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APS Remote Photo Eye Kit Manual

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Overview

This Kit is designed to be used to replace the Air Pressure Switch in installations where there is an elevation change during the run of the horizontal tubing. Typically, the Air Pressure Switch that is in the vertical unit after the drop of the horizontal tubing will sense the carrier's drop and shut that vertical's blower(s) off even if the carrier has not made it to that vertical. Installation of this Kit will allow the blower to run until the carrier has made it through the turn and the Photo Eye senses the carrier passing through the Suction Fitting at the top of the vertical. The Photo Eye Controller board will then signal the APS Control board of the arrival, and then shut the blower(s) off.

Features

- The Photo Eye Controller board is designed to work with a voltage range of 12 – 24 volts of either AC or DC power.
- The Output signal can be set to either Normally Open or Normally Closed.
- There is a Green LED on the Controller board to show that the Photo Eye is “On”, (the Receiver Photo Eye is seeing the Transmitter).
- There is a Yellow LED that lights when the Photo Eye is “On” and the Photo Eye is dirty or misaligned.

Tools Needed

- 1/4” Nut Driver
- Philips Screwdriver
- Connector Crimp Tool
- 5/8” Drill Bit
- Drill
- PVC Primer & Glue
- 7/16” Straight Round Bar, or 3/8” Straight Threaded Rod with (2) Flat Washers & (2) Nuts, (8” - 10” long)
- Zip Ties to secure wiring

Installation

Note: It is recommended to install this kit before the Suction Fitting is glued into place. If the Suction Fitting is already glued in place, use care to not leave burrs when drilling, or beads of glue that can catch or damage the carrier, or block the Photo Eye's vision.

1. Determine which vertical is attached to the lower elevation horizontal tube.
2. Remove the lower skin lid for that vertical, (if it is the Customer vertical, also remove the plastic control board cover).
3. Un-plug the white 4 position connector that connects the blower control cable to the control board for this end. (Note: This will disconnect power from the controls at this end.)
4. Un-plug the Black and the Orange/Black wires from the Air Pressure Switch, and cut the connectors off of these wires. (Note: Leave the Air Pressure Switch and its sensing Hose in place.)
5. Strip the wires, and crimp the fully insulated female quick-slide supplied onto these two wires.
6. Connect the Black wire to the Green wire of the APS Remote Photo Eye Harness that is supplied in this kit. (See Fig. 2)
7. Connect the Orange/Black wire to the Red wire of the APS Remote Photo Eye Harness.
8. Position the 6" long, 16/4 cable so it can be connected to the 4 position connectors of the blower and board cables, (DO NOT connect at this time), and secure in place.
9. Route and secure the 12' long 22/4 cable up the inside of the skin to a position near the Suction Fitting for this vertical.
10. Mark and drill a 5/8" diameter hole all the way through both sides, at the center of the Suction Fitting, (See Fig. 3). Deburr these holes on the inside of the Suction Fitting to keep from catching or damaging the carrier.
11. Carefully clean, prime, and apply PVC glue to the Female PVC Adapters and Suction Fitting holes. Then using either a 7/16" diameter smooth bar, or 3/8" threaded rod with (2) flat washers and (2) nuts as an alignment guide, press the adapters into place on the Suction Fitting. Clean off any excess glue bead from the inside of the Suction Fitting to keep from catching or damaging the carrier.
12. After the Adapter glue has dried and the Suction Fitting is in place, Thread the Photo Eye Transmitter and Receiver into the Adapters.

13. Connect the Photo Eye wires to their mating connectors on the Photo Eye Controller board.
14. Connect the 22/4 cable of the APS Remote Photo Eye Harness to its mating connector.
15. Verify that the Output selection jumper, (JMP1) is in the N.C. position, (the Jumper is on the center pin and the pin closest to the long edge of the board). (See Photo Eye Controller Board Illustration.)
16. Secure the Photo Eye Controller board and wiring into place.
17. Return to the APS Control board area and connect the 6" long 16/4 section of the Remote Photo Eye Harness to the mating connectors of the blower cable and the blower pigtail from the control board.
18. Check that the Photo Eye is "On", Green LED on the Photo Eye Controller board is lit.
19. Test run the lane and verify that the "Air" LED on the control board blinks on when the carrier passes through the Suction Fitting, and the blower shuts off at that time.
20. Secure all wires and cables, and then re-install all removed covers.

Photo Eye Installation

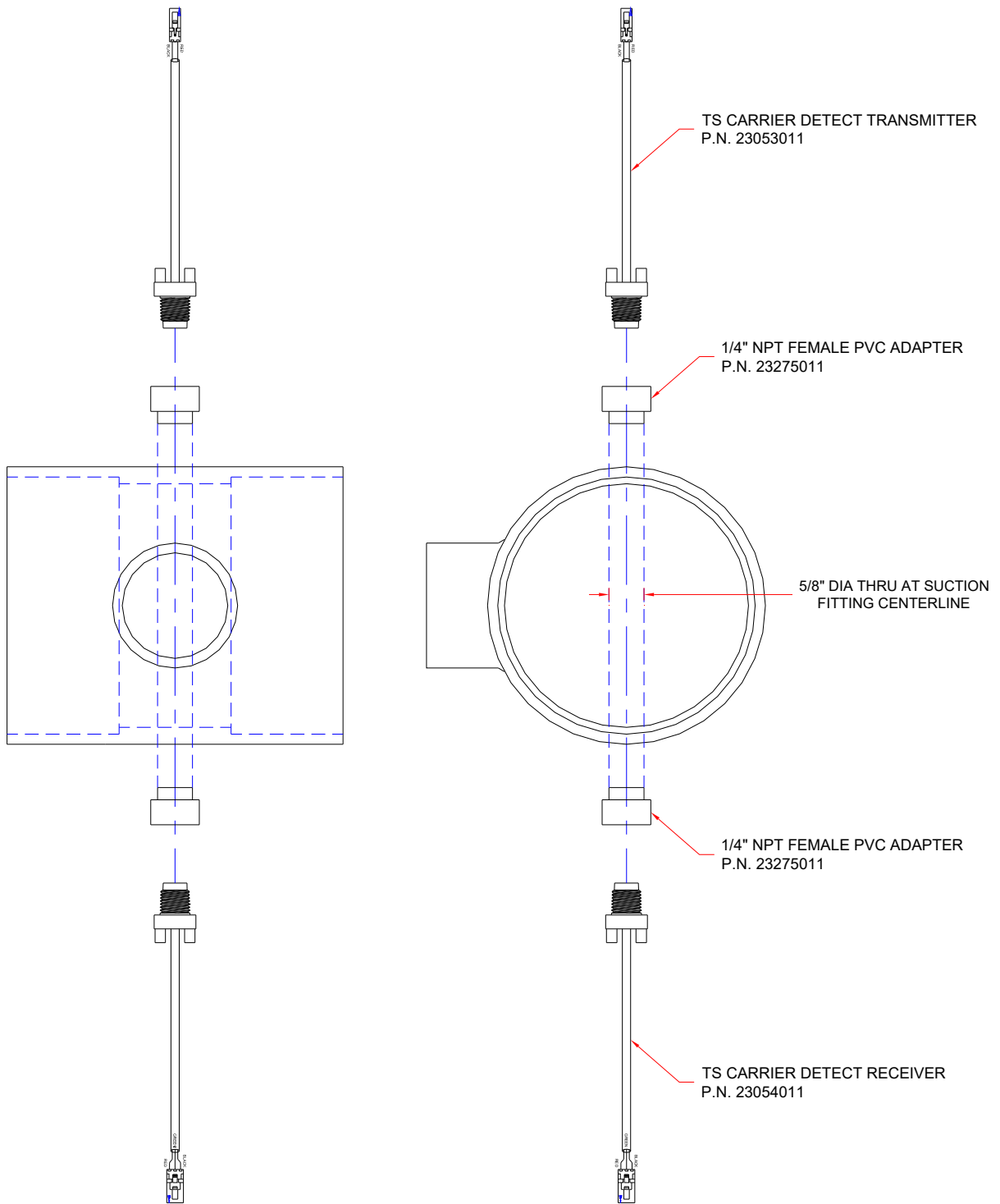
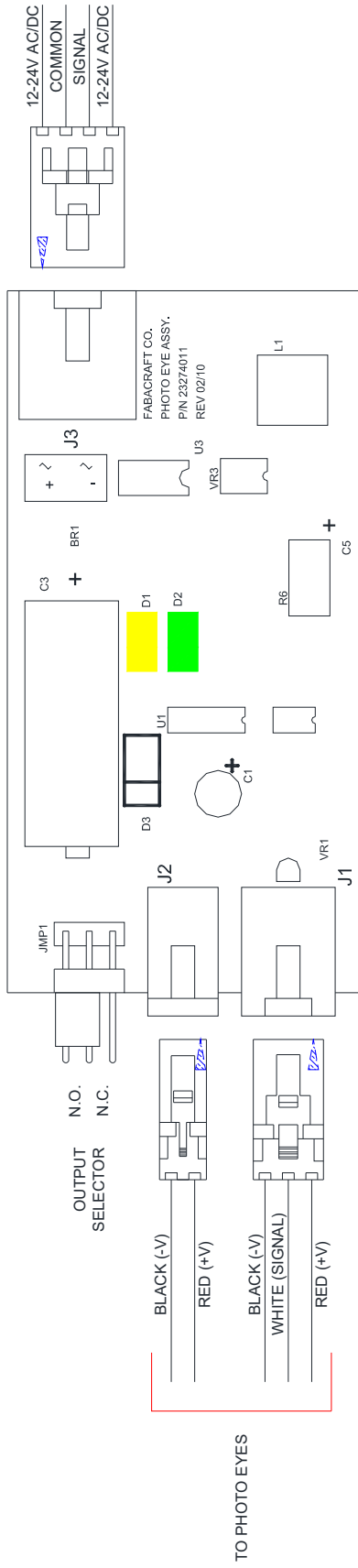


Photo Eye Controller Board Illustration



APS Remote Photo Eye Wiring Diagram

