

Installation and Operation Manual

DB10 Kit

Pressure Sensing Switch

DB10 Kit Includes:

- DB10 Pressure Sensing Switch, 1 pc
- 15" Tubing, 1pc
- Grommet for Tubing, 1pc
- Wire Nuts for Electrical Connection, 4 pcs
- Conduit connector, 1pc



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Note	Warning / Important note	Information	Technical information	Practical tip



Read and Save these instructions for future reference.

Pressure Sensor Switch Operation

The DB10 is a positive pressure sensing switch that is used with a dryer exhaust booster fan. A booster fan is recommended where dryer output alone is insufficient to maintain adequate airflow in a long dryer exhaust duct run.

The DB10 senses dryer operation and activates the booster fan from an independent electrical circuit (120VAC).

The electrical supply to the booster fan is connected in series through the DB10 switch. One end of a pressure tube is connected to a nipple on the switch, the other end of the tube is tapped into the dryer duct through a grommet.

Within ten seconds of the dryer beginning operation, positive pressure in the duct causes the switch diaphragm to close, activating the electronic timer circuit. The timer directs power to the fan in consecutive five minute cycles, effectively providing continuous boost as long as the dryer is on. When the dryer finishes its operation, the fan will complete the five minute cycle that it had started before the dryer stopped and then it will begin one final clearing cycle of five minutes. This means that the fan will continue to run for between five and ten minutes after the dryer has stopped.

Installation Instructions

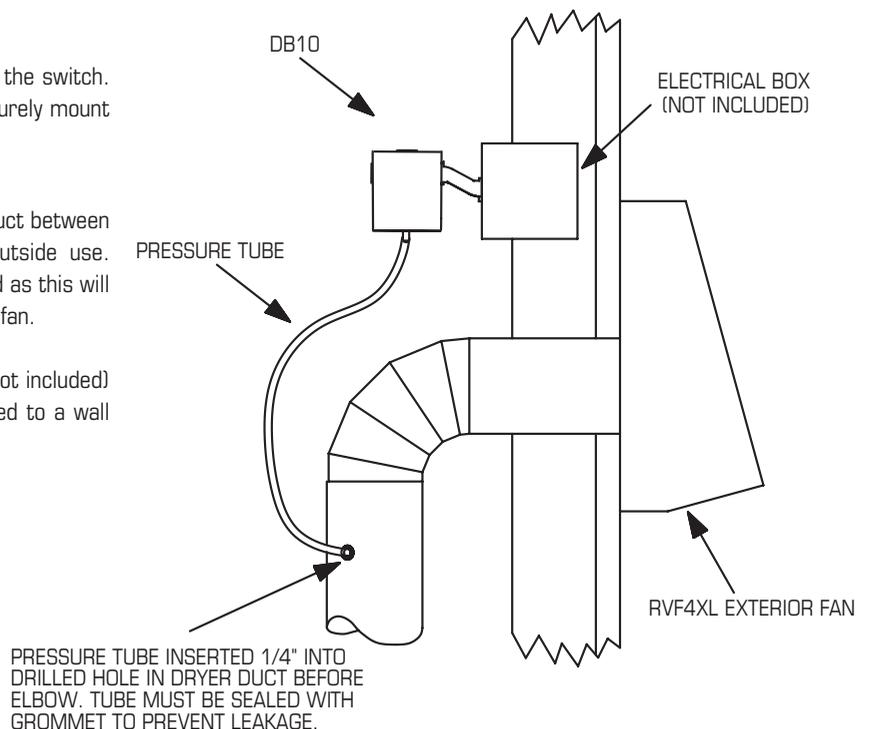
Step 1. Mount conduit

Unscrew and remove the bracket and cable connector from the switch. Thread the switch wires through the conduit connector. Securely mount the conduit to the switch.

Step 2. Selecting Switch Location

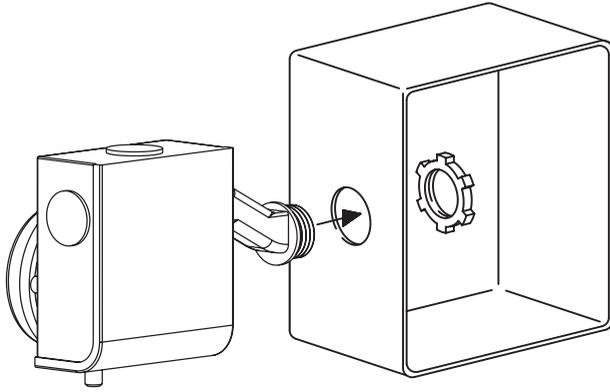
The DB10 switch can be located anywhere along the dryer duct between the dryer and the fan. The switch is not intended for outside use. Locating the switch close to the booster fan is recommended as this will allow a short wiring connection between the switch and the fan.

The DB10 should be connected to an electrical wiring box (not included) as shown. The electrical box should be permanently attached to a wall or other building structure.



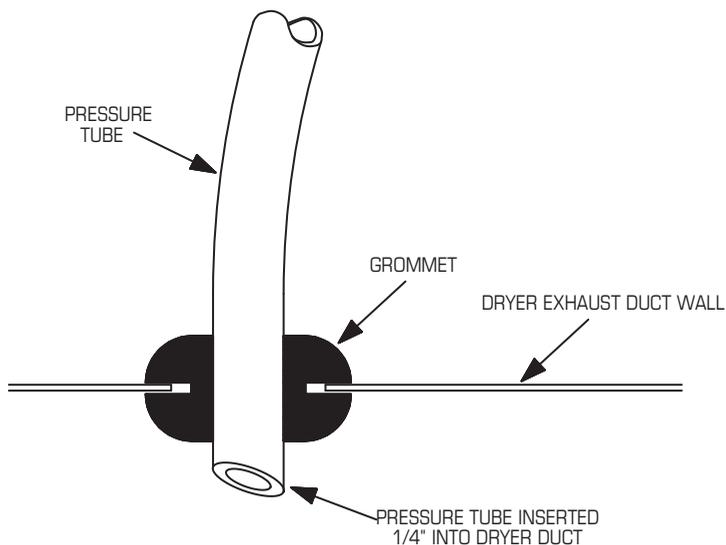
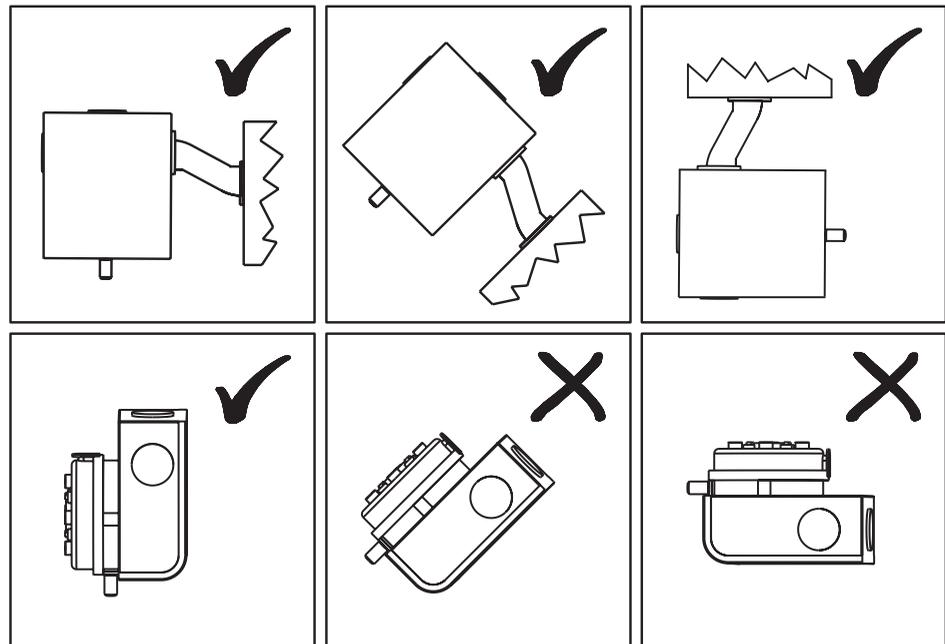
Step 3. Mount Switch

Insert the DB10 conduit connector through a knock-out in the electrical box and secure with the nut as shown.



Pressure Switch Diaphragm Positioning

Switch must be positioned so the diaphragm is maintained in vertical plane.



Step 4. Installing Grommet and Tubing

Note

Grommet should be mounted no more than 15 inches from the pressure switch in order to allow the tubing to reach from the switch to the duct.

First, drill a 7/16 -1/2 inch diameter hole in the duct wall. Carefully insert the grommet into the hole. (Drilling a metal duct may produce burrs. Be careful not to be cut or pricked by the burrs or the duct.) Next, force one end of the tubing over the nipple on the switch. It may be necessary to use a lubricant in order to slide the tubing over the entire nipple.

Make a mark a distance of 1/2 inch from the other end of the tubing. Slide this end of the tubing through the center of the grommet up to the mark. Do not use a lubricant on this end of the tubing.

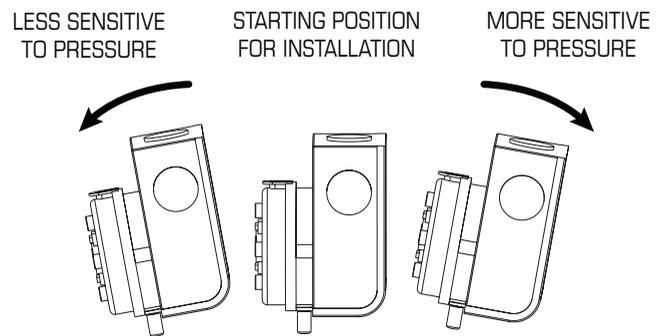
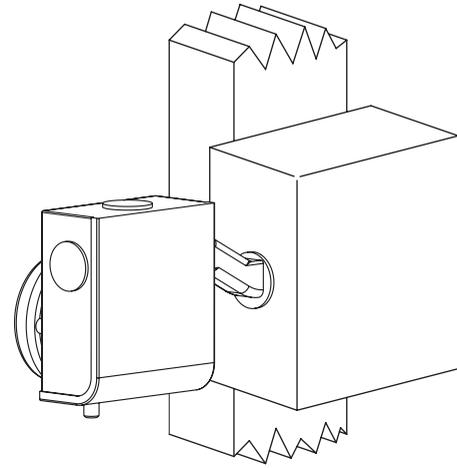
Additional Installation Notes

The DB10 operates by sensing pressure in the dryer duct. The fan by itself may not create enough resistance in the system for sufficient pressure to build up. For this reason, the duct system should include at least one elbow and the pressure tube should be tapped into the high pressure side of this elbow (between the dryer and the elbow).

For proper operation, the DB10 should be installed vertically as shown. If installed horizontally or on a slant, gravity will cause the diaphragm inside the switch to move out of its neutral position. This can either prevent the fan from being activated when the dryer is on or it can cause the fan to be activated by itself without dryer operation.

Since the DB10 is activated by pressure inside the duct, sufficient pressure can be generated by wind blowing into the duct from the outside. If the wind gust is sustained for five seconds or more, the fan may be activated and run for ten minutes. Should this occur, it will cause no harm to the fan or to the dryer.

Deviation from the vertical installation should not be necessary. However, some circumstances may require adjustments for sensitivity. If the airflow from the dryer is not enough to activate the switch, the sensitivity can be adjusted as shown.



Electrical Connection



DO NOT CONNECT POWER SUPPLY UNTIL SWITCH IS COMPLETELY INSTALLED. MAKE SURE ELECTRICAL SERVICE TO THE SWITCH IS LOCKED IN "OFF" POSITION.

WARNING: TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS - OBSERVE THE FOLLOWING:

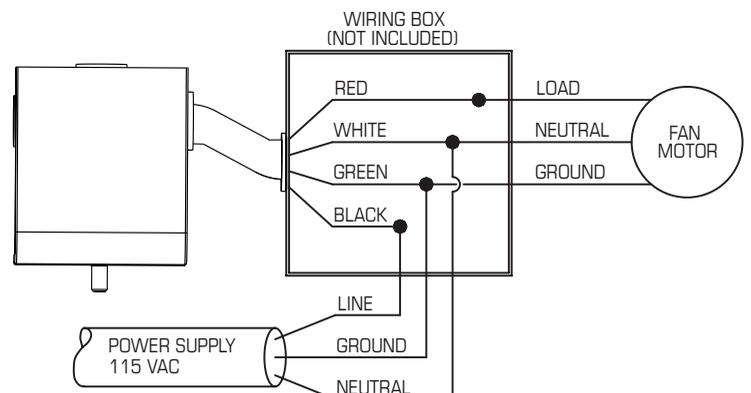
1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the factory.
2. Before servicing or cleaning, switch power off at service panel and lock service panel to prevent circuit from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction.
4. When cutting or drilling into wall or ceiling, do not damage electrical wires or other hidden utilities.

The DB10 is suitable for controlling 115VAC fans up to 3.8 amps.

Wiring Procedure

A 4"x4" electrical box is recommended for mounting the DB10 switch and for making the electrical connections to the power supply and to the fan.

Using the wire nuts provided, connect the incoming electrical supply, the switch leads and the power supply to fan as shown in the schematic on the right.



Recommended Maintenance

The DB10 switch requires no maintenance.

The dryer exhaust duct will require periodic cleaning to remove any accumulated lint. Time between cleaning intervals will depend on usage and any suggested guidelines from the dryer manufacturer. The fan can be removed from the outside wall to facilitate cleaning of the duct.

The external fan cover can be removed to clean the impeller without removing the fan from its installed position.

Disconnect the power supply before removing the fan or its cover.

The external cover must be in place for the fan to work properly.

Troubleshooting



PRIOR TO PERFORMING STEPS 1 - 4, BE CERTAIN THAT THE ELECTRICAL SUPPLY TO THE FAN/SWITCH IS TURNED OFF.

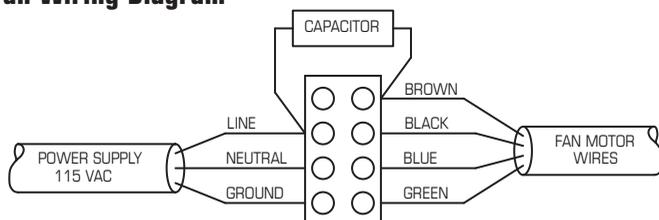
If fan fails to start when the dryer cycle begins, please follow the procedure listed below:

1. Check the incoming supply for proper voltage.
2. Consult schematic shown on Page 3 of these instructions to ensure proper connection.
3. If possible, use a meter to test for continuity across the fan motor leads. In order to do this, the capacitor and pressure switch must be disconnected (do not test the capacitor - it will not meter continuity). If motor leads show continuity, rewire the fan, capacitor and pressure switch.
4. Turn on the electrical supply and restart the dryer cycle. Check to be certain that fan starts.

If fan still fails to start after performing Steps 1 - 4, continue following the procedure as listed below:

5. Verify that the pressure switch diaphragm is vertical as illustrated on Page 2 of these instructions. If the diaphragm is not vertical, reposition the pressure switch and check for fan operation against another dryer cycle.
6. Verify that pressure tube is not crimped or obstructed and that it is sealed tight where it enters the dryer duct.
7. If switch diaphragm is vertical and fan still fails to start, with electrical supply connected, remove end of tube from where it is inserted into dryer duct. Blow into the tube and maintain pressure for more than five seconds after the switch clicks. This action should start the fan. Once it starts, it should complete two five minute cycles separated by a period of 20 to 30 seconds.
8. If fan fails to start after blowing into the pressure tube:
 - a. Disconnect incoming power supply at the source.
 - b. Remove the pressure switch leads from the wiring terminal block
 - c. Connect the incoming power supply directly to the fan motor as shown in Fan Wiring Diagram below.
 - d. Turn on power to fan.
9. If fan fails to start, please consult Fantech for additional technical support.

Fan Wiring Diagram



Fan Wiring - Fan Only - Reference
for Troubleshooting Step 8.c.

WARRANTY

Five (5) Year Warranty

This warranty supersedes all prior warranties

DURING ENTIRE WARRANTY PERIOD:

Fantech will repair or replace any part which has a factory defect in workmanship or material. Product may need to be returned to the Fantech factory, together with a copy of the bill of sale and identified with RMA number.

FOR FACTORY RETURN YOU MUST:

- Have a Return Materials Authorization (RMA) number. This may be obtained by calling Fantech either in the USA at 1.800.747.1762 or in CANADA at 1.800.565.3548. Please have bill of sale available.
- The RMA number must be clearly written on the outside of the carton, or the carton will be refused.
- All parts and/or product will be repaired/replaced and shipped back to buyer; no credit will be issued.

OR

The Distributor may place an order for the warranty part and/or product and is invoiced. The Distributor will receive a credit equal to the invoice only after product is returned prepaid and verified to be defective.

FANTECH WARRANTY TERMS DO NOT PROVIDE FOR REPLACEMENT WITHOUT CHARGE PRIOR TO INSPECTION FOR A DEFECT. REPLACEMENTS ISSUED IN ADVANCE OF DEFECT INSPECTION ARE INVOICED, AND CREDIT IS PENDING INSPECTION OF RETURNED MATERIAL. DEFECTIVE MATERIAL RETURNED BY END USERS SHOULD NOT BE REPLACED BY THE DISTRIBUTOR WITHOUT CHARGE TO THE

Limitation of Warranty and Liability

This warranty does not apply to any Fantech product or part which has failed as a result of faulty installation or abuse, incorrect electrical connections or alterations made by others, or use under abnormal operating conditions or misapplication of the product or parts. We will not approve for payment any repair not made by us or our authorized agent without prior written consent. The foregoing shall constitute our sole and exclusive warranty and our sole exclusive liability, and is in lieu of any other warranties, whether written, oral, implied or statutory. There are no warranties which extend beyond the description on the page hereof. In no event, whether as a result of breach of contract, or warranty or alleged

END USER, AS CREDIT TO DISTRIBUTOR'S ACCOUNT WILL BE PENDING INSPECTION AND VERIFICATION OF ACTUAL DEFECT BY FANTECH.

THE FOLLOWING WARRANTIES DO NOT APPLY:

- Damages from shipping, either concealed or visible. Claim must be filed with freight company.
- Damages resulting from improper wiring or installation.
- Damages or failure caused by acts of God, or resulting from improper consumer procedures, such as:
 1. Improper maintenance
 2. Misuse, abuse, abnormal use, or accident, and
 3. Incorrect electrical voltage or current.
- Removal or any alteration made on the Fantech label control number or date of manufacture.
- Any other warranty, expressed, implied or written, and to any consequential or incidental damages, loss or property, revenues, or profit, or costs of removal, installation or reinstallation, for any breach of warranty.

WARRANTY VALIDATION

- The user must keep a copy of the bill of sale to verify purchase date.
- These warranties give you specific legal rights, and are subject to an applicable consumer protection legislation. You may have additional rights which vary from state to state.

negligence, defect incorrect advice or other causes, shall Fantech be liable for special or consequential damages, including, but not limited to, loss of profits or revenue, loss of use of equipment or any other associated equipment, cost of capital, cost of substitute equipment, facilities or services, downtime costs, or claims of customers of purchase for such damages. Fantech neither assumes or authorizes any person to assume for it any other liability in connection with the sale of product(s) or part(s). Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages so the above limitations and exclusions may not apply to you.

NOTES

Fantech reserves the right to make technical changes.
For updated documentation please refer to www.fantech.net

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