

PCRC-11 RH REPLACEMENT CHIP

FOR CAMPBELL SCIENTIFIC'S

207 TEMPERATURE AND RELATIVE HUMIDITY PROBE

SENSOR HANDLING

1. The surfaces of the sensor should not be touched or contaminated in any way.
2. The sensor should be held by its terminals, or by two edges.
3. The sensor should not be exposed to organic solvents and ionic-laden liquids; (any chemical compound that attacks polystyrene may affect sensor performance).
4. For removal of dust or dirt, use a gentle, clean (oil-free) air blast, or brush lightly with a clean, soft, camel's hair brush.
5. Contamination by exposure to oil or oil vapors must be avoided; calibration shift, loss of response time and sensor deterioration may result.
6. The sensor should not be subjected to liquid water immersion, and water condensation on the sensor surfaces should be avoided. While the sensor is not water soluble, water condensation or immersion may affect sensor calibration.
7. The sensors are particularly susceptible to contamination by sulfur gases and sulfur compounds (Do not smoke near the sensor!).
8. It is important to remember that while this sensor is rugged, the nature of its function, the sensing of water vapor, precludes any type of handling that would obstruct or shield its surface from the atmosphere to be sampled.

REPLACEMENT PROCEDURE

Figure 1 shows an assembly drawing of the 207 Probe. The screen to the 207 Probe can be lifted after removing two screws. The PCRC-11

Sensor can then be removed by holding the edges (do not touch sensor surface) and gently lifting up from the sockets, and is installed by gently pushing down into the sockets.

MAINTENANCE

The temperature sensor (thermistor) should require no maintenance unless there is physical damage or repeated condensation on the 207 Probe.

In a clean air environment, the PCRC-11 Sensor should perform reliably for up to one year when housed in the 41004-5 12 Plate Gill or UT12PV Radiation Shields. The sensor should be replaced annually when it is operating in typical environmental conditions. In a contaminated or frequently condensing environment, the sensor should be replaced more frequently. Sulfur and oil gases or compounds will rapidly deteriorate the sensor.

Liquid water contacting the PCRC-11 Sensor causes a temporary calibration shift resulting in a high reading. As the water evaporates, the sensor will return to its original calibration. When liquid water repeatedly contacts the sensor, the gold plated spring clips which hold the sensor become corroded, and the carbon electrode on the polystyrene wafer begins to lift or flake off. If any carbon lifts or flakes away from the wafer, the probe resistance is increased resulting in permanently low readings. At this point, the PCRC-11 sensor should be replaced.

NOTE: CSI's warranty does NOT cover the replacement of the PCRC-11 Sensor if operating the 207 Temperature and RH Probe under harsh conditions.

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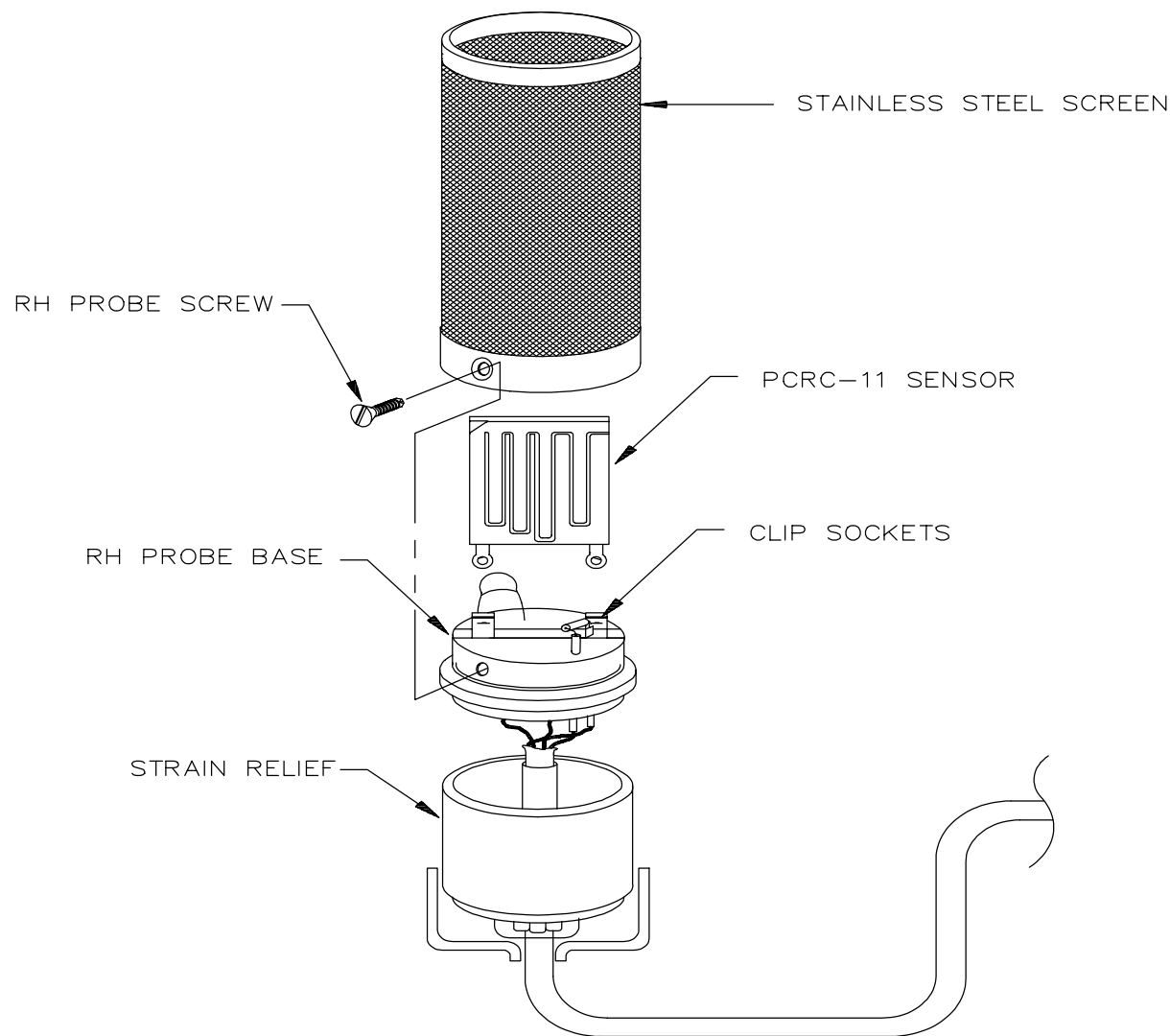


FIGURE 1. 207 Probe Assembly Drawing