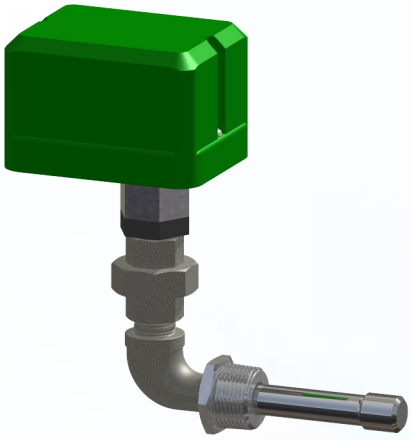
ECS Detector Corrosion Monitoring Probe (DCMP)



PATENT PENDING

Specifications

Stock Number:	DCMP-1 (wired to panel) DCMP-3 (push to test/indicator)
Service Pressure:	Up to 175 PSIG
System Connection:	1” MNPT
Temperature Range:	-40°F to 120°F (-40°C to 49°C)
Dimensions:	8”(W) X 3.5”(D) X 8”(H)

General Description

The ECS Detector Corrosion Monitoring Probe (DCMP) is available in two models which offer project flexibility. The DCMP 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 where the most active levels of corrosion can be expected to occur.

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 experienced by the probe.

DCMP-3: This Detector model is designed to be utilized in either wet or dry/preaction fire protection systems. The corrosion monitoring probe is connected to a pressure switch which is equipped with a Green LED push button monitoring element that when pushed:

- Illuminates - Normal condition
- Not Illuminate - Probe has corroded sufficiently to cause failure in the wall of the probe.

This model is provided with a self-contained power supply which eliminates the costly wiring of the unit for monitoring or power.

Installation Instructions

Wet Pipe Systems with an Existing ECS Inspector Corrosion Monitoring Station (ICMS):

1. Turn the 1" isolation ball valve to the closed position to isolate the ECS Inspector Corrosion Monitoring Station (ICMS) 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 ICMS by opening the air Inlet/relief valve slowly.

   Note: The water and air in the ICMS 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 ICMS through the ½" drain valve into a 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 Corrosion Monitoring Probe into the bottom outlet provided in the ECS Inspector Corrosion Monitoring Station (see installation diagram on ICMS label or Figure 3).

6. Install the closed nipple, union, and 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 DCMP-1 is installed, 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 ICMS 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):

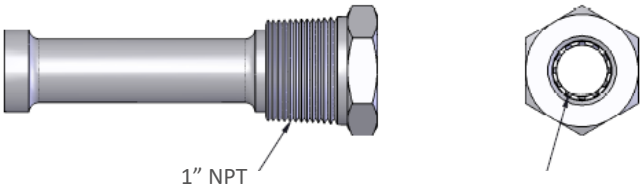
1. Turn the 1" isolation ball valve to the closed position to isolate the ECS Inspector Corrosion Monitoring Station from the fire sprinkler system.
2. Verify that the ½" drain valve is in the closed position. Remove the ½" plug.
3. Relieve system pressure from the ECS Inspector CMS by opening the drain valve slowly. **NOTE:** The water and air in the ECS Inspector ICMS will be pressurized to the system pressure. Hold container at drain valve discharge to catch any water.
4. Close the ½" drain valve. Reinstall 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 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 ICMS (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 DCMP-1 is installed, 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 system back in service by turning the 1" isolation ball valve to the open position to allow system pressure to enter the ICMS.
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. 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 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 shipping container 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, accompanied by a report outlining Engineered Corrosion Solutions recommendations for actions to be taken to address the level of corrosion activity indicated by analysis of the probe, will be provided to the Contractor/Owner.

FIGURE 1: ECS Detector Corrosion Monitoring Probe



1/2" FNPT CONNECTION FOR PRESSURE SWITCH OR WATER COLLECTION CHAMBER INDICATOR

FIGURE 2: ECS Detector Assembly

DCMP Shipped In 3 Parts When Not Ordered With An ECS Inspector ICMS

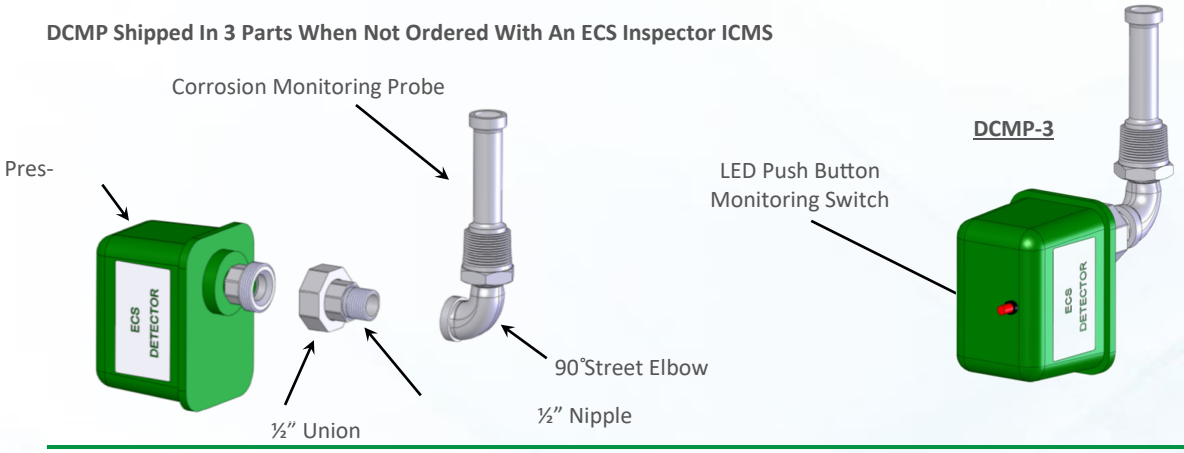


FIGURE 3: ECS Detector Assembly with an ECS Inspector Corrosion Monitoring Station

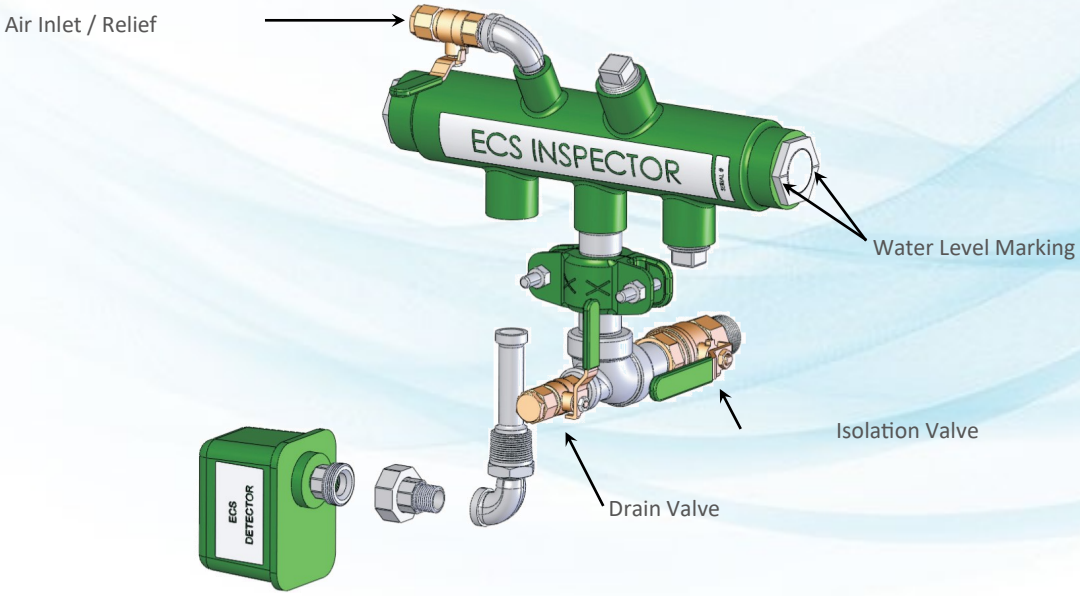
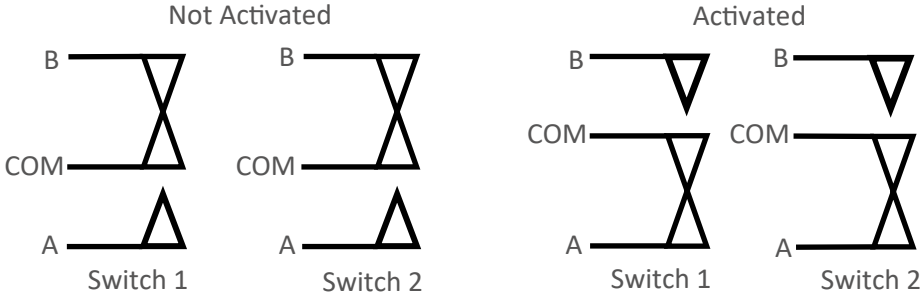


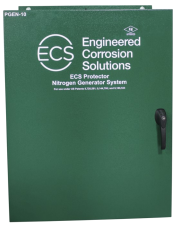
FIGURE 4: Model EPS10-2 Pressure Switch Electrical Connections



OUR PRODUCTS. YOUR SYSTEMS

Solutions for every environment

DRY PIPE SYSTEM NITROGEN GENERATORS



Corrosion control technology located in the riser room

	Wall Mount			Skid Mount	Stand Alone w/Separate Air Compressor			
	PGEN-3	PGEN-5	PGEN-10	PGEN-20	PGEN-30	PGEN-40	PGEN-50	PGEN-60
Total System Capacity	675 gal	950 gal	2,000 gal	3,200 gal	6,500 gal	11,000 gal	18,500 gal	22,500 gal
Single System Capacity @ 40 psi(1)	215 gal	265 gal	560 gal	950 gal	1,150 gal	1,440 gal	2,025 gal	2,900 gal
Single System Capacity @ 20 psi(1)	540 gal	590 gal	1,120 gal	1,800 gal	2,300 gal	2,880 gal	4,050 gal	5,800 gal
Air Compressor	Integral	Integral	Integral	Integral	Separate	Separate	Separate	Separate
Size (H x W x D)	36x24x9	36x24x9	38x29x11	57x32x40	53x24x9(2)	76x24x12(2)	76x24x12(2)	76x24x12(2)
Weight	115 lbs	125 lbs	175 lbs	420 lbs	152 lbs(2)	264 lbs(2)	300 lbs(2)	300 lbs(2)

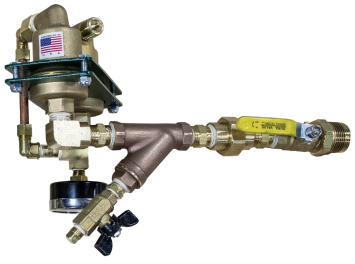
Notes

(1) Single system capacity based on 30 min. fill requirement of largest single sprinkler system; a secondary air compressor with normally closed isolation valve can be used to meet fill requirement for larger individual systems

(2) Size and weight of nitrogen generator only, does not include separate air compressor

(3) All nitrogen generators include 1 year manufacturer's warranty per ECS terms and conditions

WET PIPE SYSTEMS

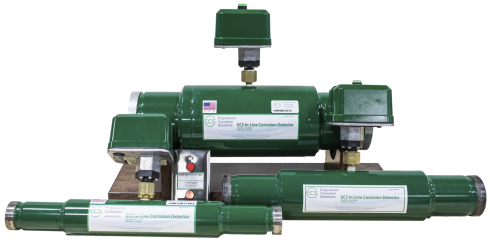


Automatic air venting and nitrogen corrosion control

SERVICES

Corrosion assessments, pipe analysis, and long term corrosion control programs to mitigate future risk

MONITORING SOLUTIONS



Ensure effective corrosion control with real time corrosion monitoring solutions