MANUAL FOR

UNIVERSAL SENSOR INTERFACE BOX

Toledo Integrated Systems
Toledo Transducers, Inc.

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Universal Sensor Interface

Toledo Integrated Systems
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Holland, OH U.S.A.

LED Indicator for power

LED Indicators for sensor input verification

Four pin female Micro-Fast connector

Banana-Plug connector for wire wisk sensors

Installation/Setup:

(With optional Amphenol Connector)

- Mount Universal Sensor Interface box.

- Connect sensors to the box in the desired channel.

- Each input uses *either* a 4-pin micro receptacle or a grounding connector.

- Set the switch for each channel depending on the type of output you desire.

    - For an npn (sinking) sensor, move the switch to the up position.

    - For a pnp (sourcing) sensor, move the switch to the down position.

- Connect the Amphenol cable to the box.

- Connect the other end of the cable, which comes pre-labeled from the factory, to your logic
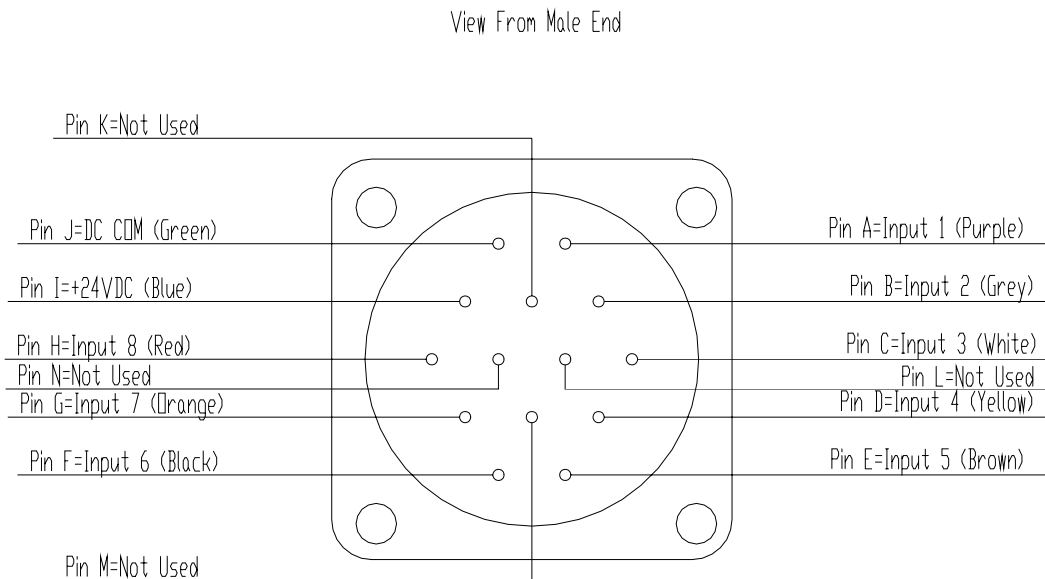 device according to the following diagram.

View From Male End

Pin K=Not Used

Pin J=DC COM (Green)

Pin I=+24VDC (Blue)

Pin H=Input 8 (Red)
Pin N=Not Used
Pin G=Input 7 (Orange)

Pin F=Input 6 (Black)

Pin M=Not Used

Pin A=Input 1 (Purple)

Pin B=Input 2 (Grey)

Pin C=Input 3 (White)
Pin L=Not Used
Pin D=Input 4 (Yellow)

Pin E=Input 5 (Brown)

Fig. 1 Amphenol Wiring Diagram
(The color code shown is the wiring used inside the interface box.)
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(Without optional Amphenol Connector)
Connect wires directly to output phoenix connectors inside box.

Co-Pilot Application:

- When interfaced with the Co-Pilot, set all switches for NPN (sinking) output.
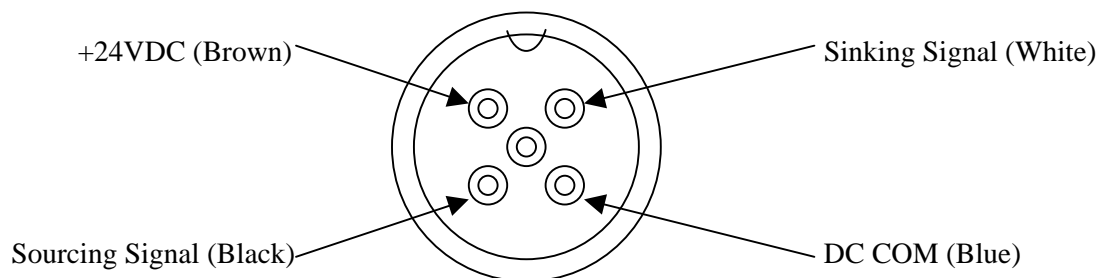
- Be sure to use a .5A fuse.
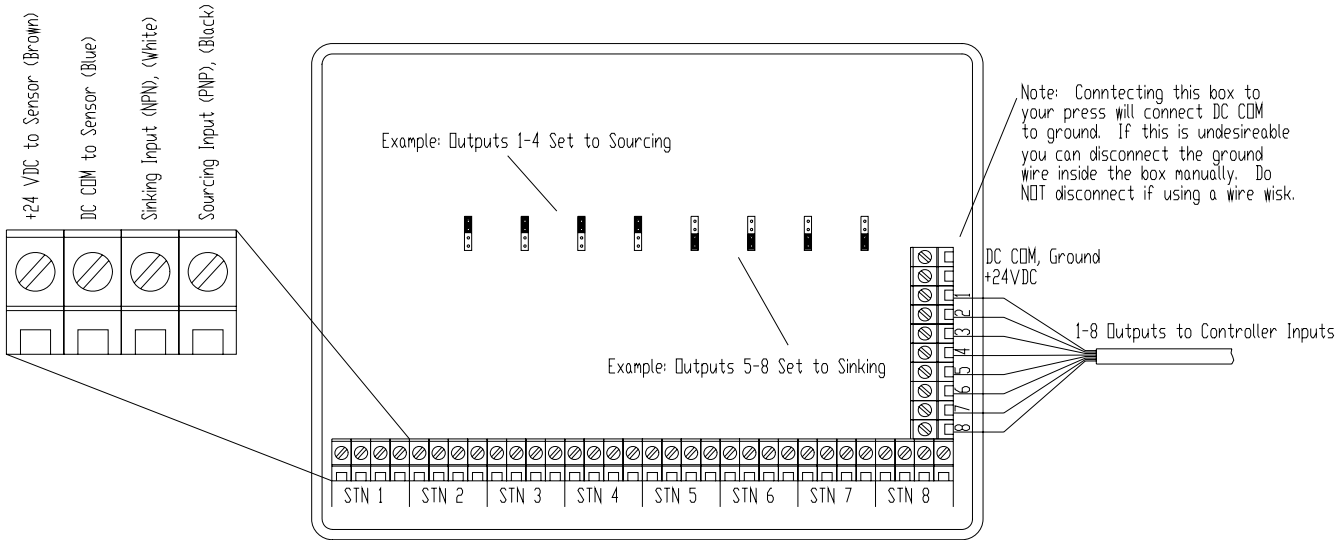
Troubleshooting:

1. If the green Power LED does not light up when power is turned on:
   - Check that the fuse is not blown.
   - Check to ensure that +24Vdc is connected to the correct wire.
   - Check to ensure that DC COM is connected to the correct wire.
   - Check to ensure that your power supply is turned on and is supplying +24Vdc.
   - Inside the box, check to ensure that the +24Vdc and the DC COM are wired to the correct phoenix connectors.
   - Ensure there is +24Vdc between the +24Vdc and DC COM phoenix connectors in the box.

2. If the green Power LED is on but the Inputs don't turn on:
   - Check to ensure that the sensor is connected to the box correctly.
   - Check to ensure that the sensor is actually turning on and sending a signal to the box:
     - If it is a grounding sensor, ensure that there is a complete circuit from the sensor and the piece of stock being sensed.
   - Inside the box, check to ensure that the switch is set to the correct type of output for the corresponding channel.

4-Pin Female Connector Specifications:

+24VDC (Brown)   Sinking Signal (White)

Sourcing Signal (Black)   DC COM (Blue)

Micro-Fast Female Connector Pin Configuration

Internal Wiring & Switch Settings