

**ECS DETECTOR – CORROSION
MONITORING PROBE
DCMP-1 OR DCMP-3 SHOWN
SEE FIGURE 4 FOR DCMP-2**

PATENT PENDING

DCMP-1 or DCMP-3 Kits Include:

- (1) Pressure Switch
- (1) Detector - Corrosion Monitoring Probe (DCMP)
- Fittings for mounting the pressure switch into the bottom of the CMS include; ½" union, ½" 90° street elbow, and ½" nipple
- One pair of latex gloves

DCMP-2 Kit Includes:

- (1) Detector - Corrosion Monitoring Probe (DCMP)
- Water collection chamber with sight glass and water indication element
- One pair of latex gloves

Tools Required:

- Pipe wrench or 14" adjustable wrench to remove and replace probes.
- Container used to drain water from the corrosion monitoring station.
- Teflon tape

Ordering Information:

Stock No.	Model/Description
DCMP-1	ECS Detector - Corrosion Monitoring Probe for wet or dry/pre-action fire protection systems wired to monitoring panel.
DCMP-2	ECS Detector - Corrosion Monitoring Probe for wet fire protection systems visually monitored only.
DCMP-3	ECS Detector - Corrosion Monitoring Probe for dry / pre-action fire protection systems visually monitored only.

NOTICE

Carefully read and follow the instructions and procedures provided in this document and referenced documents. Failure to do so will inhibit ECS Detector's ability to properly detect the corrosion activity occurring within the fire sprinkler system.

The ECS Detector - Corrosion Monitoring Probe is available in three models which offer design flexibility and economic benefit to projects.

The ECS Detector - Corrosion Monitoring Probe is designed to be used in conjunction with the ECS Inspector - Corrosion Monitoring Station. The unit is designed to detect a predetermined amount of corrosion activity occurring to the probe install in the corrosion monitoring station. The environment within the corrosion monitoring station is similar to conditions within the fire sprinkler system were the most active levels of corrosion can be expected to occur. The three models provide design flexibility regarding how corrosion activity is monitored.

DCMP-1 This Detector model is designed to be utilized in either a wet or dry /pre-action fire protection system. The corrosion monitoring probe is connected to a pressure switch that must be wired to a building monitoring panel. Activation of the pressure switch will provide a supervisory signal when a predetermined amount of corrosion is experience by the probe.

DCMP-2 This Detector model is designed to be utilized in only a wet fire protection system. The corrosion monitoring probe is connected to a water collection chamber that contains a water indicator element, this unit is designed to be visually inspected to determine if the probe has corroded sufficiently to cause a failure in the wall of the probe allowing water to enter into the water collection chamber activating the water indicator element. This condition can be determined by viewing through the sight glass provided at the bottom of the water collection chamber which is attached to the monitoring probe. A visual

inspection is recommended quarterly or semiannually to monitor for corrosion activity. Using this detector model eliminates costly wiring to a building monitoring panel.

DCMP-3 This Detector model is designed to be utilized in only dry or pre-action fire protection systems. The corrosion monitoring probe is connected to a pressure switch which is equipped with an LED push button monitoring element that will illuminate when pushed if the probe has corroded sufficiently to cause failure in the wall of the probe. This model is provided with self-contained power which eliminates the costly wiring of the unit for monitoring or power.

Installation Instructions:

The ECS Detector is designed to be installed in an ECS-Corrosion Monitoring Station. Contact ECS staff to discuss any other type of installation.

Wet Pipe Systems with an Existing ECS Inspector - Corrosion Monitoring Station (ICMS) or Similar Device:

1. Turn the 1" isolation ball valve to the closed position to isolate the ECS Inspector - Corrosion Monitoring Station (CMS) from the fire sprinkler system.
2. Verify that the ½" air inlet/relief valve is in the closed position and remove the ½" plug.
3. Relieve system pressure from the CMS by opening the air inlet/relief valve slowly. **Note: The water and air in the CMS will be pressurized to the system pressure.**
4. Verify that the ½" drain valve is in the closed position. Remove the ½" drain plug. Open the drain valve slowly. Drain the water from the CMS through the ½" drain valve into container. Close the ½" drain valve and the ½" air inlet/relief valve. Reinstall the ½" plug into the drain valve.
5. **Do not handle probe with bare hands.** Remove the ECS Detector - corrosion monitoring probe (DCMP) from the packaging using the latex gloves provided and carefully remove the cardboard protection

sleeve. Apply Teflon tape to the 1" NPT male pipe threads and install the ECS Detector into the bottom outlet provided in the ECS Inspector (see installation diagram on the ICMS label or Figure 3 or Figure 4).

6. For the DCMP-1 install the closed nipple, the union, and the pressure switch on the 90° street elbow that is connected to the ECS Detector - Corrosion Monitoring Probe, using Teflon tape on all joints, to join the probe and pressure switch into a single unit as illustrated in Fig. 2. **Note: It is not recommended to mount the pressure switch in an inverted position. Therefore, it must be mounted in the vertical configuration shown in Figure 3. If installing a DCMP-2 use teflon tape on all threads and install as shown in Figure 4.**
7. When specified, connect the wiring from the monitoring panel to the pressure switch in accordance with the wiring instructions. Notify the monitoring panel contractor / administrator to enable the zone connected to the ECS Detector - Corrosion Monitoring Probe. This zone should be identified as a supervisory zone, not an alarm zone on the monitoring panel.
8. Temporarily install fittings necessary to supply pressurized air to the coupon rack through the air inlet/relief valve.
9. With the ECS Inspector - Corrosion Monitoring Station isolation valve closed to the system and the ICMS drain valve closed and plugged. Open the ICMS isolation valve and check the water level through the sight glass at either end. The water level needs to be maintained at the water level marking at the center of the CMS sight glasses. Add additional air through the air inlet/relief valve to lower the water level or relieve air to raise the water to the water level marking. Close the air inlet/relief valve after the correct water level has been achieved. **Remove the temporary air inlet fittings if used and reinstall the plug in the air inlet/relief isolation valve. Be sure to leave the ECS Inspector - Corrosion Monitoring Station's isolation valve in the open position. Verify that all valves are in the correct position and the Corrosion Monitoring Station is free of any leaks.**

Dry / Pre-Action Fire Protection Systems with an Existing ECS Inspector-Corrosion Monitoring Station (ICMS) or Similar Device:

1. Turn the 1" isolation ball valve to the closed position to isolate the ECS Inspector - Corrosion Monitoring Station from the fire sprinkler system.
2. Verify that the ½" drain valve is in the closed position. Remove the ½" plug.
3. Relieve system pressure from the ECS Inspector CMS by opening the drain valve slowly. **Note: The water and air in the ECS Inspector CMS will be pressurized to the system pressure. Hold container at drain valve discharge to catch any water.**
4. Close the ½" drain valve. Reinstall the ½" plug into the drain valve.
5. **Do not handle probe with bare hands.** Remove the ECS Detector - Corrosion Monitoring Probe from the packaging using the latex gloves provided and carefully remove the cardboard protection sleeve. Apply teflon tape to the 1" NPT male pipe threads and install the ECS Detector DCMP-1 or DCMP-3 and the assembled 90° street elbow into bottom outlet provided in the ECS Inspector CMS (see installation diagram on Figure 2 and 3).
6. Install the closed nipple, the union, and the pressure switch on the 90° street elbow that is connected to the ECS Detector Corrosion Monitoring Probe, using Teflon tape on all joints, to join the probe and pressure switch into a single unit as illustrated in Figure 2. **Note: It is not recommended to mount the pressure switch in an inverted position. Therefore, it must be mounted in the vertical configuration shown in Figure 3.**
7. When specified, connect the wiring from the monitoring panel to the pressure switch in accordance with the wiring instructions. Notify the monitoring panel contractor/administrator to enable the zone connected to the ECS Detector - Corrosion Monitoring Probe. This zone should be identified as a supervisory zone, not an alarm zone.

8. Place the system back in service by turning the 1" isolation ball valve to the open position to allow system pressure to enter the CMS.
9. Verify that all valves are in the proper position and the ECS Inspector - Corrosion Monitoring Station is free of any leaks. **Be sure to leave the corrosion monitoring station isolation valve open to the fire sprinkler system.**

UPON DETECTION OF CORROSION ACTIVITY

When a visual inspection or a monitoring signal is received from an ECS Detector - Corrosion Monitoring Probe indicating corrosion activity, the following procedure should be utilized:

- a) Close the isolation ball valve to isolate the corrosion monitoring station from the fire protection system.
- b) As indicated on the corrosion monitoring station label contact ECS at 1- 877 - 432 -8040 to order a probe and coupon replacement kit.
- c) Leave the isolation valve in the closed position until the replacement kit is received.
- d) Upon receipt of the replacement kit follow the step by step instructions provided with the kit for the removal of the old probe and corrosion coupons and the installation of the replacement parts into the corrosion monitoring station.
- e) After replacement is complete follow the instructions for placing the corrosion monitoring station back in service leaving the isolation valve to the fire protection system in the open position.
- f) Place the removed probe and corrosion coupons in the packing box provided with the replacement kit and use the provided address label to send the probe and coupons to the independent laboratory for analysis.
- g) The laboratory analysis accompanying with a report including recommendations from FPSCMI of the action to be considered to address the level of corrosion activity being experienced will be provided to the contractor/owner.

FIGURE 1 – ECS Detector - Corrosion Monitoring Probe

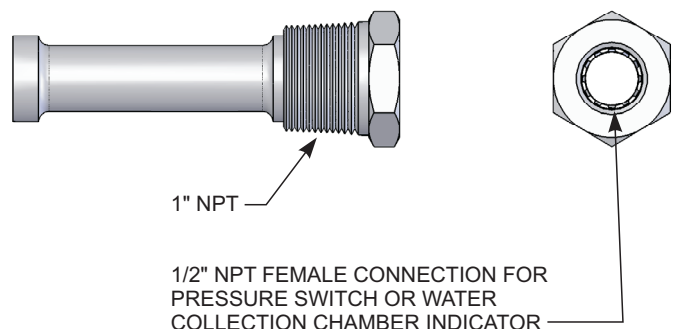


FIGURE 2 – ECS Detector Assembly

**DCMP-1 OR DCMP-3 SHOWN
IS SHIPPED IN 3 PARTS WHEN
NOT ORDERED WITH AN
ECS INSPECTOR CMS**

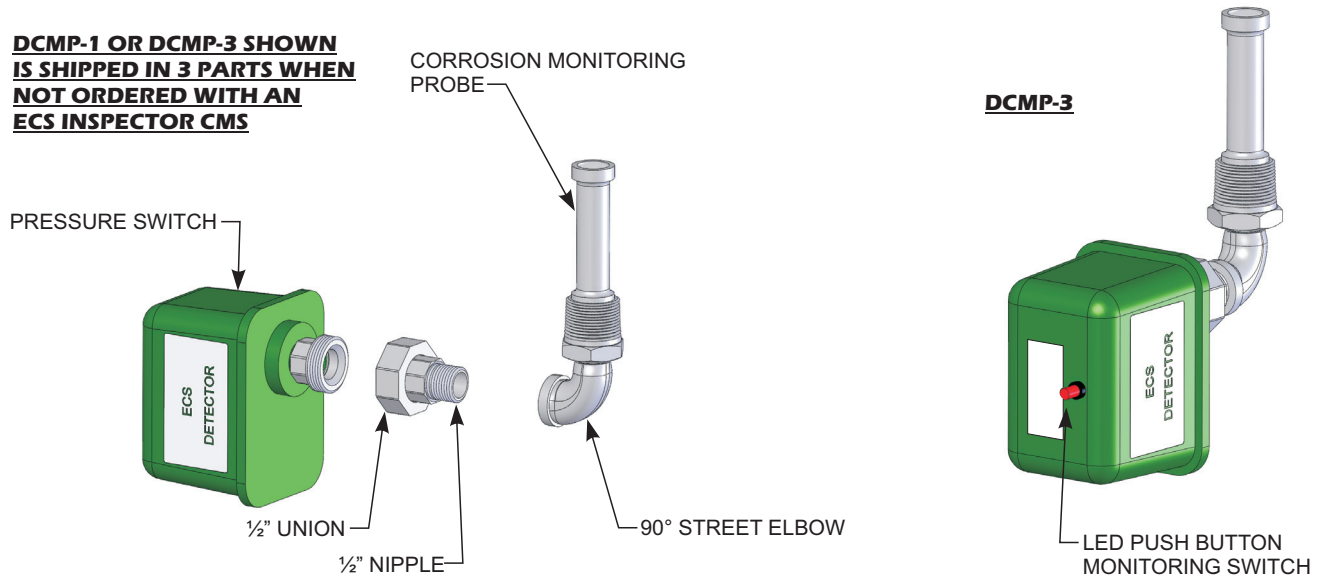


FIGURE 3 – ECS Detector Assembly Into An ECS Inspector - Corrosion Monitoring Station

DCMP-1 OR DCMP-3 SHOWN

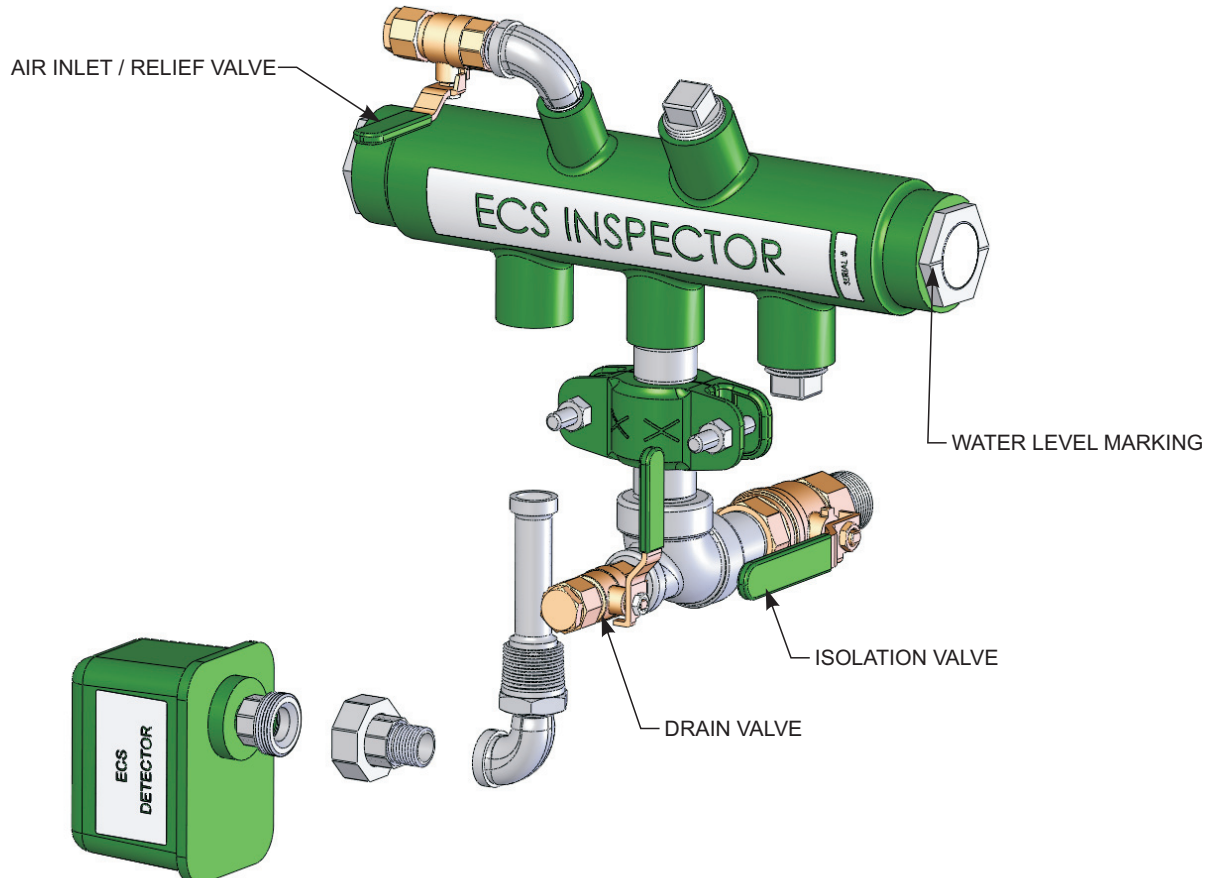


FIGURE 4 – ECS Detector DCMP-2 installation into an ECS Inspector - Corrosion Monitoring Station

**DCMP-2 SHOWN IS SHIPPED
ASSEMBLED AS A COMPLETE UNIT**

