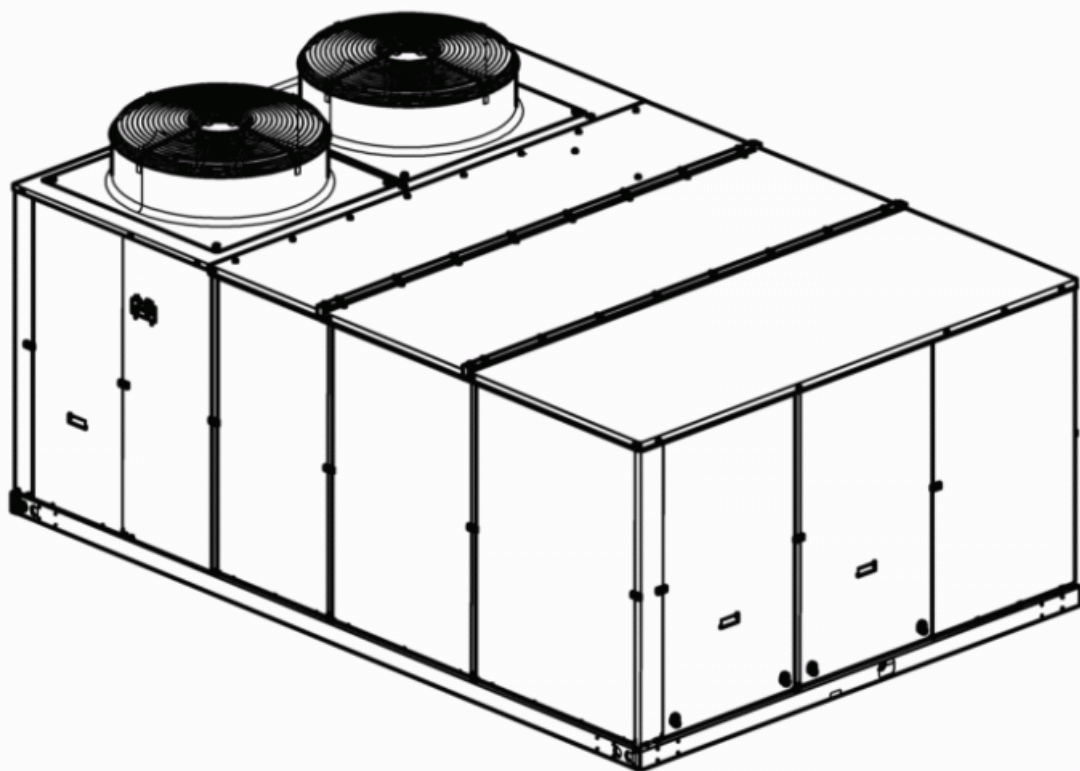




BY JOHNSON CONTROLS

Fire detection thermostat



Options and Accessories, Installation manual

Ref.: N-40331_EN 0909



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1

Fire detection thermostat

1.1 General Information

When the hot supply air reaches the set temperature, the thermostat disconnects and the control detects the fault, indicating as such on the YKN2Open board and on thermostat DPC-1 and closing the accessory board relay contact.

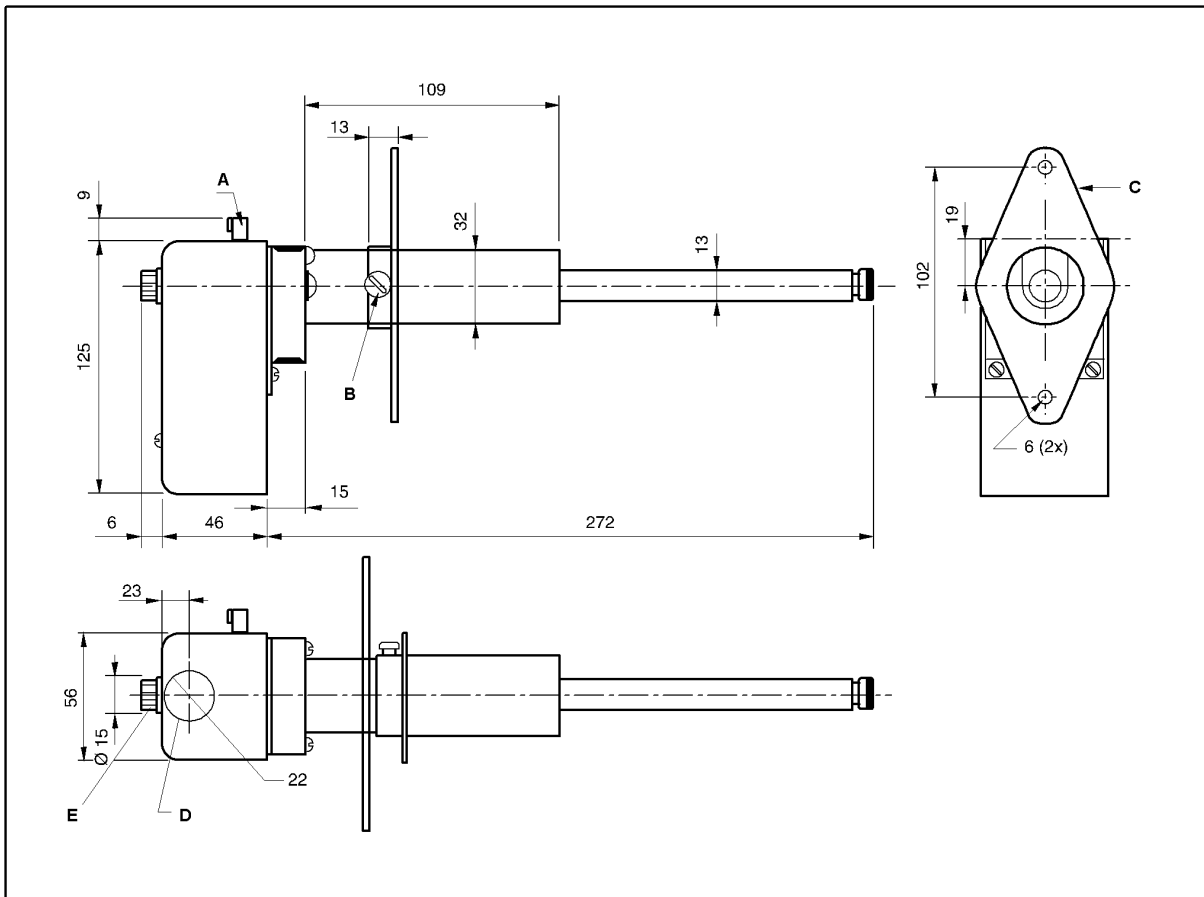
1.2 Technical specifications

This accessory includes the following components:

- Limiting thermostat (A25CN).
- Temperature/Smoke control board.
- Telephone connection cable (300 mm).
- Ties for cable securing.

1.3 General measurements

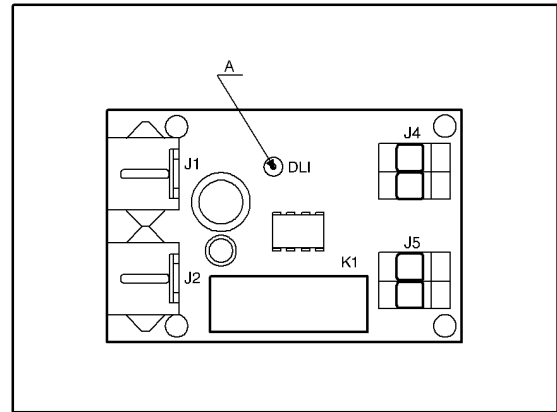
Thermostat (mm)



- A. Reset lever.
- B. 1/4-20UNC assembly bolt.
- C. Flange.
- D. 22.3 mm hole - PG16.
- E. Dial button.

Accessory board

- A. Green LED.



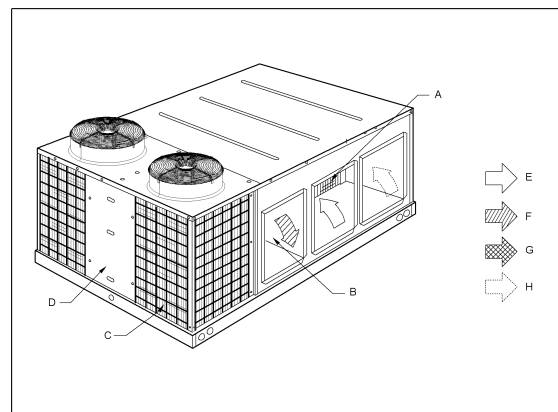
1.4 Assembly

The temperature limiting thermostat is fitted on the inside of the Rooftop, on the supply air side, using the metal flange supplied and attached to the separator panel with two screws.

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

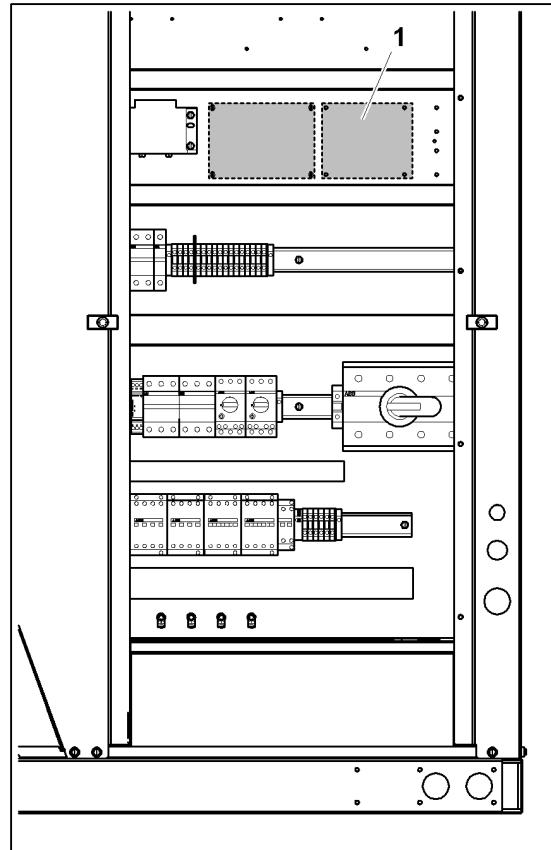
Close-up of assembly, thermostat side.

- A. Evaporator coil.
- B. Fire detection thermostat.
- C. Outside coil.
- D. Access to the compressor
- E. Return air.
- F. Supply air.
- G. Condensation air.
- H. Outdoor air (economiser).



Accessory circuit board

1. Temperature/Smoke control board.



1.5 Operations

Under normal operations, contact 1 (COM) of the thermostat is on standby and 2 (NC) is closed. When a temperature higher than the set value (100 °C) is detected the contact opens.

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 high temperature incident 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 increase in temperature has disappeared, the thermostat must be manually reset and the YKN2Open board (A1) reset to delete the incident.

If 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 unit will stop and fault code 45 displayed.

1.6 Installation



NOTE

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

- A. Manual thermostat A25CN-9001.
- B. Accessories.

- 1 Disconnect the main switch on the unit.
- 2 Fit the thermostat using the metal flange supplied and two screws to the separator panel plate on the supply air side.
- 3 Connect brown wires no. 692, terminal 1 (COM) and 693, terminal 2, (NC) (The wires are located in the economiser cable on the air filter access side).
- 4 Set the thermostat to 100 °C.
- 5 Fit the temperature/smoke control board in the electrical box.



NOTE

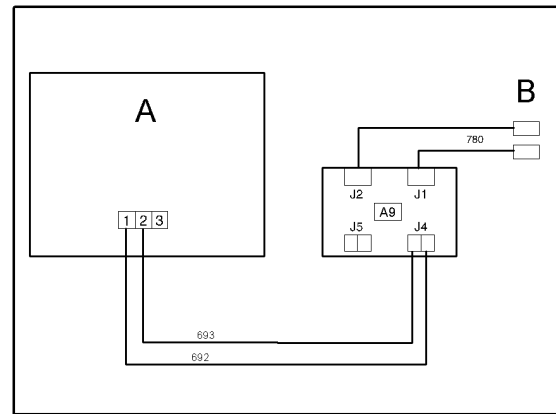
If the smoke detection accessory is also fitted, only one temperature/smoke control board is fitted and the two normally closed contacts fitted in series in input J4.

- 6 Search for brown wires no. 692 and 693 inside the duct and connect them to connector J4 on board A9. Connect the telephone cable to connector J2 or J8 on board A2.
- 7 Once all of the connections are made, reconnect the unit main switch.
- 8 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.
- 9 To check correct electrical operations, make a bridge between terminals 1 and 2 of the thermostat 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.