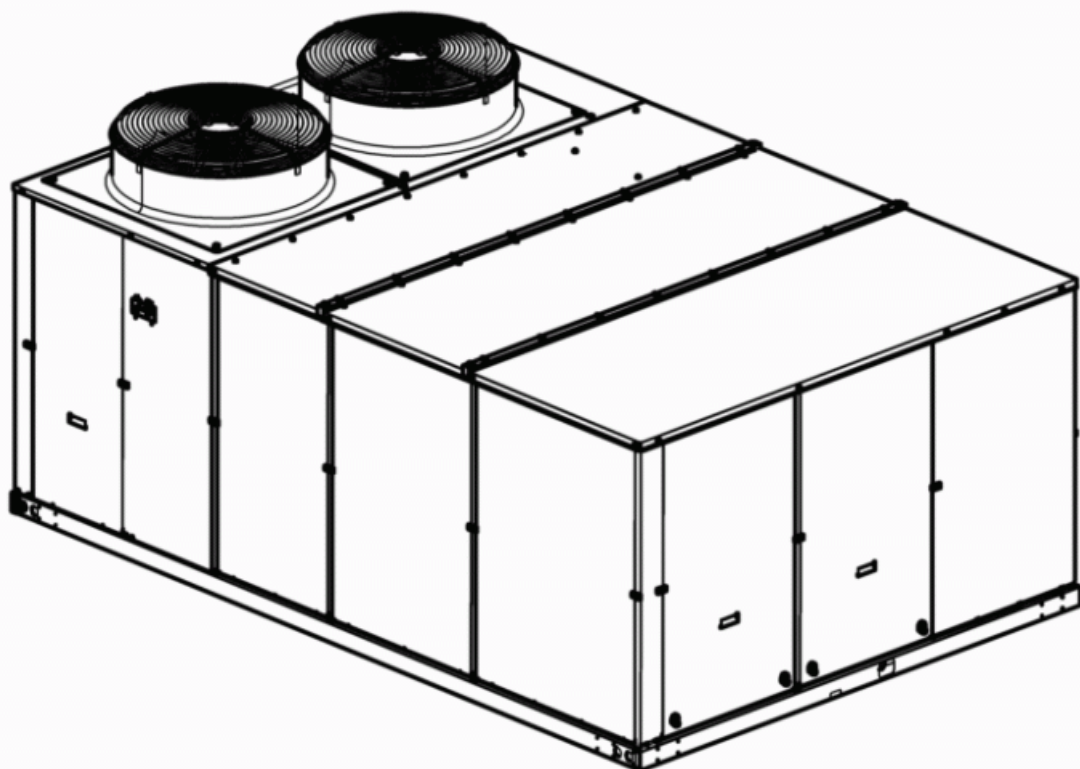




BY JOHNSON CONTROLS

## Dirty filter pressure switch for Roof Top ACTIVA 045-090



Options and Accessories, Installation manual

Ref.: N-40328\_EN 1109



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**Dirty filter pressure switch for Roof Top  
ACTIVA 045-090**

## 1.1 General Information

The dirty filter pressure switch allows for a difference in pressure between both sides of the air filter inside the Roof Top to be detected at the air inlet to the indoor coil.

When the set value is exceeded, the control detects the incident and indicates as such on the YKN2 Open board, closing the relay circuit on the accessory board and on thermostat DPC-1.

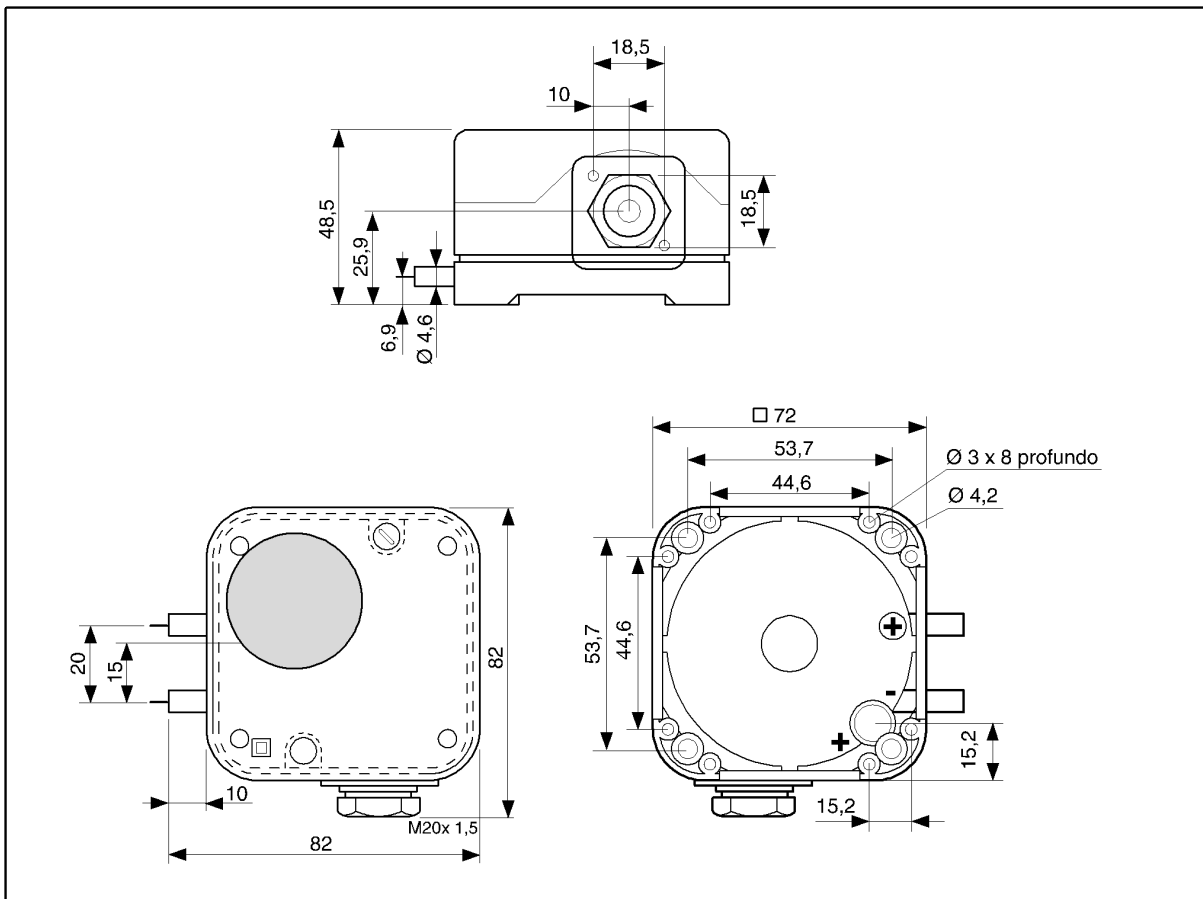
## 1.2 Technical specifications

This accessory includes the following components:

- Air pressure switch (LGW3A2).
- Plate support for the pressure switch.
- Dirty filter control board.
- Telephone connection cable (300 mm).
- 4x7 mm rubber pipe (1000 mm).
- Plate bolts, clamps and flanges.

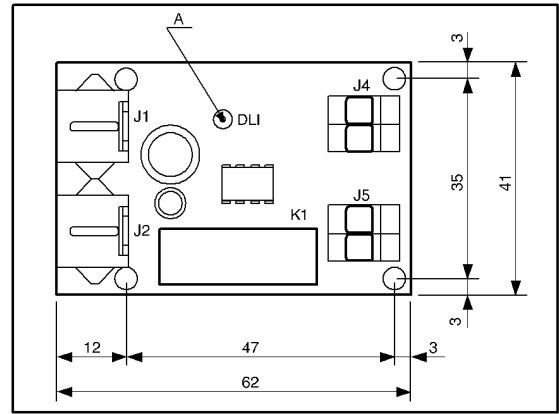
## 1.3 General measurements

Pressure switch (mm)

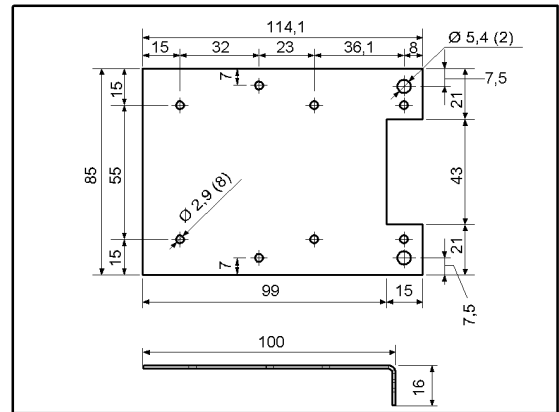


**Accessory board (mm)**

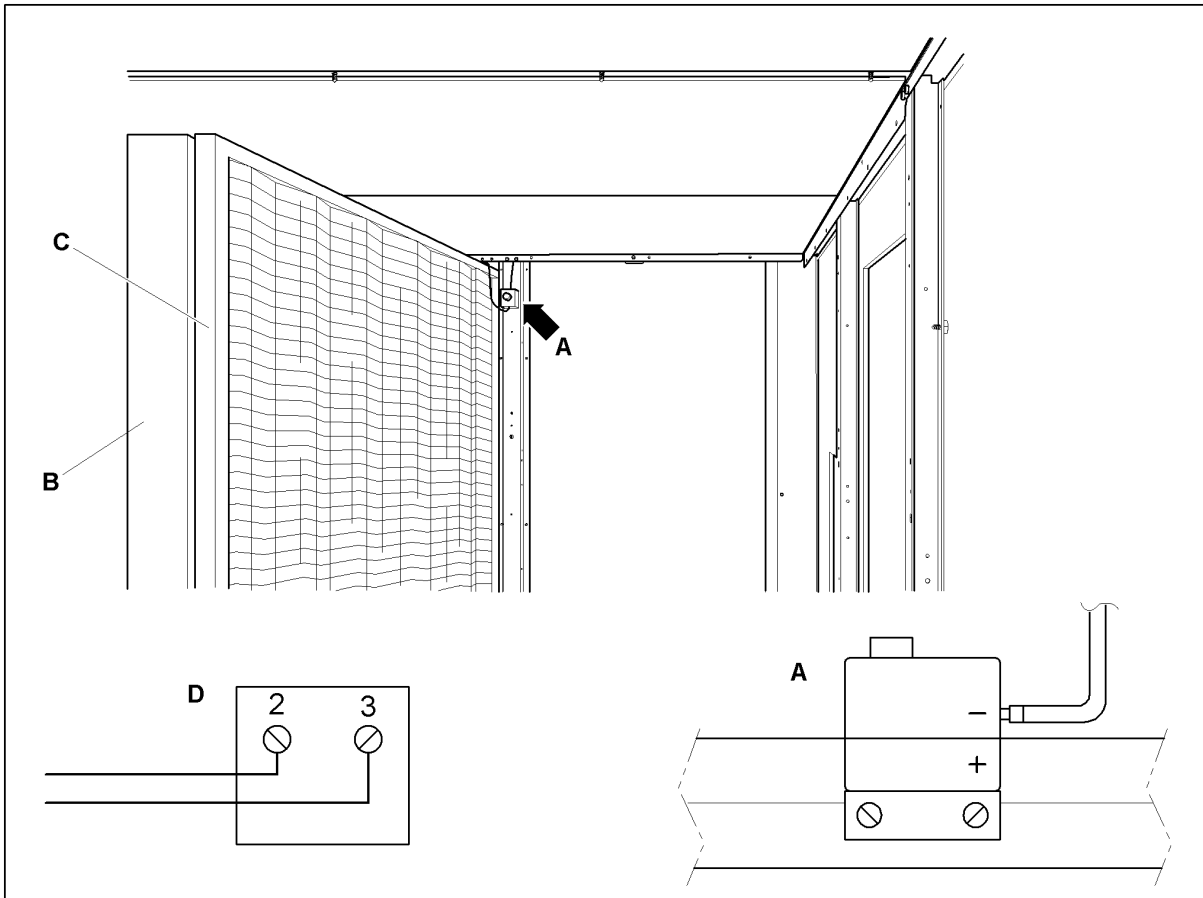
A. Green LED



**Plate support (mm)**



## 1.4 Assembly



- A. Close-up of fitting the differential pressure switch.
- B. Evaporator coil.
- C. Filters.
- D. Close-up of the pressure switch connections.
- 690: Brown: Contact 2
  - 691: Brown: Contact 3

The differential air pressure switch is fitted to the plate support supplied on the inside of the Roof Top, on the air return side. It is secured by two screws to the inside of the post, next to the filter access panel.

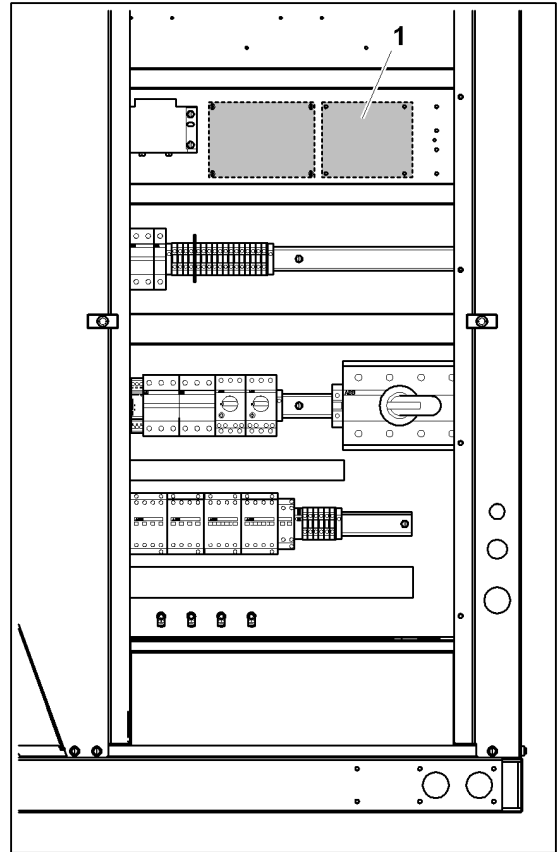
The dirty filter control board is fitted to the inside of the electrical box in the holes provided for this accessory on the side of the boards.

Pass the silicone pipes through to the upper filter area over the existing rubber strip and position them between the filters and the coil (approximate pipe length: 1000 mm).

Secure the support to the central filter guide using screws.

### Accessory circuit board

1. Accessory circuit board.



## 1.5 Operations

Under normal operations, contact 3 (COM) of the pressure switch is on standby and 2 (NO) is open. When a difference in pressure above the set value (0.6 mbar) is detected, the contact closes between terminals 3 and 2.

The dirty filter control board detects the closed contact at the input of terminals J4, triggering output relay K1 through terminals J5 (contact not live).

The YKN2 Open board (A1) indicates the dirty filter incident with a 4-5-4 flashing sequences of the green LED. If thermostat DPC-1 is fitted, the incident is indicated by the flashing dirty filter icon on its screen.

Once the filters have been replaced, the YKN2 Open board (A1) must be reset to delete the incident.

## 1.6 Installation



### NOTE

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

## 1.6 Installation

- A. Differential air pressure switch.  
 B. Accessories.

- 1 Disconnect the main switch on the unit.
- 2 Fit the dirty filter pressure switch on the plate support supplied and secure it using two screws to the inside of the post next to the filter access panel.
- 3 Connect brown wires no. 690, terminal 2 (NO) and 691, terminal 3, (COM).
- 4 Set the pressure switch to 0.6 bar.

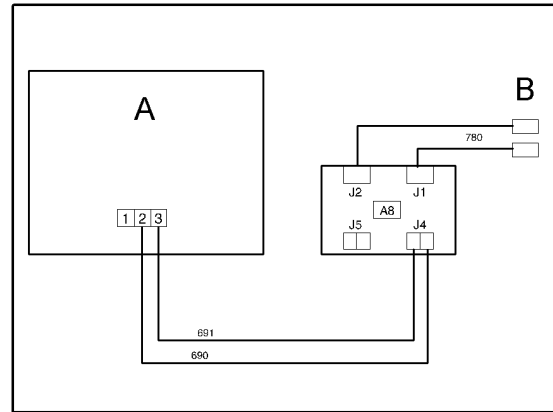
**NOTE**

*After the filters have been changed for the first time, set the pressure switch to the most suitable value for the installation.*

- 5 Fit the dirty filter control board in the electrical box.
- 6 Search for brown wires no. 690 and 601 inside the duct and connect them to connector J4 on board A8. Connect the telephone cable to connector J2 or J8 on board A2.
- 7 Once all of the connections are made, reconnect the main switch of the unit.
- 8 Check that the green LED on board A8 remains lit. Then search for and configure accessories by pressing the test button on the YKN2 Open 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 A8 is flashing to indicate that the accessory has been configured.
- 9 To check correct electrical operations, make a bridge between terminals 2 and 3 of the air pressure switch and check that the YKN2 Open board (A1) indicates the dirty filter incident with a 4-5-4 flashing sequences of the green LED . Remove the bridge and reset the YKN2 Open board (A1) to delete the incident.

**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.