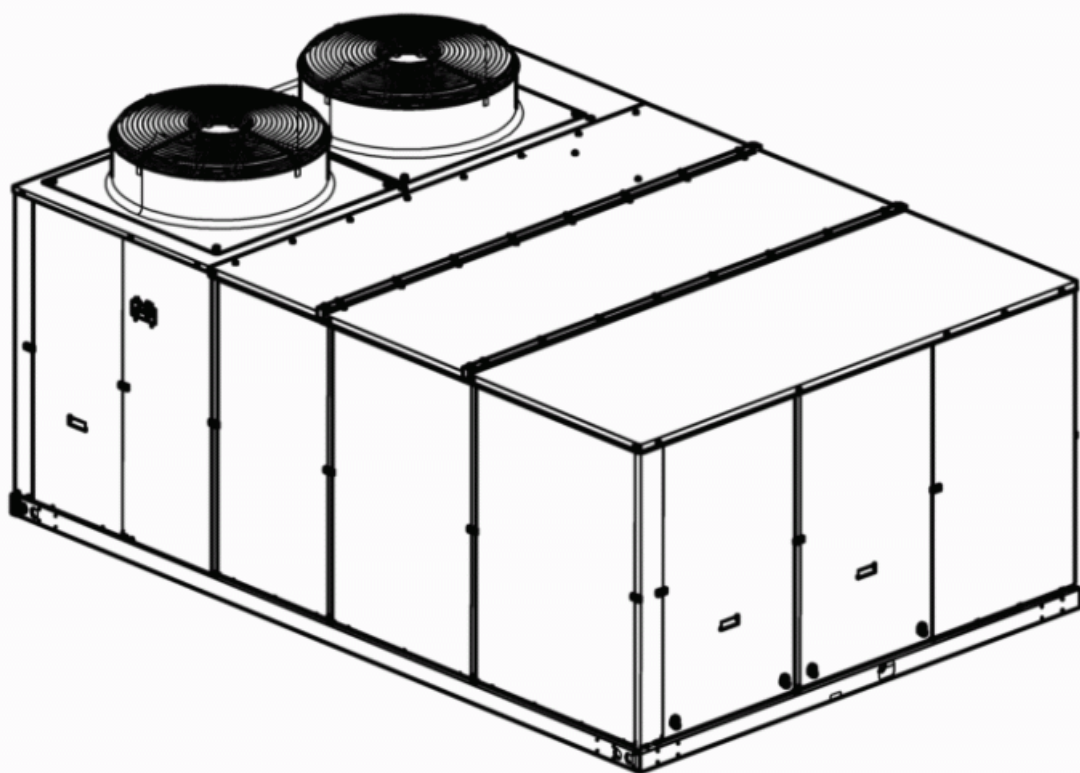




BY JOHNSON CONTROLS

Smoke detector



Options and Accessories, Installation manual

Ref.: N-40332_EN 0810



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1

Smoke detector

1.1 General Information

When the ionic sensor detects smoke, the DAD control triggers the fault relay, indicating as such on the YKN2Open board and on thermostat DPC-1, closing the relay circuit on the accessory board.

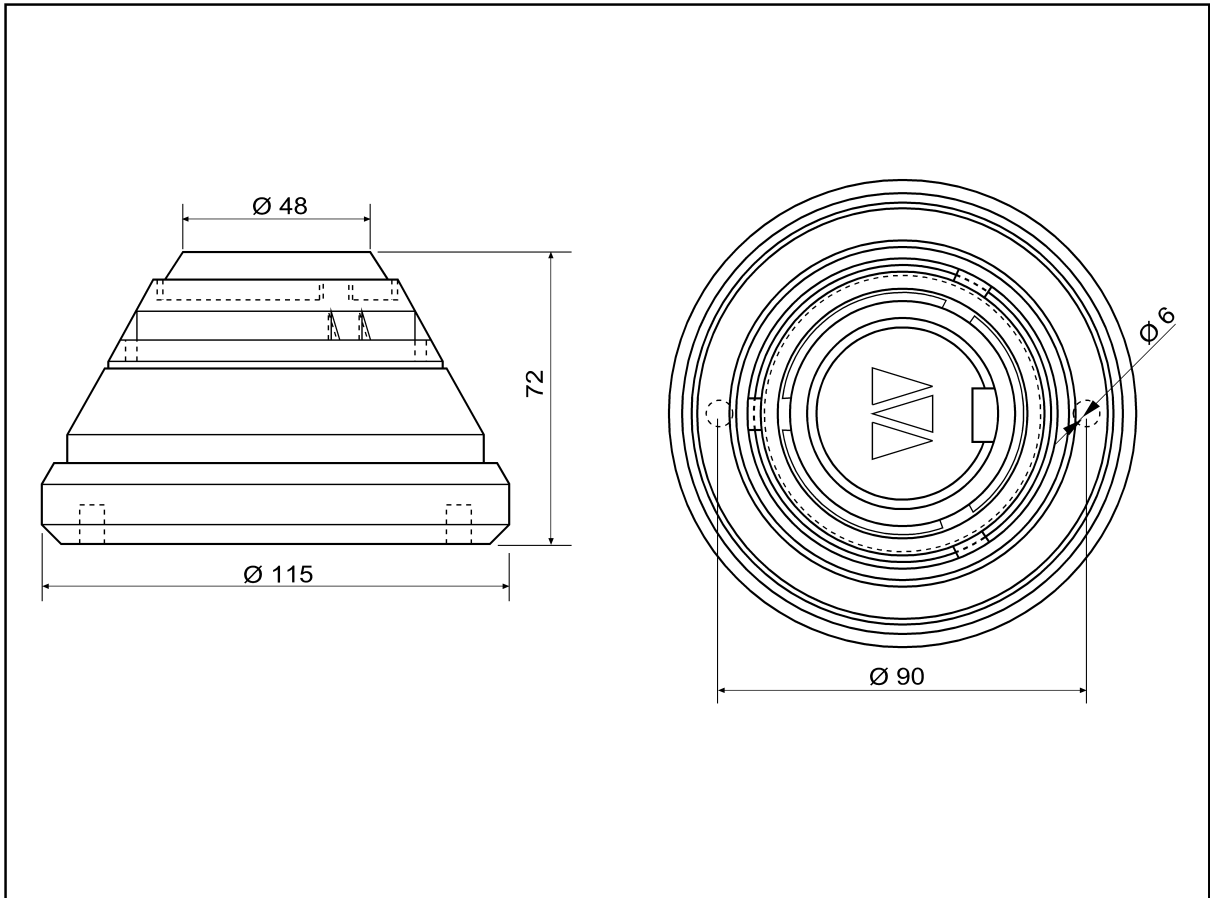
1.2 Technical specifications

This accessory includes the following components:

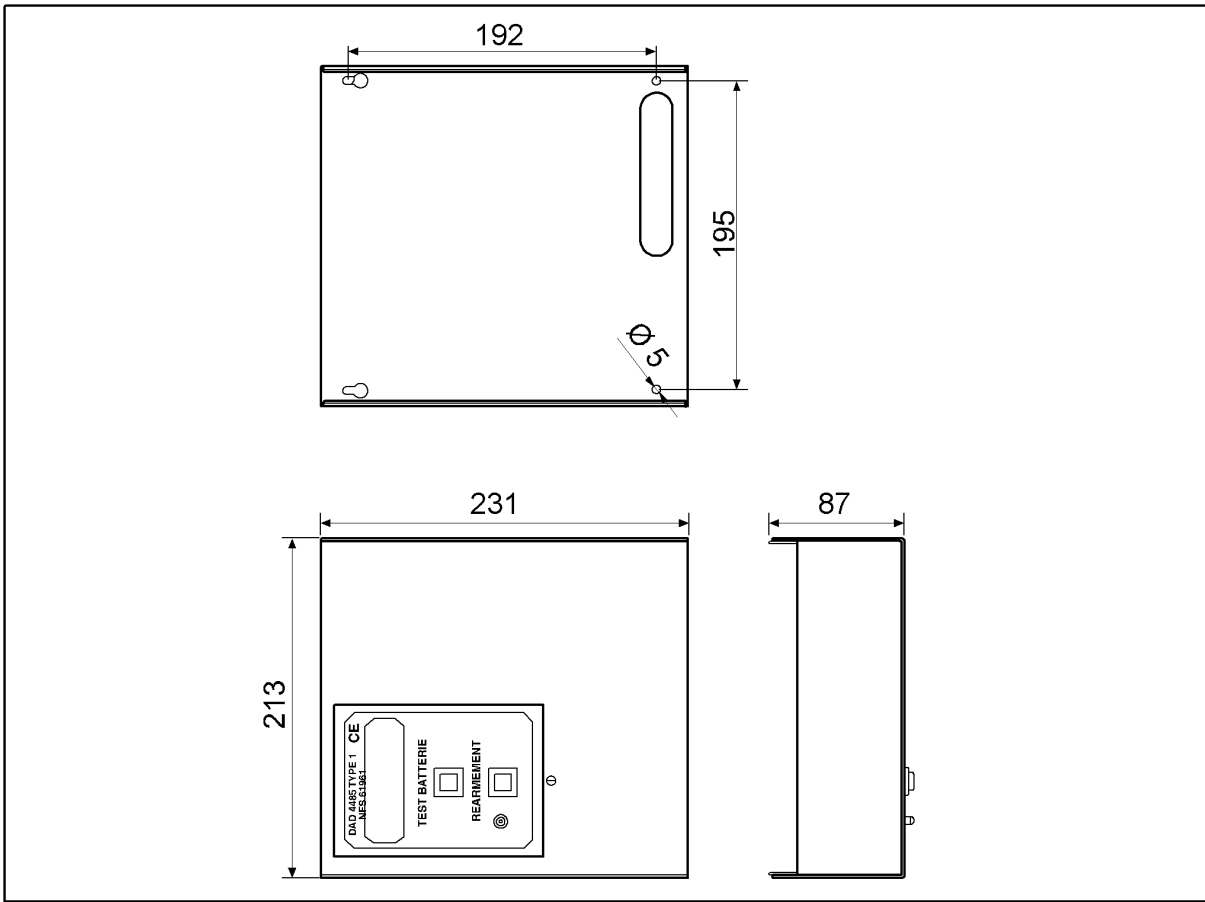
- Ionic sensor with Ref. IX010310E4.
- Smoke control DAD with battery and Ref. 4485.
- Temperature/smoke control board A9.
- Telephone connection cable (300 mm).
- Ties for cable securing.

1.3 General measurements

Ionic sensor (mm)

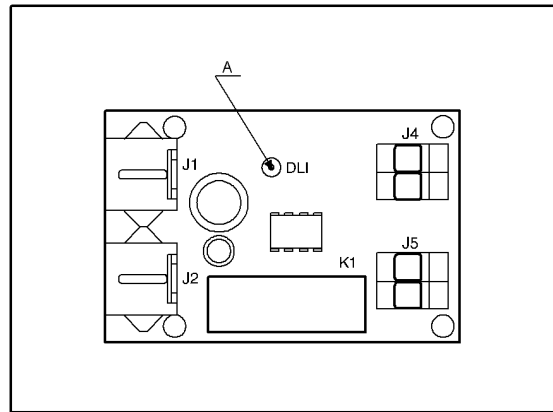


Smoke control board



Accessory board

- A. Green LED.



1.4 Assembly

The ionic sensor is fitted inside the Rooftop, on the supply air side at the top of the fan, attached with two screws to the separator panel.

The DAD control and the temperature/smoke control board are fitted to the inside of the electrical box in the holes provided for this accessory on the side of the boards.

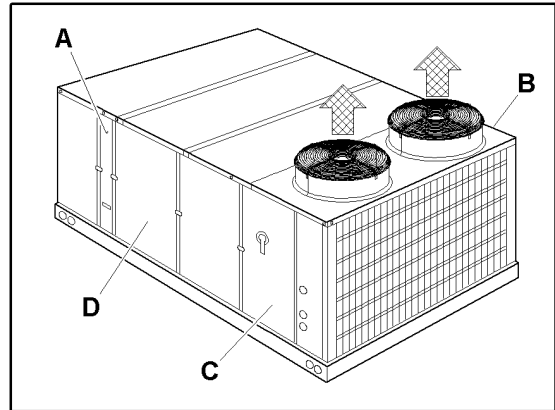
Close-up of assembly, thermostat side

A: Fan motor access.

B: Compressor access.

C: Control board access.

D: Ionic sensor.



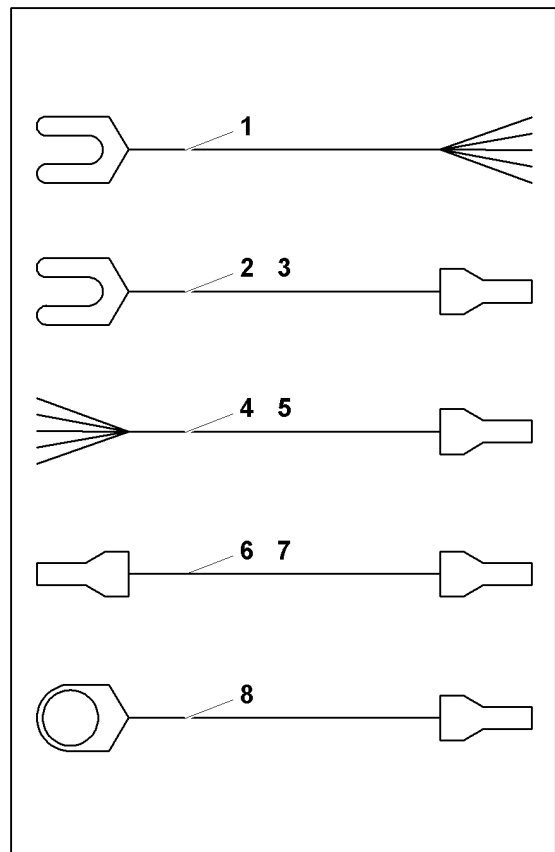
Wiring table

No	Colour	From	To	mm
1	A-Green	XI - \perp	DAD - \perp	2500
2	Blue	XI - N	DAD - N	2500
3	Black	XI - L	DAD - L	2500
4	Red	A9 - J4	DAD - 10	2500
5	Red	A9 - J4	DAD - 11	2500
6	Red	IXDI - 2	DAD - 8	1000
7	White	IXDI - 4	DAD - 7	1000
8	Brown	IXDI - 3	Resistance	1000



NOTE

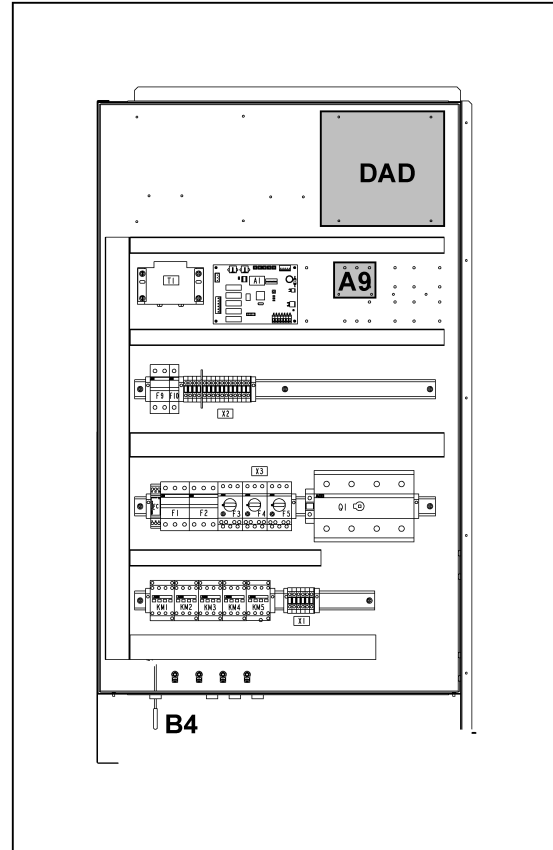
All wires have a cross-section of 1 mm, except for the A-Verde wire cross-section that is 0.75 mm.



Accessory circuit board

A9: Temperature/smoke control board.

DAD: Accessory control board.



1.5 Operations

The first time the DAD control is powered, contact 11 (COM) of the thermostat is on standby and 10 (NC) is open. Press the reset button to close contact NC and press RESET on the YKN2Open board to delete the fault.

The temperature/smoke control board opens contact NC as soon as smoke is detected.

The temperature/smoke control board detects the open contact at the inlet of terminals J4, triggering output relay K1 through terminals J5 (contact not live).

The YKN2Open board (A1) indicates the smoke fault with a 4-5 flashing sequence of the red LED. If thermostat DPC-1 is fitted, the incident is indicated on the screen where the time is displayed along with fault code 45.

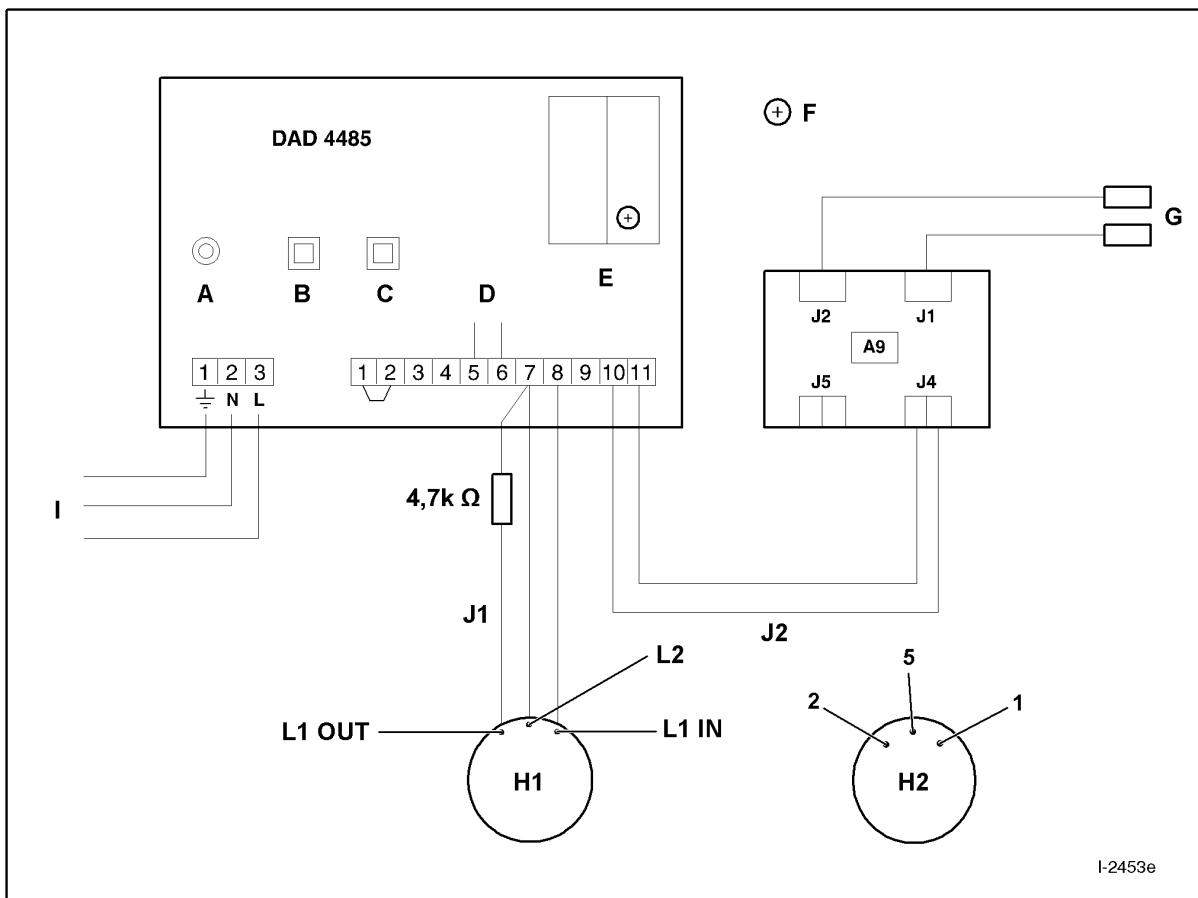
Once the cause of the presence of smoke has disappeared, the thermostat must be manually reset and the YKN2Open board (A1) reset to delete the incident.

Where the economiser accessory is fitted, check the position of bridge J20 on the economiser board. Bridge J20 (outside damper closed with high temperature-smoke alarm) is open by default. If the bridge is closed, outside damper open with high temperature-smoke alarm is selected.

In units equipped with a supply sensor connected to the YKN2Open board with hot water coil (accessory) or economiser, where a supply temperature of over 80 °C is detected the equipment will stop and fault code 45 displayed.

1.6 Installation

1.6.1 Wiring diagram



- | | | | |
|-----|---------------------------------|---------|--------------------|
| A. | Green LED. | I. | Power cables. |
| B. | Reset. | 1. | A-Green. |
| C. | Battery test. | 2. | Blue |
| D. | Remote reset. | 3. | Black. |
| E. | Battery. | J1. | Connection cables. |
| F. | Connect red wire to terminal +. | L1 OUT: | Brown. |
| G. | Accessories. | L2: | White |
| H1. | APOLLO Sensor. | L1 IN: | Red. |
| H2. | C. Scan O Sensor. | J2. | Connection cables. |
| | | 2.: | Brown. |
| | | 5: | White |
| | | 1: | Red. |



NOTE

Bear in mind the current regulations on electrical installation in the country where the unit is to be installed.

1.6.2 Installation

- 1 Disconnect the main switch on the unit.
- 2 Fit the optical sensor using the two screws to the separator panel plate at the top of the inside fan.
- 3 Fit the DAD control in the electrical box.
- 4 Fit the temperature/smoke control board in the electrical box.



NOTE

If the temperature detection accessory is also fitted, a temperature/smoke control board is fitted and the two normally closed contacts fitted in series in input J4.

- 5 Connect the cables supplied according to the wiring diagram.
- 6 Once all of the connections are made, reconnect the unit main switch.
- 7 Check that the green LED on board A9 remains lit. Then search for and configure accessories by pressing the test button on the YKN2Open board (A1) for more than three seconds until the red LED lights up. When the search and configuration process starts, the red LED on the board will light up and will remain on until the operation is completed. Once switched off, check that the green LED (V1) on board A9 is flashing to indicate that the accessory has been configured.
- 8 To check the electrical operations, disconnect the wires from terminals J4 on board A9 or apply smoke directly to the optical sensor and check that the YKN2Open board (A1) indicates the high temperature fault with a 4-5 flashing sequence of the red LED . Reconnect the wires and reset the YKN2Open board (A1) to delete the fault.



CAUTION

Loose connection terminals produce overheating of cables and terminals. The unit is working incorrectly and there is a risk of fire.

Data and measurements subject to changes without prior notice.