

Monochloramine Sensor

For additional information, please refer to the Instruction Manuals CD shipped with this product, or visit our website at www.emersonprocess.com/raihome/liquid/.

SPECIFICATIONS — SENSOR

Pressure: 0 psig (101 kPa abs) Sensor must drain to open atmosphere

Temperature: 32 to 122°F (0 to 50°C)

Process Connection: 1 inch MNPT

Wetted Parts: Noryl¹, Viton², silicone, wood, Zitex³ (PTFE)

Cathode: Gold mesh

¹ Noryl is a registered trademark of General Electric.
² Viton is a registered trademark of E.I. duPont de Nemours & Co.
³ Zitex is a registered trademark of Performance Plastics Corp.

CAUTION
SENSOR/PROCESS APPLICATION COMPATIBILITY
 The wetted sensor materials may not be compatible with process composition and operating conditions. Application compatibility is entirely the responsibility of the user.

CAUTION
 Do not exceed pressure and temperature specifications.
Pressure: 0 psig max (101 kPa abs max)
Temperature: 32 to 122°F (0 to 50°C)

SPECIFICATIONS — FLOW CELLS

Type	PN	Wetted Materials	Process Connection	Maximum Temperature	Maximum Pressure
Low Flow	24091-01 (with bubble sweeping nozzle)	Polycarbonate/ Polyester, 316SS, Silicone	1/4 in. tubing	122°F (50°C)	65 psig (549 kPa abs)

Pressure specification is for inlet pressure. Flow cell must drain to open atmosphere. Do not install the sensor in a pressurized line. Doing so may damage the cathode.

INSTALLATION

Install sensor in the low flow cell (PN24091-01) only. Control flow between 1 and 4 gph (3.8 to 15 L/hr). See Figure 2.

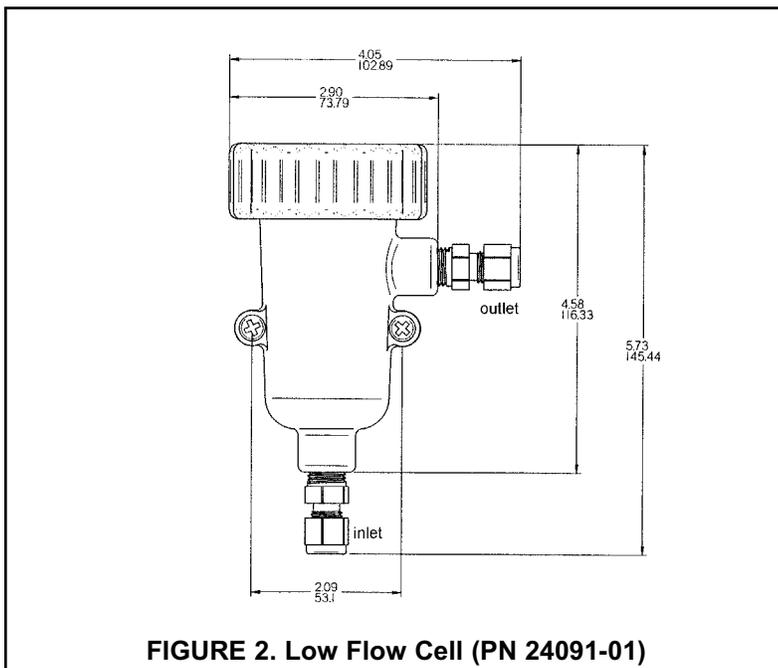
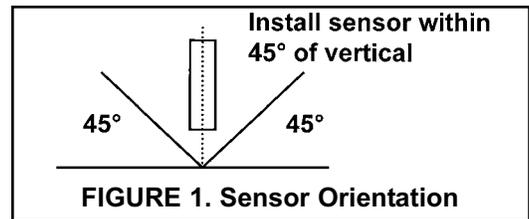


FIGURE 2. Low Flow Cell (PN 24091-01)

WIRING

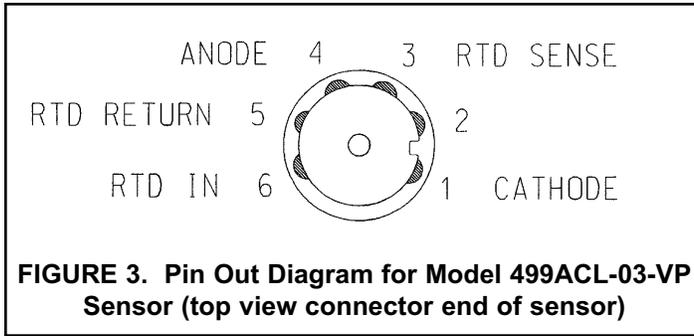


FIGURE 3. Pin Out Diagram for Model 499ACL-03-VP Sensor (top view connector end of sensor)

When making connections through a junction box (PN 22719-02), wire point-to-point.

NOTE:

Use a wire nut and pigtail (included) when connecting several wires to the same terminal.

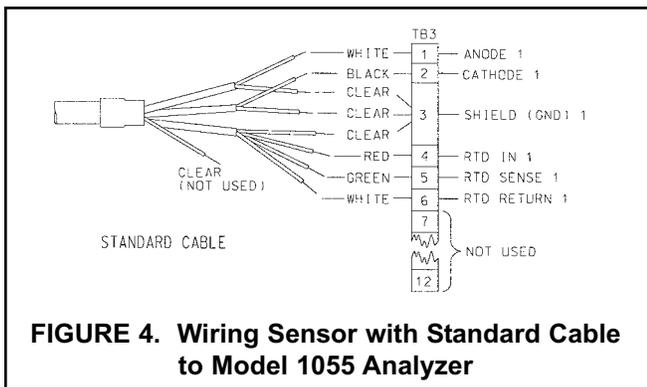


FIGURE 4. Wiring Sensor with Standard Cable to Model 1055 Analyzer

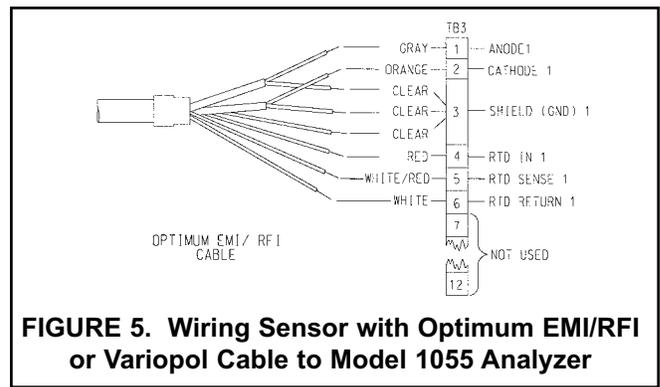


FIGURE 5. Wiring Sensor with Optimum EMI/RFI or Variopol Cable to Model 1055 Analyzer

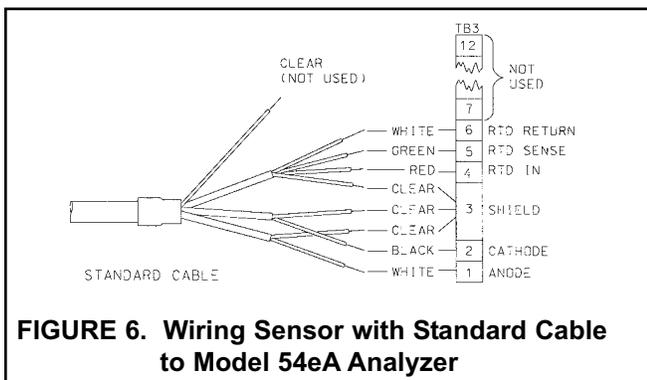


FIGURE 6. Wiring Sensor with Standard Cable to Model 54eA Analyzer

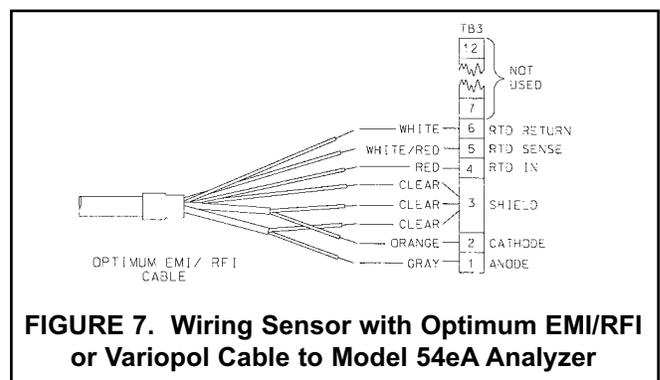


FIGURE 7. Wiring Sensor with Optimum EMI/RFI or Variopol Cable to Model 54eA Analyzer

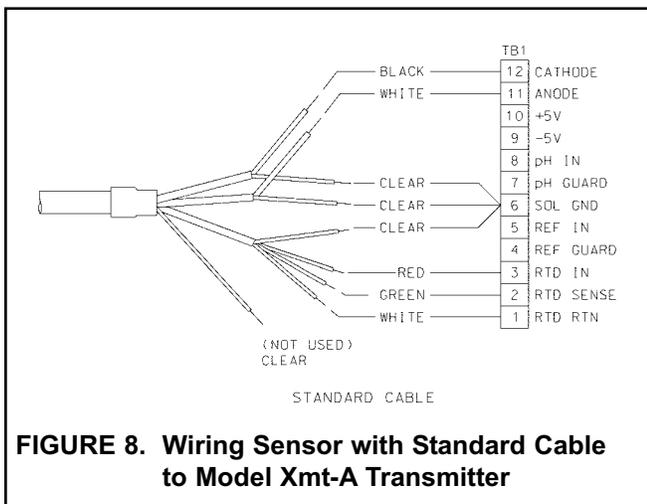


FIGURE 8. Wiring Sensor with Standard Cable to Model Xmt-A Transmitter

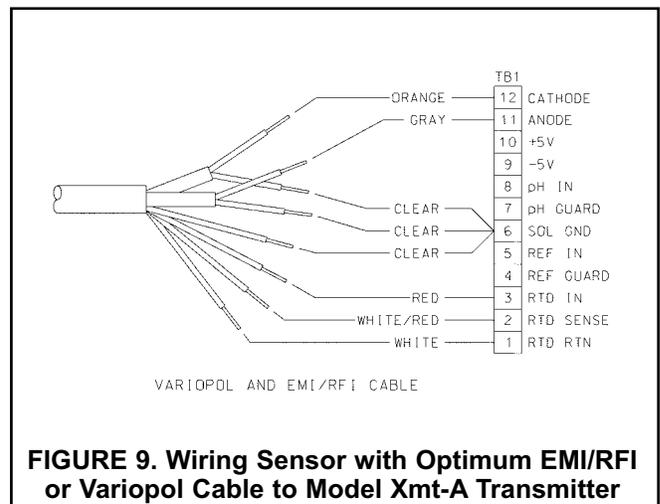


FIGURE 9. Wiring Sensor with Optimum EMI/RFI or Variopol Cable to Model Xmt-A Transmitter

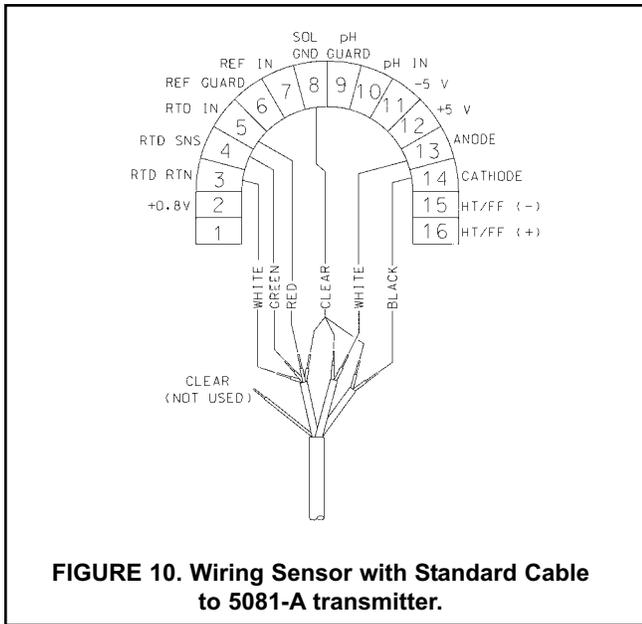


FIGURE 10. Wiring Sensor with Standard Cable to 5081-A transmitter.

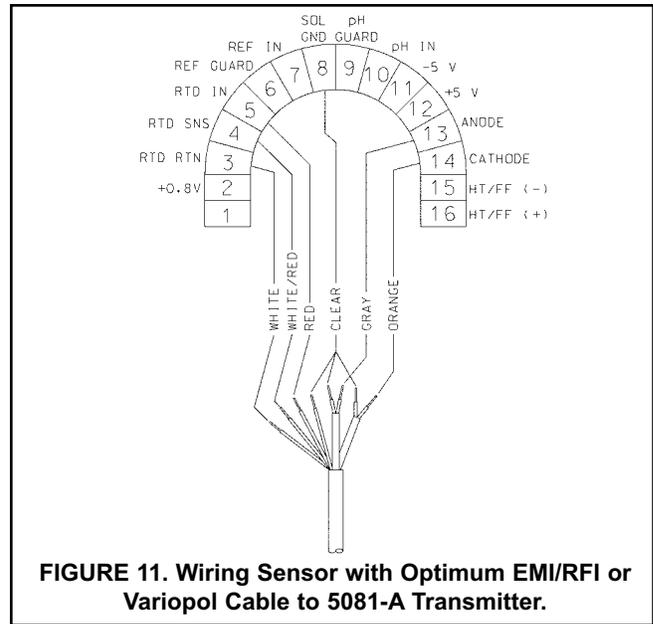


FIGURE 11. Wiring Sensor with Optimum EMI/RFI or Variopole Cable to 5081-A Transmitter.

MAINTENANCE

CAUTION: PRESSURIZED SPRAY INJURY
 Before removing the sensor from the process stream for maintenance, be sure the process pressure is reduced to 0 psig and the process temperature is at a safe level!




CAUTION
 Fill solution is corrosive. Avoid contact with skin and eyes. Consult MSDS for safety information



CLEANING THE MEMBRANE.

Keep the membrane clean and free from dirt and algae. Periodically inspect the membrane. If it appears fouled and sensor response is less than expected, clean the membrane by washing it with a stream of water from a wash bottle.

NOTE

Do not wipe membrane with a tissue. Do not touch the membrane. Doing so may damage the cathode, making the sensor unusable.

REPLACING THE ELECTROLYTE SOLUTION AND MEMBRANE.

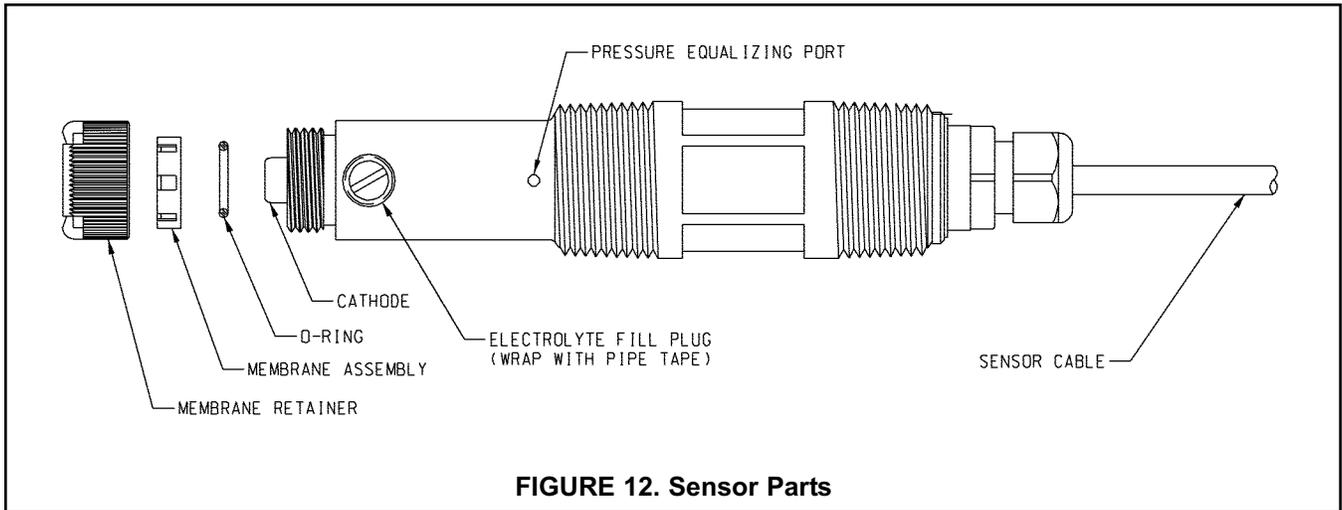
1. Unscrew the membrane retainer and remove the membrane assembly and o-ring. See Figure 13.

NOTE

Do not touch the cathode. Doing so may damage the cathode, making the sensor unusable.

2. Hold the sensor over a container with the cathode pointing down.
3. Remove the fill plug and allow the electrolyte solution to drain out.
4. Wrap the plug with several turns of pipe tape and set aside.

5. Prepare a new membrane. Hold the membrane assembly with the cup formed by the membrane and membrane holder pointing up. Fill the cup with electrolyte solution.
6. Hold the sensor at about a 45-degree angle with the cathode end pointing up. Add electrolyte solution through the fill hole until the liquid overflows. Tap the sensor near the threads to release trapped air bubbles. Add more electrolyte solution if necessary.
7. Place the fill plug in the electrolyte port and begin screwing it in: After several threads have engaged, rotate the sensor so that the cathode is pointing up and continue tightening the fill plug. Do not over-tighten.
8. Place a new O-ring in the groove around the cathode post.
9. Cover the cathode with electrolyte solution, then place the membrane assembly over the cathode. Screw the membrane retainer in place.
10. Hold the sensor with the cathode end pointing down. Give the sensor several sharp shakes to dislodge air bubbles trapped behind the cathode.
11. The sensor may require several hours operating at the polarizing voltage to equilibrate after the electrolyte solution has been replaced.



SPARE PARTS

23750-00	Electrolyte Fill Plug with Wooden Osmotic Pressure Relief Port
9550094	O-Ring, Viton 2-014
33521-00	Membrane Retainer
23501-09	Monochloramine Membrane Assembly: includes one membrane assembly and one O-ring
23502-09	Monochloramine Membrane Kit: includes 3 membrane assemblies and 3 O-rings
9210372	Monochloramine Sensor Fill Solution, 4 oz (120 mL)



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