

Technical Bulletin

Model 1405

Contact Corrosion Ambient Temperature/RH% Sensor Cable & Intermittent Missing Ambient Temperature Faults

Rev 09/2012

Description: Cable connection at the system inlet area for the Ambient Temperature/RH% Sensor cable and the Interconnecting 10m cable is susceptible to corrosion if not properly installed. The contact housing at the sensor cable end was also changed from a plastic housing to a metal housing to improve the resistance to outdoor elements. Intermittent missing Ambient Temperature faults were found to be caused by an impedance mismatch with the extended interconnecting cable and the rear interface board assembly.

Corrosion Issue:

1. Check the installation of the cable connection at the inlet area. Use a 'service loop' placing the connection point at the top of the loop as shown below. This type of installation will prevent beads of water from running into the back of the connector reaching the contacts and will drip away from the connector running to the bottom of the loop.



2. If you are experiencing issue with intermittent signal loss or a failed temperature reading you should open the connection at the inlet area and check for corrosion on the contacts. If corrosion is present you should replace the cables.



Corroded Contacts

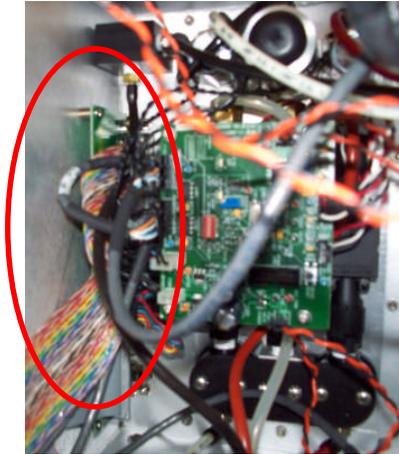
3. Check the housing of the Temperature/RH% sensor cable end; is it plastic or metal? If it is plastic the cable should be replaced.



Cable housing shown here is plastic (black base)

Impedance Issue:

1. If the instrument reports intermittent faults of the ambient temperature sensor open or missing; the temperature reads -273C and you have confirmed it is not related to the corrosion issue above; you may have an impedance issue on the rear interface board.
2. The board is located inside the electronics compartment in the rear left corner or to the left of the mass flow controller assembly. The board should be replaced to resolve the impedance issue.

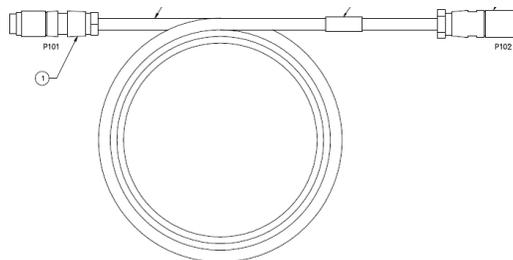


Rear Interface Board

Part Number References:



51-010792 Ambient Temperature/RH% Sensor Cable Assembly



51-010812 10Meter Interconnecting Cable Temp/RH% Sensor to 1405 Unit

