

TS STATIC PRESSURE **ADD-ON KIT**

Installation Instructions

For Model: 423-460-001A



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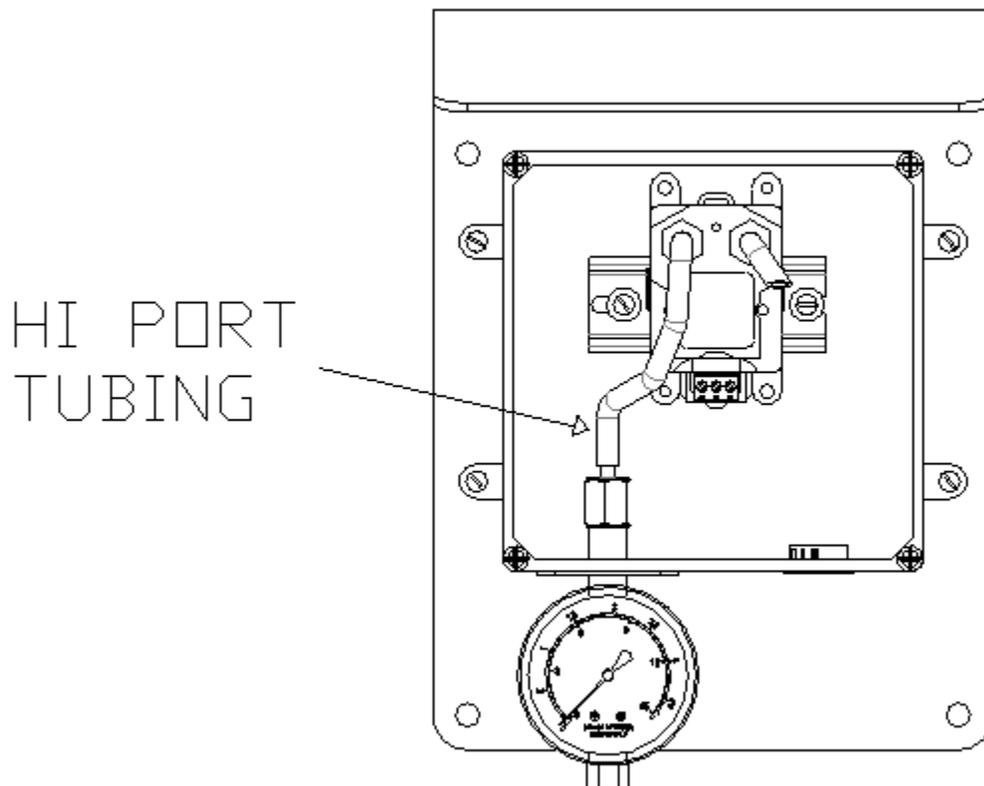
INTRODUCTION

This manual is intended for use with the Shivers TS STATIC PRESSURE ADD-ON Kit. This kit will allow monitoring of static pressure within the range of 0 – 15” of water column (w.c.).

It will work with the Convert TS or CompuDry TS touch screen controllers. Adding this kit also allows a Weather Station Kit (641AL-001A) to be added.

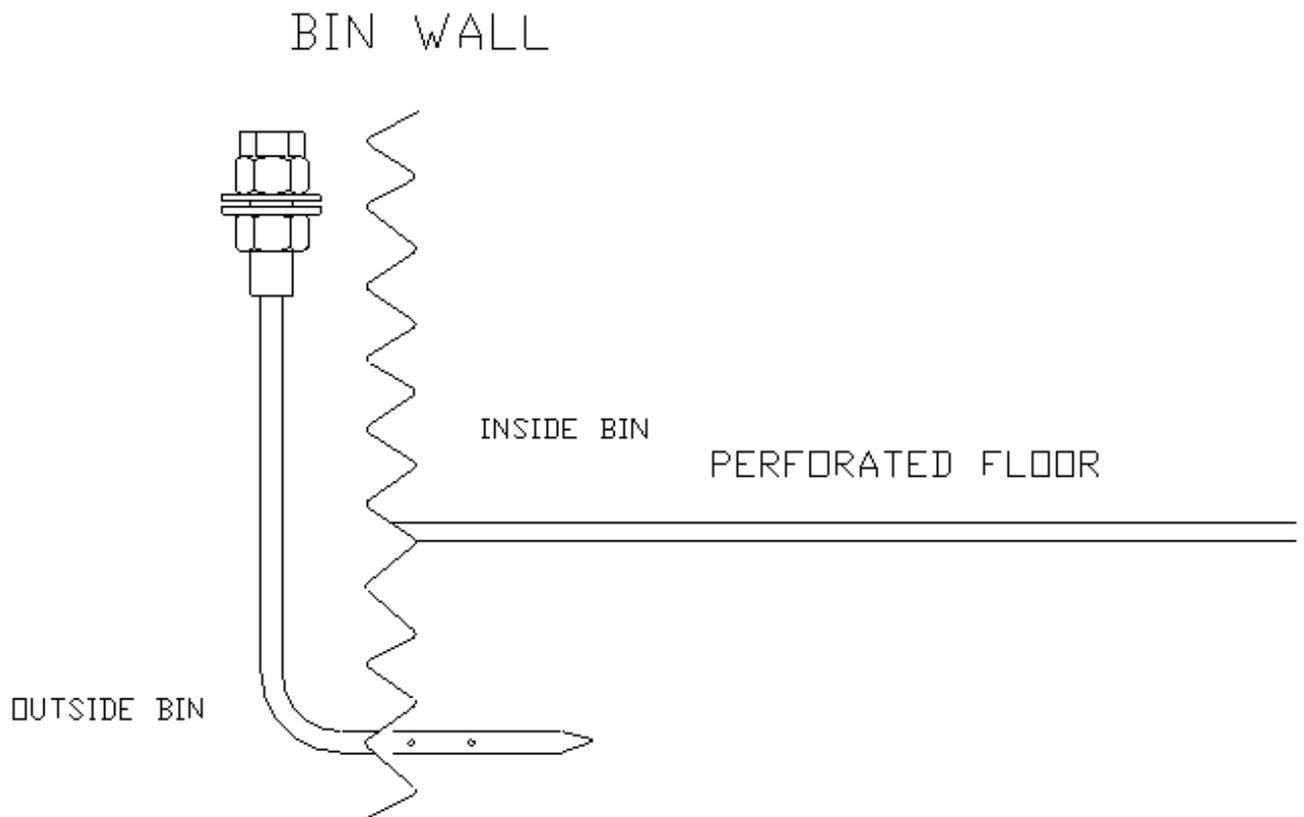
TRANSDUCER BOX INSTALLATION

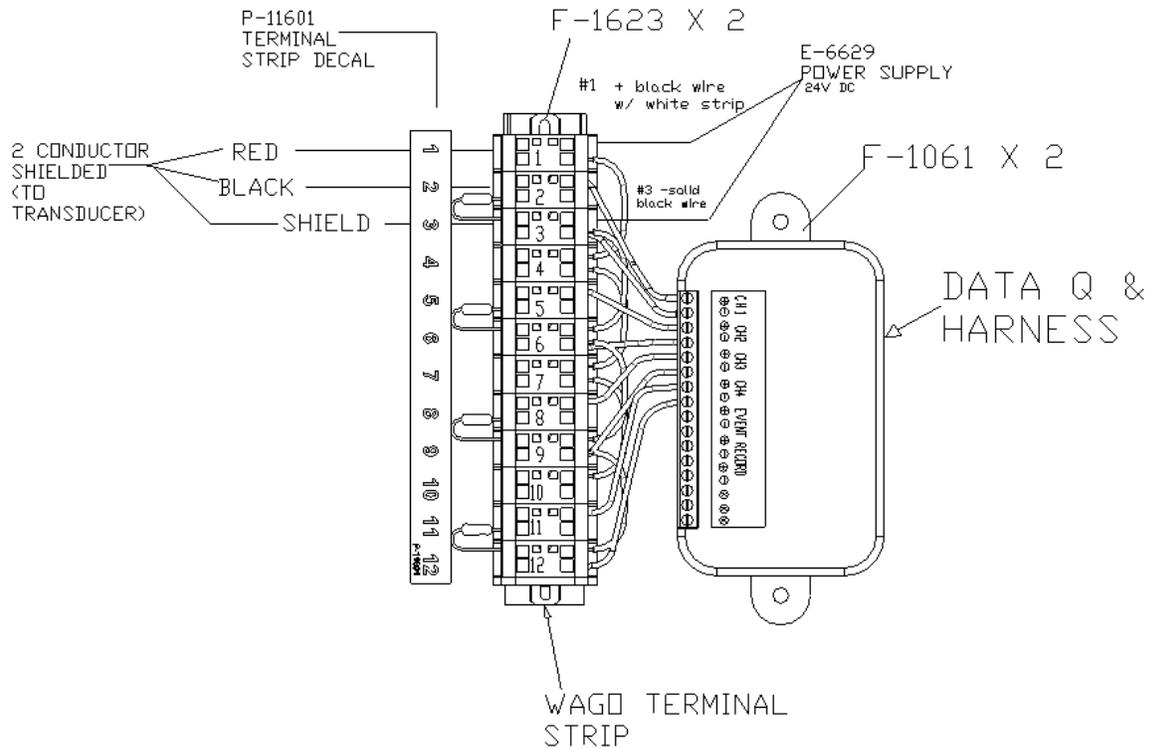
Mount the transducer box in a convenient location. It is usually mounted on the grain bin sidewall, but it could be anywhere. Just allow for easy viewing of the static pressure gauge and easy service of the components. Use the four self-drilling screws provided, or use appropriate hardware obtained locally.



PITOT TUBE INSTALLATION

Mount the pitot tube tip into the location where the static pressure will be measured. The tip should be under the perforated drying floor, about 2/3 the way up from the concrete. Drill a 13/64" (0.203") diameter hole and insert the pitot tube tip. Make sure the tip pressure holes are inside the bin. Connect the pitot tube to the transducer box with 1/4" OD copper tubing. A compression fitting is provided at each end. Five feet of copper tubing is provided. If more is needed, it may be obtained locally. It is unknown how far away the transducer box can be from the pitot tube tip, but it could possibly be up to 100 feet. Just make sure the connections do not leak. Secure the tubing to the bin wall so it will not get damaged. Nylon loop clamps and small self-drilling screws are provided.





Make sure all power is shut off and locked out.

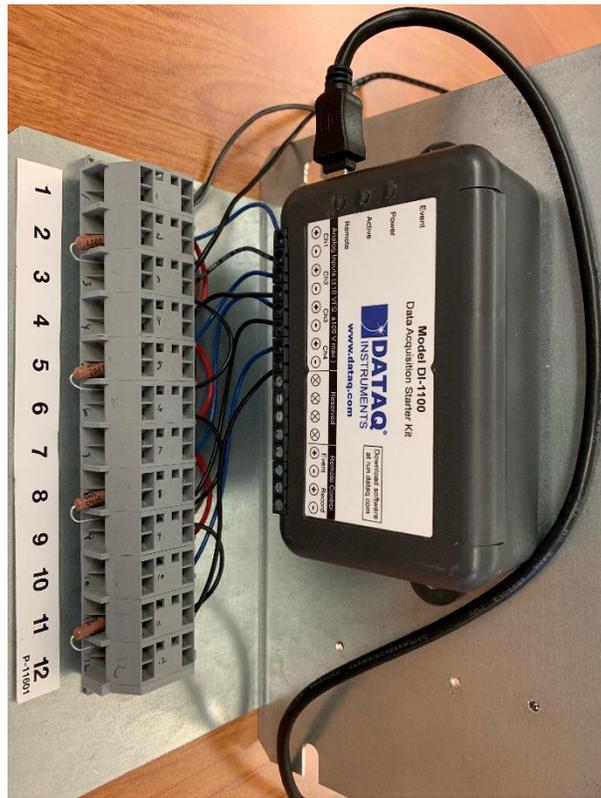
1. For Convert TS remove monitor frame and plug in USB cable to USB port on bottom of monitor and reinstall. For Compudry TS, just plug in USB cable.
2. Locate DATA Q harness & power supply.
3. Cut circular plug off of power supply. Separate and strip back wires about 1/4". Install black w/ white wire to the right side of number 1 of the Wago terminal strip. Install solid black wire to the right side of number 3 of the Wago terminal strip.
4. Mount Wago terminal strip using (2) F-1623 #4 X 3/8 screws as shown above, and on next page. Pilot holes are already provided. Install 1-12 terminal strip decal.
5. Mount data Q using (2) F-1061 #8 X 3/8" screws as shown above.
6. Plug USB cable into data Q.
7. Plug power supply into power strip in Compudry TS or outlet receptacle in Convert TS.

KIT MOUNTED ON
COMPU DRY TS

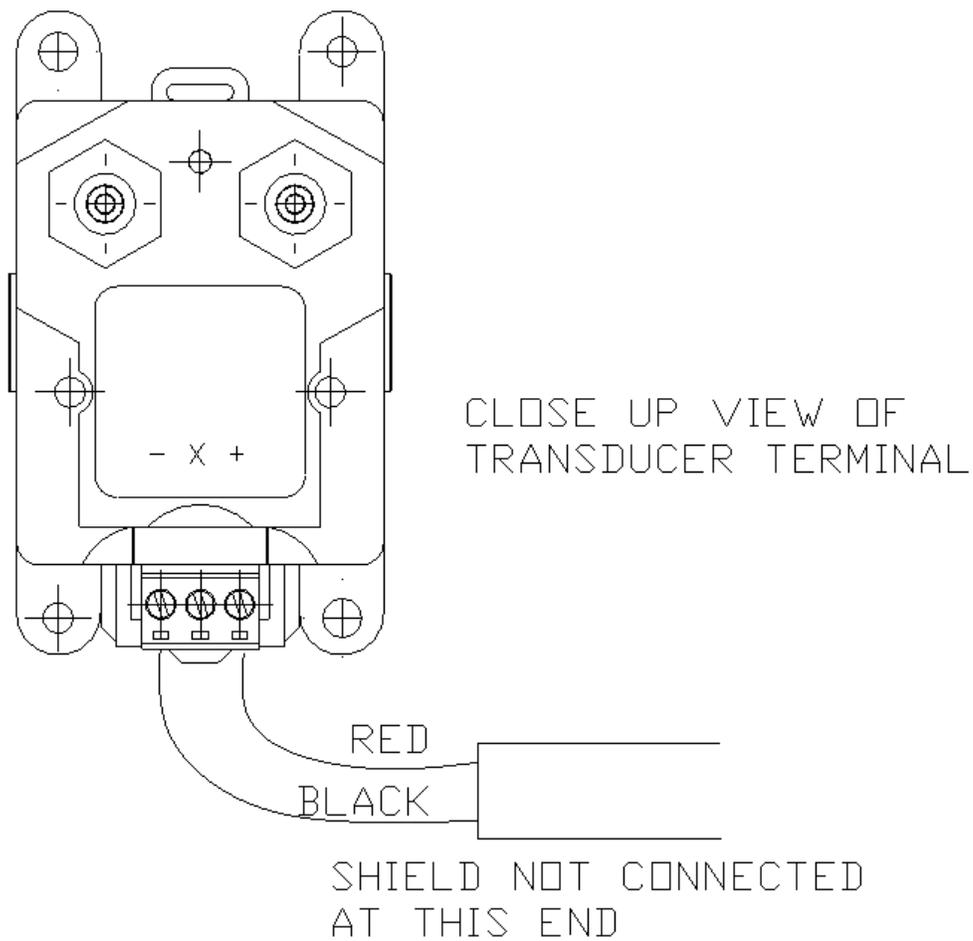


USB CABLE

KIT MOUNTED IN
CONVERT TS



The shielded 2 conductor cable needs to be in the conduit from the transducer box to the box that contains the touch screen. 50 feet is provided. Wire the shielded 2 conductor cable's red wire to the #1 on the terminal strip and the + on the static pressure transducer. Wire the black wire to the #2 on the terminal strip and the - on the static pressure transducer. Wire the shield to #3 on the terminal strip and trim the shield on the transducer side of the cable.



TROUBLE SHOOTING

STATIC PRESSURE ALWAYS SHOWS NEGATIVE.

- 1). Make sure DataQ has green light. Check the USB cable connection to the DataQ and the USB on the touch screen.
- 2). No 24 VDC power available. Make sure power adapter is plugged in. Check voltage on the terminal strip #1 and #3.
- 3). Bad connection, broken cable to the pressure transducer. Make sure that there is a green light on pressure transducer.
- 4). Bad pressure transducer or datalogger.

STATIC PRESSURE DOESN'T CHANGE

Pitot tube tip or tubing may be plugged/frozen. Unplug Hi port tubing and see if reading goes to zero.

STATIC PRESSURE ALWAYS READS LOW

- 1). Make sure there isn't a leak in the tubing. Check the tubing connections.
- 2). Check voltage input into DataQ. $\text{Static Pressure} = 3.75 \times (\text{Voltage Reading}) - 3.75$. Voltage reading can be checked between ch1+ and ch1- on the DataQ, or #2 and #3 on the terminal strip.
- 3). Static pressure transducer may have gone out of calibration. Re-calibrate or replace transducer. Calibrate the transducer by adjusting the 2 pots on the front of the transducer. The zero pot is on the left side of the transducer and the span pot is on the right side of the transducer.