Control Point Sprague® RoadWatch® Turck Sensor Adapter

The DICKEY-john Sprague RoadWatch Sensor Adapter is an electronic interface that connects to the Control Point system to display current road temperature and ambient air temperature on the Control Point display. Sensor connection varies based on the adapter harness style used.

**To install RoadWatch Sensor to Harness 46649-0480S1:**

1. Disconnect the PWM driver or valve actuator 16-pin connector.
2. Connect the adapter harness p/n 46649-2090 between the Control Point main harness and PWM driver or valve actuator.
3. Connect the adapter harness 3-pin connector to the Control Point main harness mating connector marked “AUX”.
4. Connect the adapter harness 3-pin connector to the Control Point main harness mating connector marked granular valve.
5. Connect the RoadWatch adapter p/n 46649-4100S1 4-pin connector to the mating adapter harness 4-pin connector.
6. Prior to connecting the RoadWatch sensor to the adapter, sensor calibration must be performed at the terminal. Refer to calibration procedure below.
7. After calibration is complete, connect the RoadWatch sensor 5-pin connector to the mating RoadWatch adapter 5-pin connector.
8. Secure any excess wires with tie straps, if necessary.

**Control Point Harness 46649-0480S1**

**IMPORTANT:**

- Prior to configuring the system, disconnect the RoadWatch sensor from the RoadWatch adapter.
- The RoadWatch adapter should remain connected to the system when the calibration is performed.

Refer to page 4 for Flex4 terminal installation instruction.
To install RoadWatch Sensor to Harness 46649-0485S1:
1. Locate the connector labeled Temperature and attach to the RoadWatch Turck adapter p/n 46649-4100S1 4-pin connector.
2. Prior to connecting the RoadWatch sensor to the adapter, sensor calibration must be performed at the terminal. Refer to calibration procedure below.
3. After calibration is complete, connect the RoadWatch sensor 5-pin connector to the mating RoadWatch adapter 5-pin connector.
4. Secure any excess wires with tie straps, if necessary.

**Control Point Harness 46649-0485S1**

To Terminal

- **OPTIONAL MATERIAL LEVEL SENSOR**
- **OPTIONAL TANK LEVEL SENSOR**
- **TEMPERATURE SENSOR**

To Battery

- **ROADWATCH TURCK ADAPTER 46649-4100S1**
- **ROADWATCH SENSOR**
- **PWM DRIVER 46421-0430S1**
- **OR VALVE ACTUATOR 46421-0260**

**IMPORTANT:** The RoadWatch sensor must be disconnected and the RoadWatch adapter must be connected for the calibration to perform successfully.

*If the RoadWatch adapter is disconnected when the calibration is performed, an error screen displays. Calibration takes approximately 10-20 seconds. The TEMPERATURE SENSOR menu displays at the conclusion of calibration for air and road temperature.*

**SENSOR CONFIGURATION and CALIBRATION**

1. At the Control Point, press F12 to enter the MISCELLANEOUS menu.
2. Press 6 to enter the next menu.
3. Press 2 to select ROAD TEMPERATURE SENSOR. The ROAD TEMPERATURE SENSOR menu displays.

Configure road temperature parameters as follows:

4. On the TEMP SNSR parameter, press Y to enable sensor. When Yes is selected, the following parameters display:
   - On ALARM TEMP1, enter a desired value. **NOTE:** This must be the highest value of the 3 alarm temperature settings.
   - On ALARM TEMP2, enter a desired value. **NOTE:** This must be the middle value of the 3 alarm temperature settings.
   - On ALARM TEMP3, enter a desired value. **NOTE:** This must be the lowest value of the 3 alarm temperature settings.
If entered temperature values are not in the correct order, an error screen displays and values must be re-entered in the correct order.

- On TEMP HYST+, enter a desired value. HIGH CAL and LOW CAL are for reference only and cannot be edited.

5. Press C to start the RoadWatch Adapter automatic calibration procedure. **NOTE:**
   Press the ESC key to return to MISCELLANEOUS menu.

6. Press 3 to display the AIR TEMPERATURE SENSOR menu.

Configure air temperature parameters as follows:

7. On the TEMP SNSR parameter, press Y to enable sensor. (Following parameters display when TEMP SNSR is set to Yes).
   - On ALARM TEMP1, enter a desired value. **NOTE:** This must be the highest value of the 3 alarm temperature settings.
   - On ALARM TEMP2, enter a desired value. **NOTE:** This must be the middle value of the 3 alarm temperature settings.
   - On ALARM TEMP3, enter a desired value. **NOTE:** This must be the lowest value of the 3 alarm temperature settings.

If entered temperature values are not in the correct order, an error screen displays. The values must be re-entered in the correct order.

- On TEMP HYST+, enter a desired value. HIGH CAL and LOW CAL are for reference only and cannot be edited.

8. Press C to start the RoadWatch Adapter automatic calibration procedure.

9. Connect the RoadWatch Sensor to the RoadWatch Adapter.

10. Press F1 to return to the operate screen.

Refer to the Control Point Operator’s Manual for explanation of Temperature Sensor and Air Temperature parameters.
Flex4 Control System
Sprague® RoadWatch® Sensor Adapter

The DICKEY-john Sprague RoadWatch Sensor Adapter is an electronic interface that connects to the Flex4 control system to display current road temperature and ambient air temperature on the Flex4 display and triggers an audible alarm when outside of defined parameters.

IMPORTANT: A Flex4 Interface cable (p/n 466495072) is required between the Rate Control Module and the RoadWatch Adapter.

To install the Adapter to the Rate Control Module Harness:

1. Attach the (2) 3-pin connectors of the Flex4 Interface cable to any of the Rate Control Module analog outputs marked 1, 2, 3, or 4.
2. Connect the RoadWatch Adapter p/n 46649-4100S1 4-pin connector to the mating Flex4 Interface cable 4-pin connector.
3. Prior to connecting the RoadWatch sensor to the adapter, sensor calibration must be performed at the terminal. Refer to calibration procedure below.
4. After calibration is complete, connect the RoadWatch Sensor 5-pin connector to the mating RoadWatch Adapter 5-pin connector.
5. Secure any excess wires with tie straps, if necessary.

The sensor’s analog connection point to the rate control module must also be identified at the Flex4 terminal (F9) Accessory Sensor screen. Refer to the Sensor Configuration and Calibration section.
**IMPORTANT:**
- Prior to configuring the system, disconnect the RoadWatch Sensor from the RoadWatch Adapter.
- The Flex4 Interface cable and RoadWatch Adapter should remain connected to the system when the calibration is performed.

**SENSOR CONFIGURATION and CALIBRATION**

1. At the Flex4 terminal, press the (F9) button to display the Accessory menu screen.
2. Highlight the Analog Acc Sensor input box and press the **Enter** button to open the sensor drop down selection list.
3. Select the appropriate sensor that is connected to the analog sensor output 1, 2, 3 or 4 on the Rate Control Module and press **Enter**.
4. Press the corresponding key (1 - 6) to select a menu item and enter sensor parameters.

Figure 1 provides an example setup as follows:

<table>
<thead>
<tr>
<th>Flex4 Terminal</th>
<th>Rate Control Module Harness</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANALOG ACC SENSOR 3</td>
<td>ANALOG 3 (pin C2)</td>
<td>Road Temp</td>
</tr>
<tr>
<td>ANALOG ACC SENSOR 4</td>
<td>ANALOG 4 (pin D2)</td>
<td>Air Temp</td>
</tr>
</tbody>
</table>

Refer to the Flex4 Operator’s manual for additional Accessory Sensor setup and calibration instruction.

**FIGURE 1**

Road and Air Temperature connection point to the Rate Control module must be correctly identified at this screen.