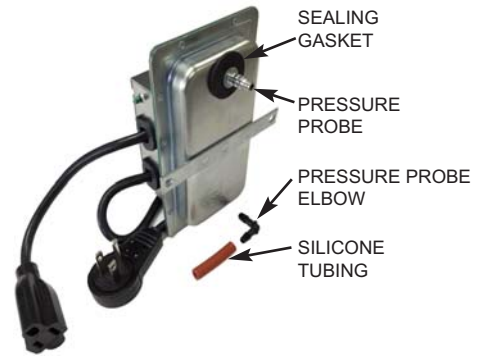




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MODEL PS1503P Duct Airstat™ Switch (Plug-in)

SPECIFICATIONS

Electrical Ratings: 7.0 Amps Non-Inductive (Air Purifier)
2.5 Amps Inductive (Duct Booster, Humidifier)

Electrical Switch: SPST, Normally Open, Non Adjustable

Operating Pressure: (+.05 ± .02" W.C.)

Maximum Pressure: 1/2 PSI

Operating Position: Diaphragm must be vertical

Operating Temperature Range: -40 to 180°F.

Dimensions: 5.75" x 4.5" Across Bracket, 2.75" High

PS1503 DUCT AIRSTAT OPERATION

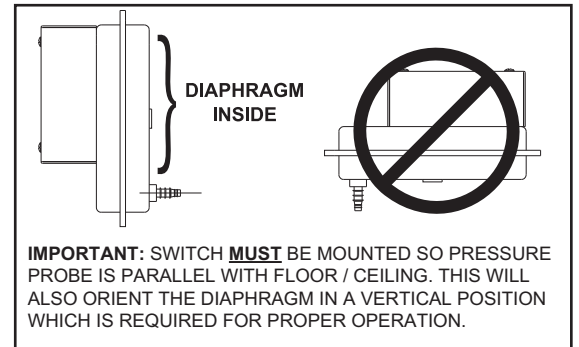
The PS1503P Duct Airstat switch is designed to sense the positive pressure increase in a supply plenum or duct when an air handler or furnace blower is in operation. The increased duct pressure expands a diaphragm which in turn mechanically closes the normally open electrical switch contacts to activate accessories in tandem with the central blower. Typical accessory devices activated include duct booster fans, UV air purification units and furnace mounted humidifiers.

MOUNTING ORIENTATION & LOCATION

IMPORTANT: Since gravity will affect switch operation, the switch must be mounted so that the tip of the Pressure Probe points in a line that is parallel to the floor and ceiling which will orient the diaphragm in a vertical position that is required for proper operation, (See Figure A).

Install the pressure switch on the supply plenum or in a main supply duct. Installing too close to a duct booster fan will cause the switch to short cycle the fan, (See Figure B). Mark a point on the side of the plenum or duct where a hole will be drilled for the barbed sensing pressure probe. Verify that the mounting bracket holes will allow switch to be securely fastened to the duct or plenum.

FIGURE A



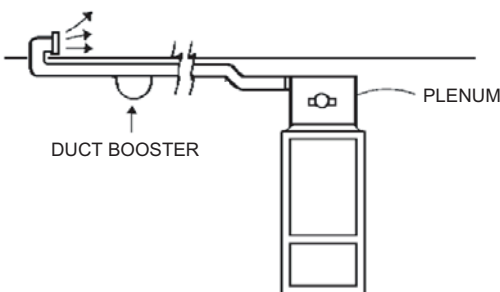
IMPORTANT: SWITCH MUST BE MOUNTED SO PRESSURE PROBE IS PARALLEL WITH FLOOR / CEILING. THIS WILL ALSO ORIENT THE DIAPHRAGM IN A VERTICAL POSITION WHICH IS REQUIRED FOR PROPER OPERATION.

INSTALLATION

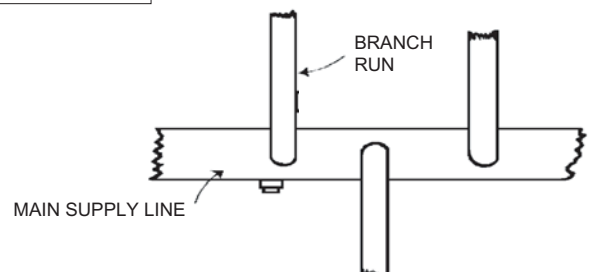
FIGURE B

INSTALL SWITCH ON MAIN SUPPLY PLENUM OR DUCT. SWITCH MUST BE MOUNTED WITH PRESSURE PROBE PARALLEL TO FLOOR / CEILING.

SIDE VIEW



TOP VIEW



IMPORTANT: Since gravity will affect the switch's operation the switch **must be** mounted so that the tip of the Pressure Probe points in a line that is parallel to the floor and ceiling, (See Figure A). For round ducts the brackets may be bent if needed for a secure attachment and seal of the pressure sensing probe, (See Figure C).

Mark the plenum or duct at a place that conforms with the Mounting Orientation & Location directions and will allow the mounting bracket to be securely fastened. Drill a 1/2" hole for the pressure sensing probe assembly. Insert the pressure sensing probe into the hole and mark the duct or plenum through the two mounting holes in the bracket. Drill (2) 1/16" pilot holes where mounting bracket holes were marked.

Push the included silicone tubing onto the barbed pressure probe and push the 90° plastic elbow into the open end of the tubing. Orient the open end of the elbow towards the direction of the central blower / air handler, (See Figure D).

Insert the elbow into the duct or plenum by bending the tubing back to gain clearance for the elbow, making sure the elbow's open end points towards the central blower. Make sure that the black foam donut shaped sealing gasket around the probe is in place. Secure the switch to the duct or plenum with the (2) provided #8 sheet metal screws.

Prior to plugging in you can validate that the pressure switch is installed where the central blower / air handler generates enough pressure to activate the switch by turning on the blower and listening for a click indicating switch closure or measuring switch continuity. If the switch does not close with the central blower operating remove switch, seal the holes with duct tape and reinstall closer to the central blower / air handler.

FIGURE C



BRACKETS MAY BE BENT TO FORM AROUND PIPE FOR SECURE ATTACHMENT.



FIGURE D



PS1503P POWER CONNECTIONS

WARNING: Do not use to power motors that exceed 2.5 amps @ 120 VAC. Non-Inductive loads should not exceed 7 amps.

Plug the power cord from the fan or other 120 VAC device into the receptacle of the cord of the PS1503P. Insert the 3 prong plug from the PS1503P into a grounded power outlet. Extension cords used in conjunction with the PS1503P should be a minimum of 18 gauge and include an electrical ground. Secure loose electrical cords with P-clips or zip ties.

TROUBLESHOOTING

Installations in larger ducts or "dead spots" in duct work may not create enough positive pressure "impact" to activate the Duct Airstat. Try locating pressure probe at several points and make sure the silicone tubing with pressure probe elbow are installed with elbow opening pointing towards the direction of the central blower / air handler. Contact Tjernlund Products customer service @ 1-800-255-4208 or email us at fanmail@tjfans.com for further assistance.

ALSO AVAILABLE - PS1503 HARD-WIRED SWITCH



TJERNLUND LIMITED 1 YEAR WARRANTY

Tjernlund Products, Inc. warrants to the original purchaser of this product that the product will be free from defects due to faulty material or workmanship for a period of (1) year from the date of original purchase or delivery to the original purchaser, whichever is earlier. Remedies under this warranty are limited to repairing or replacing, at our option, any product which shall, within the above stated warranty period, be returned to Tjernlund Products, Inc. at the address listed below, postage prepaid. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, AND TJERNLUND PRODUCTS, INC. EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF THIS PRODUCT. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND NO AGENT IS AUTHORIZED TO ASSUME FOR US ANY LIABILITY ADDITIONAL TO THOSE SET FORTH IN THIS LIMITED WARRANTY. IMPLIED WARRANTIES ARE LIMITED TO THE STATED DURATION OF THIS LIMITED WARRANTY. Some states do not allow limitation on how long an implied warranty lasts, so that limitation may not apply to you. In addition, some states do not allow the exclusion or limitation of incidental or consequential damages, so that above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from state to state. Send all inquiries regarding warranty work to Tjernlund Products, Inc. 1601 9th Street, White Bear Lake, MN 55110-6794. Phone (651) 426-2993 • (800) 255-4208 • Fax (651) 426-9547 • Email fanmail@tjfans.com.