



BY JOHNSON CONTROLS

Dirty filter pressure switch for Roof Top ACTIVA 017 - 175

Options and Accessories, Installation manual

Ref.: N-40437_EN 0913



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**Dirty filter pressure switch for Roof Top
ACTIVA 017 - 175**

1.1 General information

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

When the adjusted value is exceeded, the control detects the fault and indicates it on the YKN2 Open board, closes the contact on the accessory board relay and on the DPC-1 thermostat.

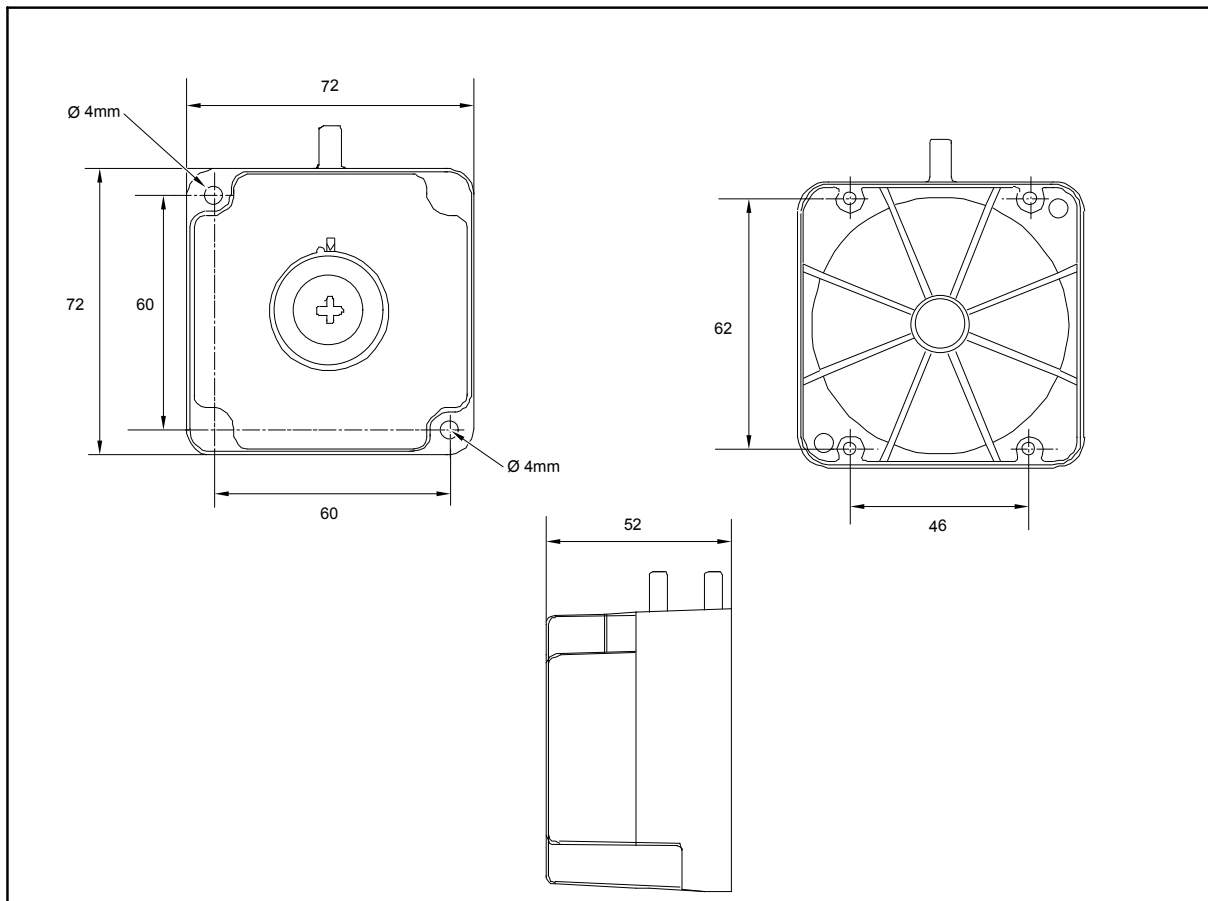
1.2 Technical specifications

This accessory includes the following components:

- Air pressure switch 0,5 / 4 mbar (P233A-4-AAC).
- 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 dimensions

Pressure switch (mm)



Accessory board (mm)

A. Green LED

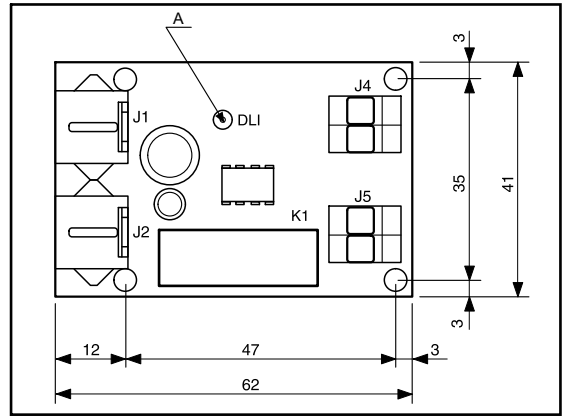
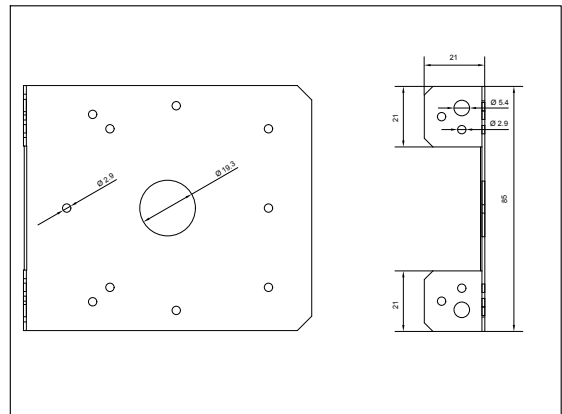
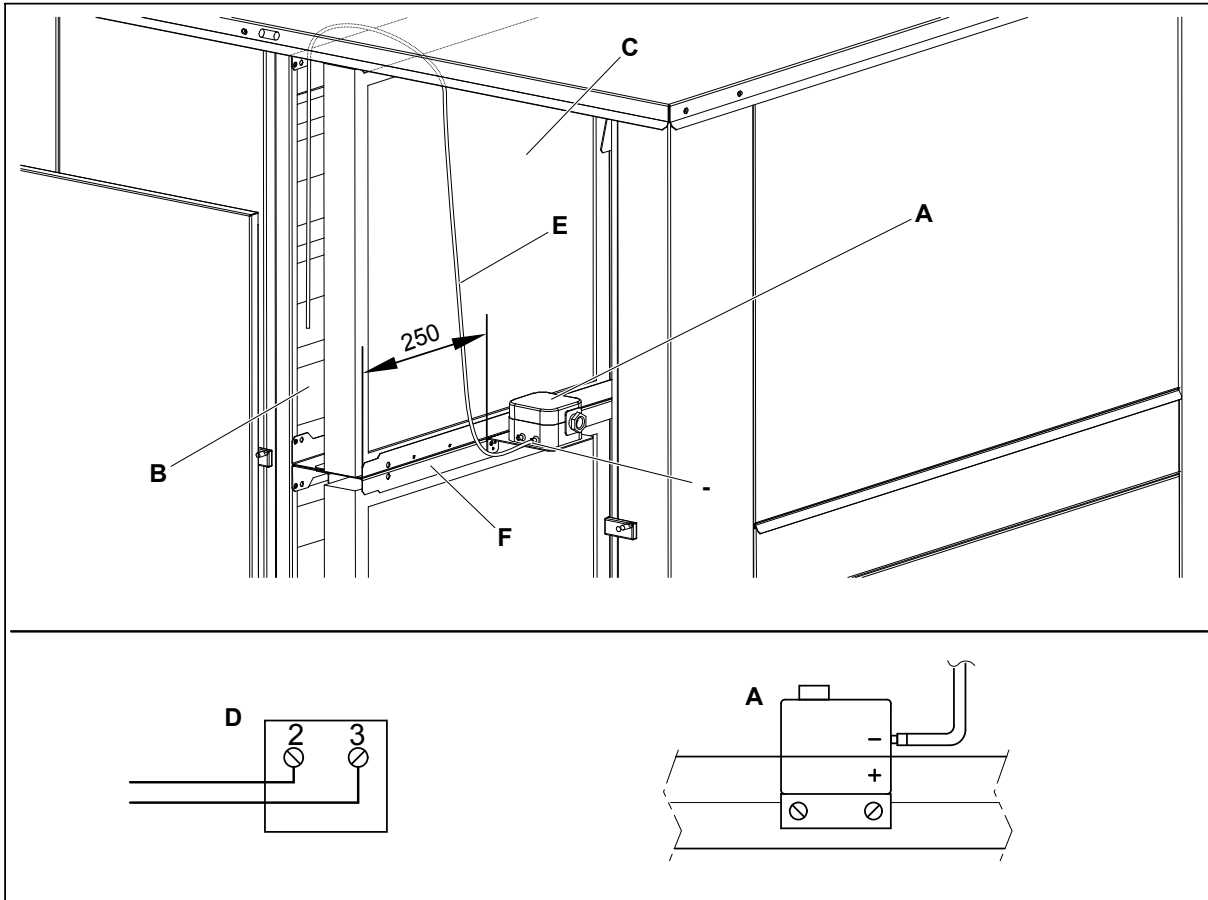


Plate support (mm)



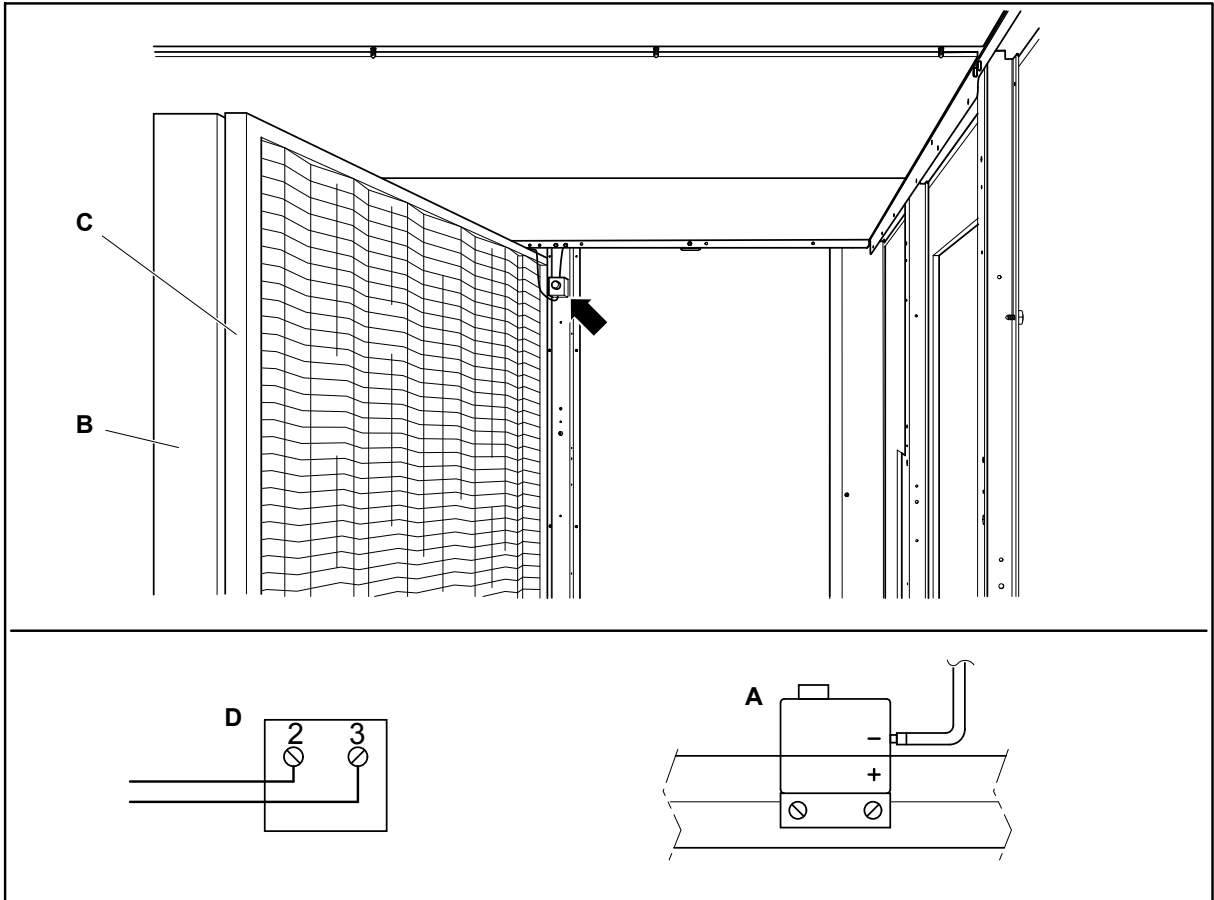
1.4 Assembly

Models 017 / 040



- | | |
|---|--|
| <p>A. Close-up of fitting the differential pressure switch.</p> <p>B. Evaporator coil.</p> <p>C. Filters.</p> <p>D. Close-up of the pressure switch connections.</p> <ul style="list-style-type: none"> • 690: Brown: Contact 2 • 691: Brown: Contact 3 | <p>E. Silicone tube</p> <p>F. Lower filter guide</p> |
|---|--|

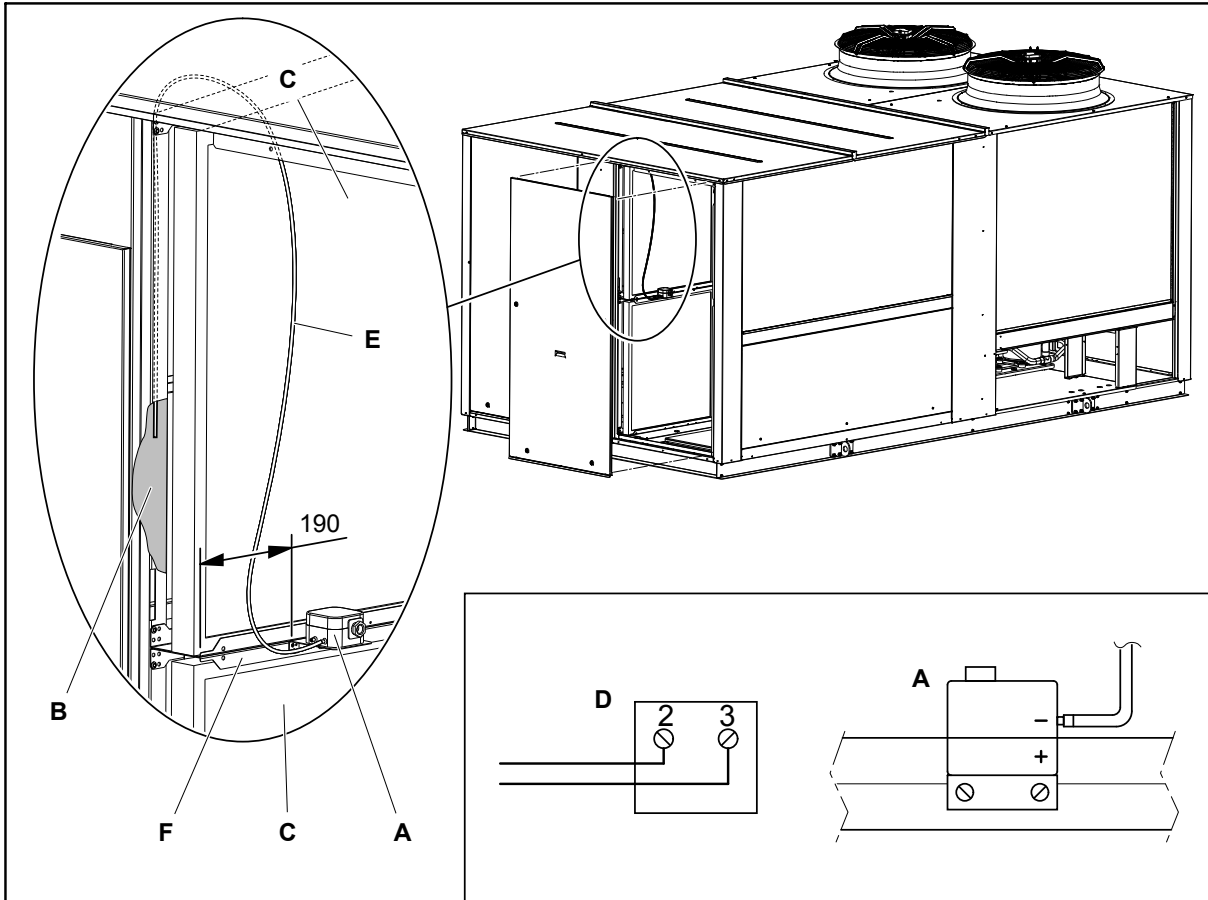
Models 045 / 090



- 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

1.4 Assembly

Models 100 / 175



- | | |
|---|--|
| <p>A. Close-up of fitting the differential pressure switch.</p> <p>B. Evaporator coil.</p> <p>C. Filters.</p> <p>D. Close-up of the pressure switch connections.</p> <ul style="list-style-type: none"> • 690: Brown: Contact 2 • 691: Brown: Contact 3 | <p>E. Silicone tube</p> <p>F. Lower filter guide</p> |
|---|--|

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 fixed with two screws on the filter guide.

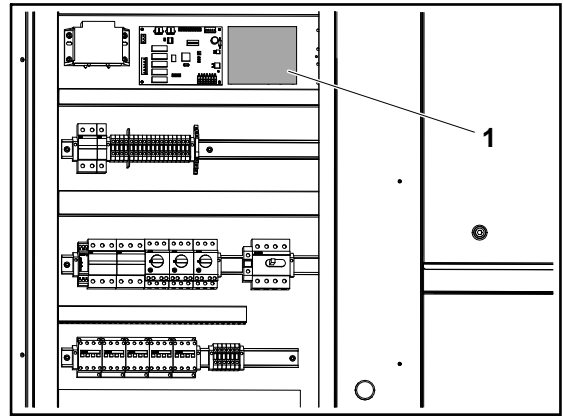
The dirty filter control board is fitted to the inside of the electrical box in the holes provided for this accessory on the side of the boards.

Pass the silicone tube on the upper filter area, over the existing rubber strip, and position them between the filters and the coil (approximate tube length: 1000 mm).

Secure the support to the filter guide using screws.

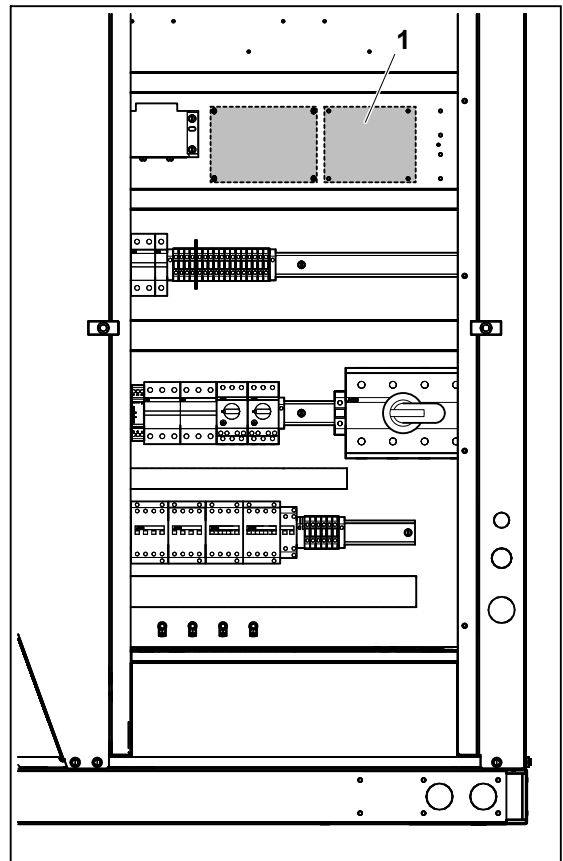
Models 017 / 040

1. Accessory circuit board.



Models 045 / 090

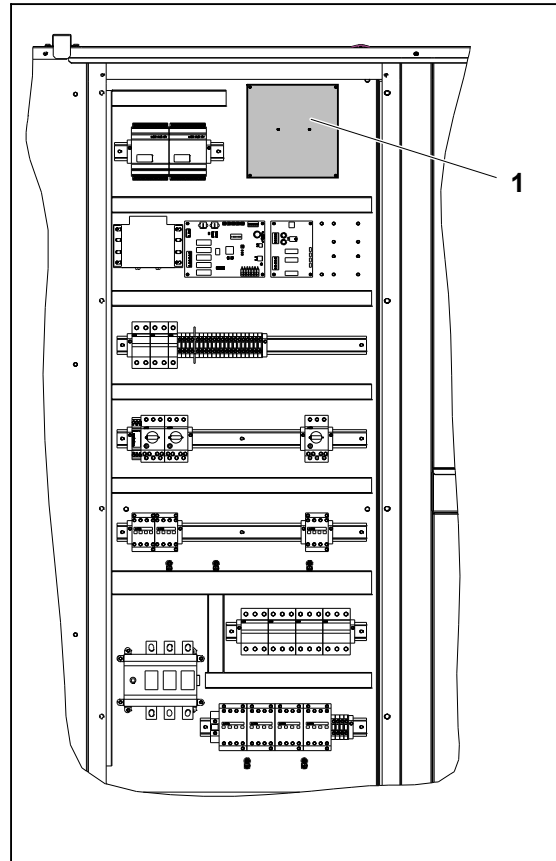
1. Accessory circuit board.



1.5 Operation

Models 100 / 175

1. Accessory circuit board.



1.5 Operation

In normal operation 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 dirty filter faults 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.

After replacing the filters, the YKN2 Open board (A1) must be reset to delete the fault.

1.6 Installation



NOTE

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

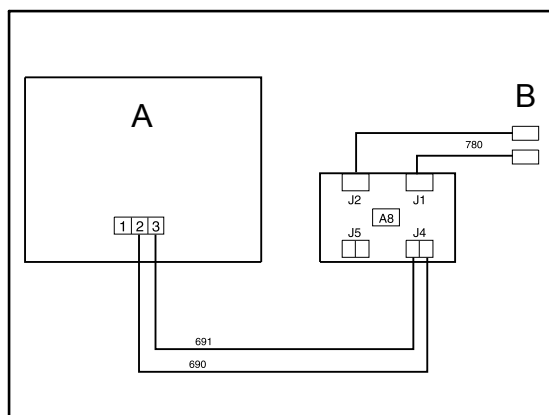
- A. Differential air pressure switch.
 - B. Accessories.
1. Disconnect the main switch on the unit.
 2. Fit the dirty filter pressure switch on the plate support supplied and secure it using two screws, on the filter guide, next to the filter access panel.
 3. Connect brown wires no. 690, terminal 2 (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 unit main switch.
8. Check that the green LED on board A8 remains lit. Next, search and configure the 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 it has switched off, check that the green LED (V1) on board A8 is flashing to indicate that the accessory has been configured.
9. To check the electrical operation, make a jumper between terminals 2 and 3 of the air pressure switch and check that the YKN2 Open board (A1) indicates dirty filter faults with a 4-5-4 flashing sequences of the green LED. Remove the jumper and reset the YKN2 Open board (A1) to delete the fault.



CAUTION

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

Data and measurements subject to changes without prior notice.