



**fantech**<sup>®</sup>  
a systemair company

Installation, Operation and Maintenance instruction

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## **DB10 — Pressure Switch Kit**



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# 1 Introduction

## 1.1 Product Description

This product is a positive pressure sensing switch that recognizes air pressure and activates the product from an independent electrical circuit. This sequence prevents the need for more connections through the appliance's circuit which may void the manufacturers' warranty as well as manual systems.

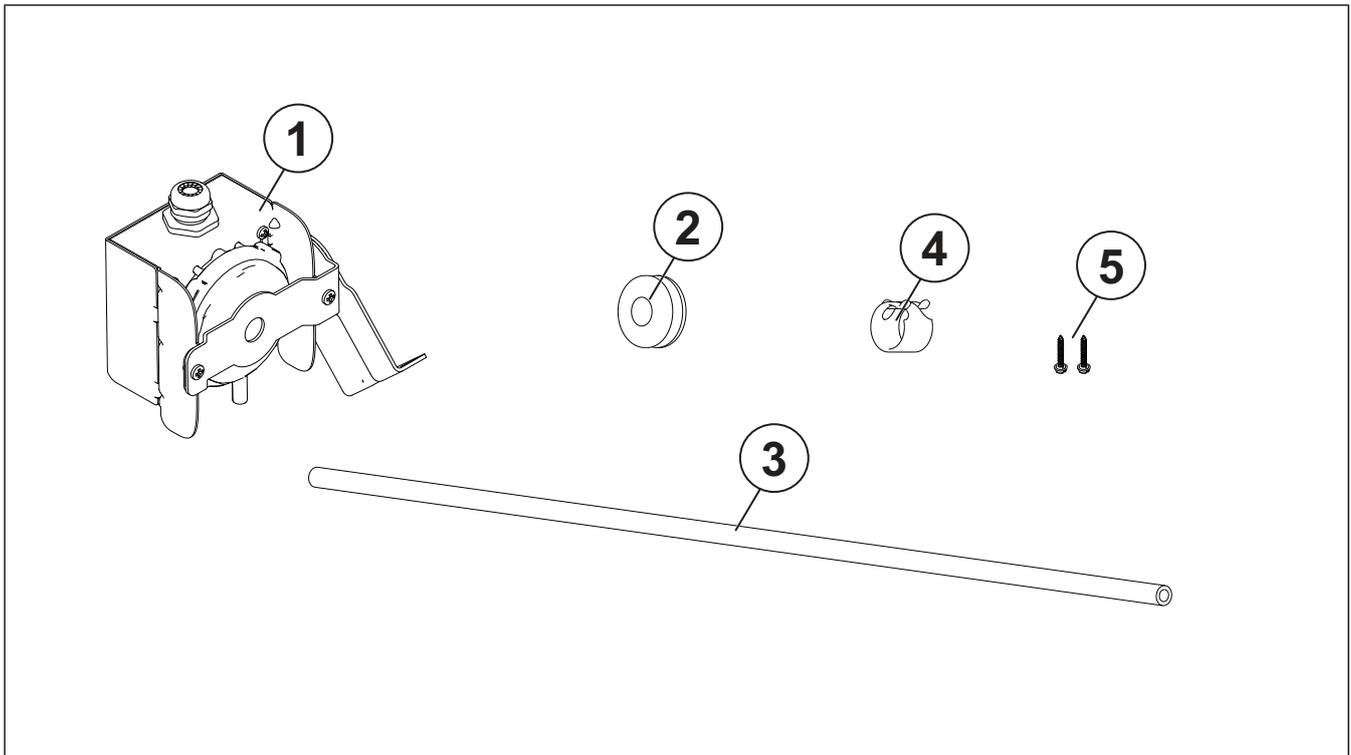
## 1.2 Fantech Warranty



Make a scan of the code above to access Fantech's warranty in English, French, or Spanish. This product has a 1 year warranty.

If additional support is needed to retrieve the warranty, visit [fantech.net](http://fantech.net); call (800) 747-1762 (US), (800) 565-3548 (Canada), or +52 55 1328-7328 (Latin America); email [support@fantech.net](mailto:support@fantech.net); or mail us at 10048 Industrial Blvd, Lenexa, KS 66215 United States or at 50 Kanalfäkt Way, Bouctouche, NB E4S 3M5 Canada.

## 1.3 Product Overview



1. DB10, #95902
2. Grommet, quantity 1
3. 15 in. (381 mm.) Tube, quantity 1

4. Spring-band Clamp, quantity 1
5. Wood Screws, quantity 2 – 1 in. (25 mm.)
6. Wire Nuts, quantity 4 (not shown)

## 2 Safety

### 2.1 Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



#### Warning

If you do not obey these instructions, there is a risk of death or injury.



#### Caution

If you do not obey these instructions, there is a risk of damage to the product, other materials or the adjacent area.

#### Note:

Information that is necessary in a given situation.

## 3 Installation

### 3.1 To Do Before the Installation

#### 3.1.1 About the Pressure Switch



#### Caution

Do not move the dial on the back of the pressure switch. This is set at the factory at an optimal position.

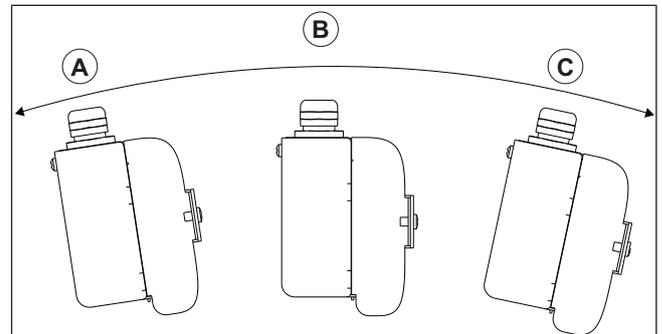


#### Caution

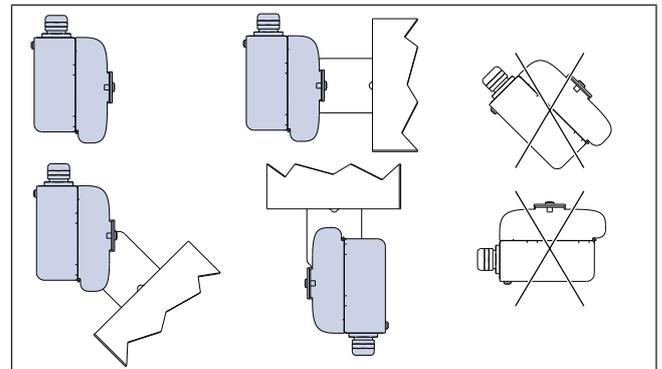
Do not install this product outside.

Make sure the pressure switch is in a vertical position. Refer to the figures that follow for more information.

For a shorter wire connection, put the product close to the connected appliance.



- A. More Sensitivity
- B. Neutral Position
- C. Less Sensitivity

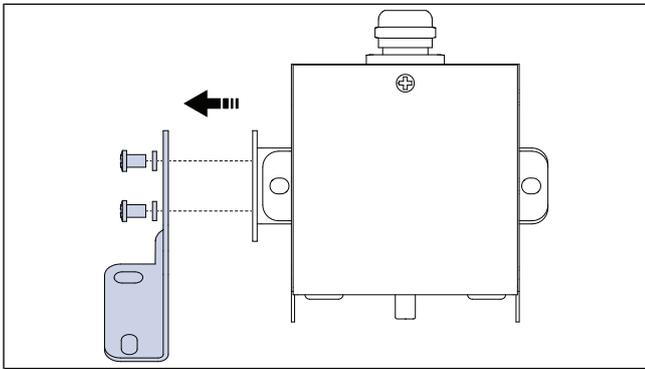


### 3.2 To Install the Product

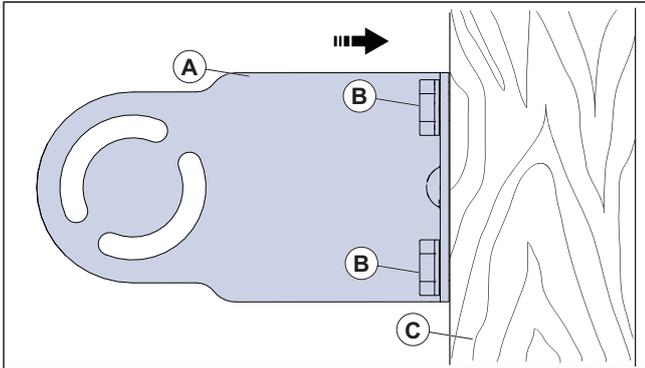
#### Note:

Make sure the duct system has a minimum of one elbow.

- 1 Attach an electrical box (not included) to a wall or another building structure.
- 2 Remove the two (2) set screws and washers that attach the bracket to the product. Put the hardware aside.

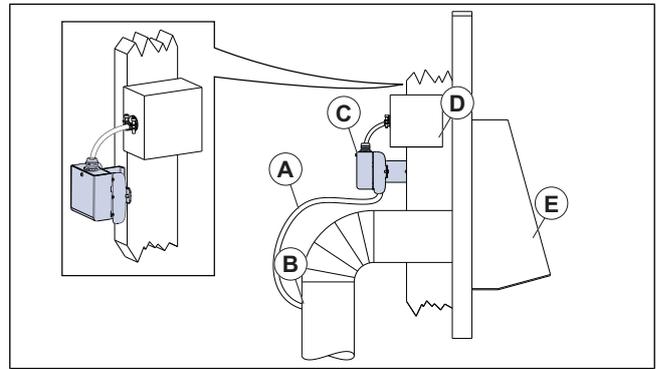
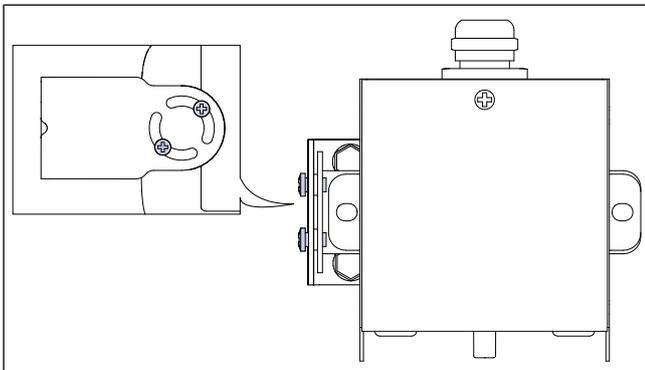


- 3 Turn the bracket 180°.
- 4 Use two (2) 1 in. (25 mm.) wood screws to attach the mounting bracket to a support beam at the selected location.



- A. Bracket
- B. Wood Screws
- C. Support Beam

- 5 Attach the product to the bracket with the two (2) set screws and washers again.



**Fig. 1 Recommended Installation Setup**

- A. Tube
- B. 1/4 in. (6 mm.) maximum
- C. DB10, #95902
- D. Electrical Box (Not Included)
- E. Exterior Fan

### 3.3 To Install the Grommet and Tubing



#### Warning

A drill that hits metal duct can make burrs. Be careful not to be cut by the burrs.



#### Caution

Do not connect the tubes in such a manner as to allow condensation from the duct to collect in the tubes.

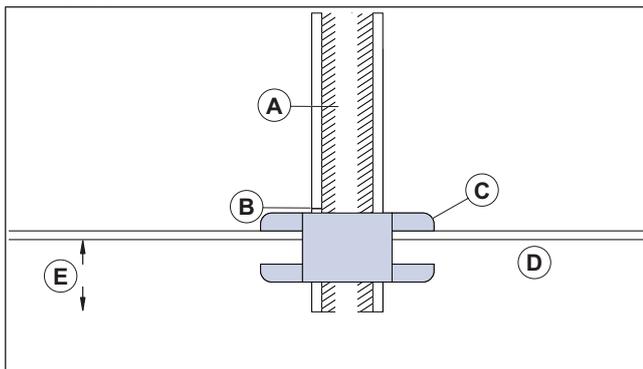
- 1 Drill a 7/16 in. (11 mm.) diameter hole in the duct wall through the high pressure side of the elbow (between the appliance and the elbow).

Refer to section 3.2 To Install the Product.

- 2 Carefully put the grommet into the hole.
- 3 Push one end of the tube over the nipple on the control.

Safety the tube to the nipple with the supplied spring-band clamp.

- 4 Make a mark a distance of 1/2 in. (13 mm.) from the other end of the tube.
- 5 Move this end of the tube through the center of the grommet up to the mark as shown in the figure from this section.



- A. Tube
- B. 1/2 in. (13 mm.)
- C. Grommet
- D. Duct Wall
- E. 1/4 in. (6 mm.) maximum

## 4 Electrical connection

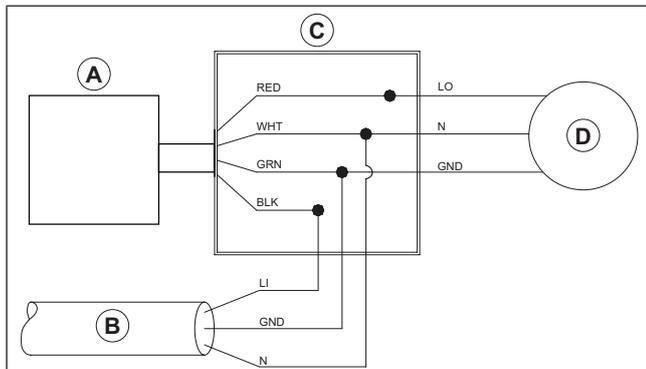
### 4.1 To Connect the Product to the Power Supply

Legend for Diagram	
English Terminology	Meaning
RED	Red
WHT	White
GRN	Green
BLK	Black
LI	Line
GND	Ground
N	Neutral
LO	Load

#### Note:

You will need a 3/8 in. (10 mm.) cable restraint connector to hold the wires through the knockout on the side of the electrical box.

- 1 Bring the power supply through the cable restraint connector on the electrical box.
- 2 Connect the neutral wire of the power supply to the white wire with a wire nut.
- 3 Connect the 115V line of the power supply to the black wire with a wire nut.
- 4 Connect the ground wire of the power supply to the green wire with a wire nut.
- 5 Safety the power supply with the cable restraint connector to the electrical box.



- A. DB10, #95902  
B. 115 Volts Alternating Current (VAC) Power Supply  
C. Electrical Box (Not Included)  
D. Motor Wires

## 5 Commissioning

### 5.1 To Commission and Test the Product

#### Note:

The procedure that follows will make sure that the product works correctly. Use this procedure at setup to make sure that the system operates correctly or as a system diagnostic when needed.

- 1 Make sure the product has power.
- 2 Start the appliance to make positive pressure in the duct.
- 3 The product will start to operate five (5) seconds after the appliance starts.
- 4 After five (5) minutes, the product will pause momentarily to do a pressure check.
  - If the product senses positive pressure within the duct, the product will start again and will operate for another five (5) minutes.
  - If the product does not sense positive pressure within the duct, the product will operate for a five (5) minute, post-purge, cooling cycle. Then, it will stop.
- 5 If the product operates correctly, no other action is needed.

## **6 Operation**

### **6.1 How the Pressure Sensor Switch Operates**

This product is a positive pressure sensing switch that recognizes air pressure and activates the product from an independent electrical circuit. This sequence prevents the need for more connections through the appliance's circuit which may void the manufacturers' warranty as well as manual systems.

Power to the product is connected in series through a normally open terminal on the switch; while a pressure tap is connected to a nipple on the bottom of the switch.

When the appliance starts to operate, positive pressure in the duct causes the switch diaphragm to expand that closes the circuit to the product.

The product will operate for a total of ten (10) minutes in five (5) minute intervals. At each interval, the product will do a pressure check to look for positive pressure in the duct.

If there is positive pressure, the product will operate for five (5) more minutes.

If there is not positive pressure, the product will operate for a five (5) minute, post-purge, cooling cycle.

The cycle will continue until the appliance has stopped and the pressure check has expired.

The product will not operate until it senses positive pressure in the duct again.

## **7 Maintenance**

### **7.1 To Maintain the Product**

You will not have to maintain this product.

Obey the manufacturer's instructions on how to maintain the connected appliance.

## 8 Troubleshooting



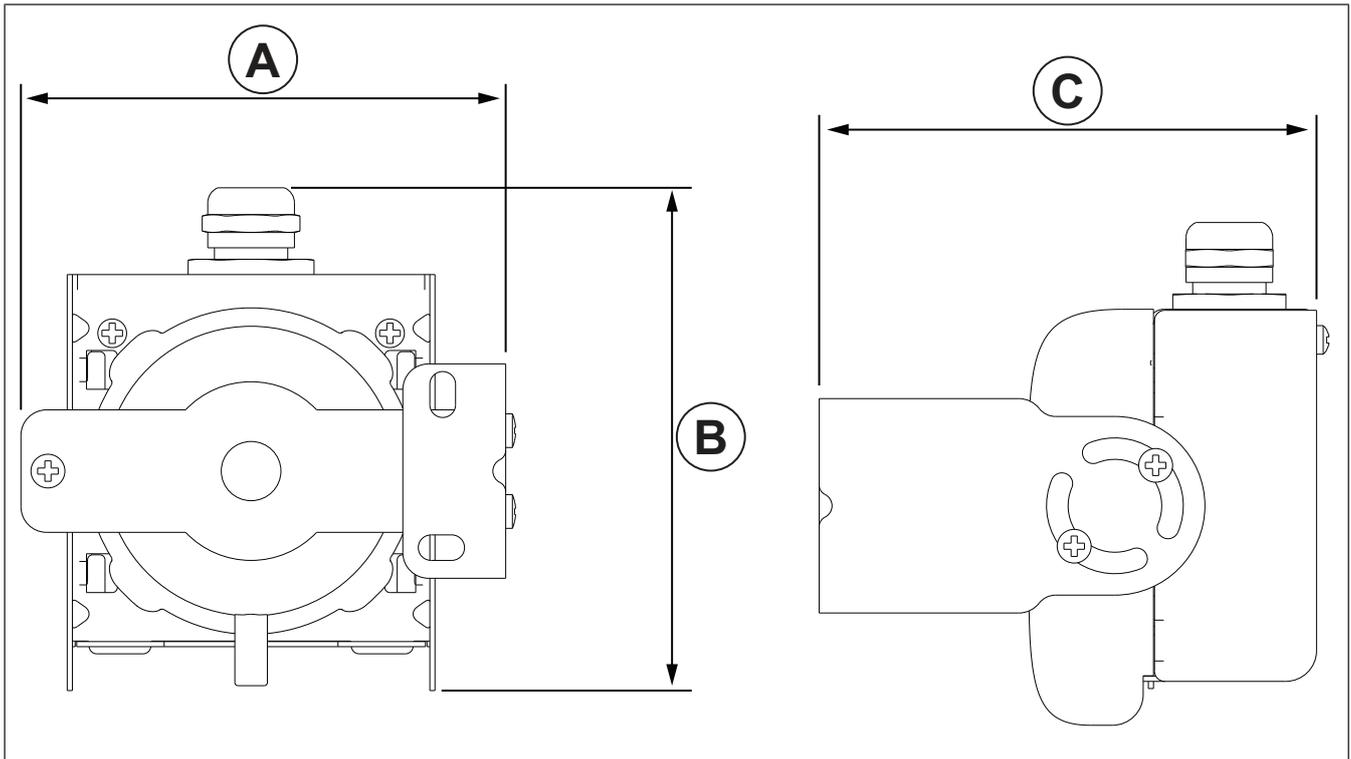
### **Warning**

Make sure that the power supply to the appliance/product is OFF.

Problem	Cause	Solution
The connected appliance does not operate when it is supposed to.	The power supply does not have the necessary voltage.	Make sure the power supply has the correct voltage.
	You have wired the product incorrectly.	Wire the product correctly. Refer to section 4.1 <a href="#">To Connect the Product to the Power Supply</a> .
	The switch diaphragm is not in a vertical position.	Refer to section 3.1.1 <a href="#">About the Pressure Switch</a> .
	The product's tube has a kink or blockage.	<ol style="list-style-type: none"> <li>1. Remove the blockage or loosen the kink.</li> <li>2. Make sure the tube has a tight seal where it enters the duct.</li> </ol> Refer to section 3.3 <a href="#">To Install the Grommet and Tubing</a> .
	The switch's diaphragm is in a vertical position, but the appliance does not start.	<ol style="list-style-type: none"> <li>1. Remove the end of tube where it is installed into the duct.</li> <li>2. Lightly blow into the tube for more than five seconds.</li> <li>3. The appliance should operate. If it does not, go to the next section.</li> </ol>
	The appliance does not start after you blew into the pressure tube.	<div data-bbox="1043 887 1471 1144" style="border: 1px solid black; padding: 5px;">  <p><b>Caution</b> This conditional is for qualified technicians only. Speak with Fantech technical support if you are not a qualified technician.</p> </div> <ol style="list-style-type: none"> <li>1. Disconnect the power supply at the source.</li> <li>2. Disconnect the pressure switch leads from the terminal block.</li> <li>3. Connect the power supply directly to the appliance.</li> </ol> Refer to the wire diagram within this section. <ol style="list-style-type: none"> <li>4. Energize the appliance.</li> <li>5. If appliance does not start, speak with Fantech technical support.</li> </ol> <div data-bbox="1046 1592 1465 1731" style="text-align: center;"> </div> <p>A. 115 Volts Alternating Current (VAC) Power Supply B. Capacitor C. Motor Wires</p>

## 9 Technical data

### 9.1 Product Dimensions



#### Note:

Dimensions are given in inches (mm).

	A	B	C
DB10, #95902	3-1/4 (83)	3-7/8 (98)	3-7/8 (98)



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