

Pneumatic Fill Switch installation guide

The Pneumatic Fill Switch (PFS) works with the Feed Level Sensor (FLS) to detect feed bin fills in a pneumatic feed delivery system.

The OMNI-Feed software needs to know when a feed bin has been filled. In feed delivery systems where feed is delivered through the bin lid using an auger, the Feed Level Sensor detects the bin lid opening and tells OMNI-Feed a ‘fill event’ has occurred.

In pneumatic feed delivery systems, the feed is ‘blown’ into the bin without opening the bin lid. Because the lid is not opened while the bin is being filled, the FLS cannot detect the ‘fill event’. The PFS senses the pressure change when the feed tube is pressurized and sends a signal to the FLS to let it know the bin is being filled.

Before installing the PFS

The Pneumatic Fill Switch (PFS) hardware consists of the switch box (black box with hose and hose clamp), a brass fitting, a rubber washer, and a hose clamp.

In addition to the parts included with the Pneumatic Fill Switch, you need enough two-conductor cable (22 AWG) to go from the PFS to the FLS control unit.

PFS ratings

- ◆ Electrical: 40 mA
- ◆ Operating range: -40 to 150°F (-40 to 66°C)
- ◆ Minimum pressure 0.25 psi
- ◆ Maximum pressure: 10 psi

Selecting a location

The Pneumatic Fill Switch requires careful installation for proper long-term operation. Carefully read and follow all the instructions in the order they are listed.

Install the PFS in a location on the feed tube that has greater than 0.25 psi of pressure during feed fills. If the pressure during feed fills is less than 0.25 psi, the switch might not detect the fill.

Typically, the pressure where the feed enters the feed tube is 6 to 8 psi. The pressure gradually declines as you move farther from the entry point. Mount the switch as close as possible to the coupler. Do not mount the switch in a location where the pressure will exceed 10 psi.

Mounting guidelines

The PFS mounting clamps are designed for feed tubes that have a diameter of 4 to 5½ inches. If your feed tube has a diameter of less than four inches, place a spacer (such as a piece of wood or plastic) between the clamps and the tube to fill in the additional space.

If your feed tube has a diameter of more than 5½ inches, connect an additional small hose clamp on each of the supplied clamps to enlarge them to fit the tube.

You can mount the PFS vertically or horizontally. If possible, use the horizontal mounting method. Refer to the diagrams on the next page and follow the guidelines below.

- ◆ Mount the PFS where it will not be damaged during fills.
- ◆ Mount the PFS where the brass fitting will not have feed blown into it during fills.
- ◆ Mount the PFS in an accessible location so you can easily clean or service the PFS if the hose becomes blocked or damaged.
- ◆ Make sure the PFS hose does not become pinched or bent.
- ◆ When mounting the PFS vertically, place the barbed fitting and hose below the switch box.
- ◆ When mounting the PFS horizontally, place the barbed fitting at the top of the tube.

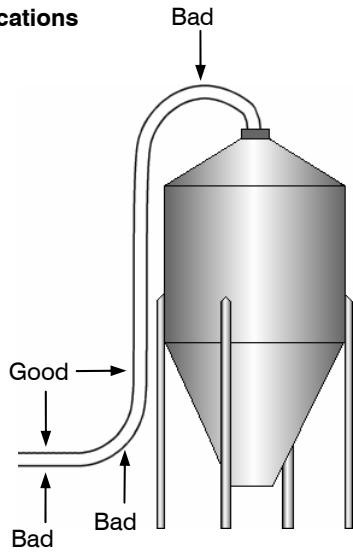
Installing the PFS

Refer to the diagrams on the next page and follow the instructions below. For information about the FLS, see your Feed Level Sensor installation guide.

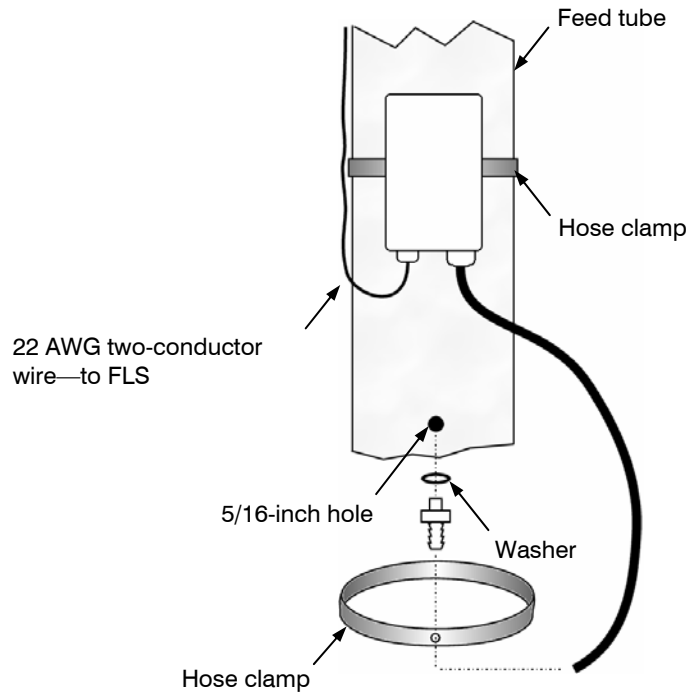
1. Select a mounting method (horizontal or vertical) and a location for the PFS.
2. Drill a 5/16-inch hole in the feed tube.
3. Place the rubber washer on the brass fitting and then insert the fitting into the hole in the feed tube.
4. Fasten the fitting to the feed tube using the hose clamp.
5. Fasten the switch box to the feed tube using the attached hose clamp.
6. Connect the hose to the brass fitting.
7. Remove the cover from the switch box and the FLS control unit.
8. Insert the two-conductor cable through the strain relief of the switch box and then connect the wires to the terminals.
9. Insert the other end of the two-conductor cable through a strain relief into the FLS control unit and then connect the wires to the **SWITCH** terminals.
10. Fasten the covers on the FLS control unit and the PFS switch box.

Installation diagrams

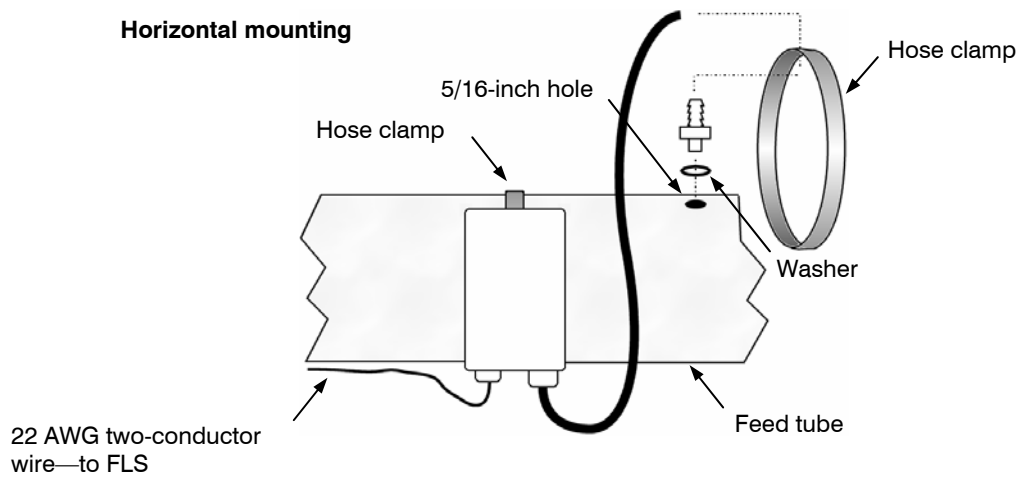
Mounting locations



Vertical mounting



Horizontal mounting



Obtaining service and technical assistance

Your dealer will answer any technical questions that will help you use or install your Pneumatic Fill Switch.

Before you call your dealer, write down the model number, serial number, and any other necessary information.

Limited warranty

This warranty applies only to the Pneumatic Fill Switch (PFS). If you need warranty service, return the product and original proof of purchase to your dealer.

Phason Inc. (Phason) warrants the PFS subject to the following terms and conditions.

This warranty is valid only to the original purchaser of the PFS, for 90 days from the manufacturing date. The manufacturing date is stated in the first eight digits of the serial number in the form year-month-day.

Phason hereby warrants that should the PFS fail because of improper workmanship, Phason will repair the unit, effecting all necessary parts replacements without charge for either parts or labor.

Conditions

- ◆ Installation must be done according to our enclosed installation instructions.
- ◆ The PFS must not have been previously altered, modified, or repaired by anyone other than Phason.
- ◆ The PFS must not have been involved in an accident, misused, abused, or operated or installed contrary to the instructions in our user and/or installation manuals. Phason's opinion about these items is final.
- ◆ The person requesting warranty service must be the original purchaser of the PFS, and provide proof of purchase upon request.
- ◆ All transportation charges for products submitted for warranty must be paid by the purchaser.

Except to the extent prohibited by applicable law, no other warranties, whether expressed or implied, including warranties of merchantability and fitness for a particular purpose, shall apply to the PFS. Any implied warranties are excluded.

Phason is not liable for consequential damages caused by the PFS.

Phason does not assume or authorize any representatives, or other people, to assume any obligations or liabilities, other than those specifically stated in this warranty.

Phason reserves the right to improve or alter the PFS without notice.

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