

Instructions for Setting Electronic-Actuator Position Sensor (PNP Normally Closed)

This instruction is for the installation and setting of a PNP normally closed electronic-actuator position sensor on DF and DP series diaphragm valves ordered with a -30426 designator.

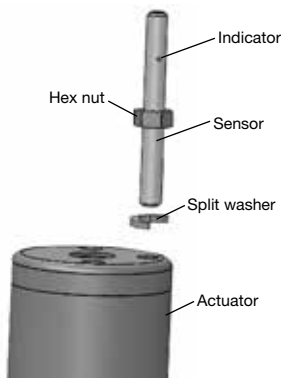
DF and DP Series – PNP Normally Closed Sensor Mounted to a Normally Closed Actuator/Valve Assembly

⚠ WARNING

Before installing the sensor, to avoid personal injury, you must:

- Depressurize the system
- Cycle the valve
- Purge the system to remove any residual system media left in the valve.

1. Ensure the valve is in the open position by applying 100 +/- 3 psig (6.8 +/- 0.20 bar) to the **actuator**.
2. Thread the **hex nut** onto the sensor to a position just below the **indicator** on the **sensor**.
3. Place the **split washer** onto the sensor below the hex nut and carefully thread the sensor approximately 20 turns into the actuator.
4. Connect the sensor to 24V DC.
5. Thread the sensor clockwise into the actuator until the sensor contacts the piston.
Note: The sensor will indicate an open circuit (indicator off) just prior to contact with the piston.
6. Turn the sensor counterclockwise 1/16 to 1/8 turn and verify the sensor maintains an open circuit (indicator off).
Note: If an open circuit is not maintained (indicator comes on), thread the sensor clockwise until the indicator turns off. Ensure the sensor does not contact the piston.
7. Pull up slightly on the sensor without allowing the sensor to rotate. Using a 5/16 in. wrench, carefully tighten the hex nut to 10 to 12 in.-lb (1.1 to 1.3 N·m).
Note: The indicator should remain off and the split washer appear flat.
8. Cycle the actuator 3 to 5 times at an actuator pressure of 100 +/- 3 psig (6.8 +/- 0.20 bar). Verify the indicator turns on and off.
9. Repeat the cycling at the actuator pressures listed below. Verify the indicator turns on and off.
 - DF series: 70 +/- 3 psig (4.8 +/- 0.20 bar)
 - DP series: 60 +/- 3 psig (4.1 +/- 0.20 bar)
10. If the indicator does not turn on and off properly, loosen the sensor and repeat steps 5 through 9.



Swagelok

DP Series — PNP Normally Closed Sensor Mounted to a Normally Open Actuator/Valve Assembly

⚠ WARNING

Before installing the sensor, to avoid personal injury, you must:

- Depressurize the system
- Cycle the valve
- Purge the system to remove any residual system media left in the valve.

1. Ensure the valve is in the open position (no actuation pressure applied).
2. Thread the **hex nut** onto the **sensor** to a position just below the **indicator** on the sensor.
3. Place the **split washer, washer, and O-ring** over the sensor/hex nut and carefully thread the sensor approximately 20 turns into the **actuator**.
4. Connect the sensor to 24 V (dc).
5. Thread the sensor clockwise into the actuator until the sensor contacts the piston.
Note: The sensor will indicate an open circuit (indicator off) just prior to contact with the piston.
6. Turn the sensor counterclockwise 1/16 to 1/8 turn and verify the sensor maintains an open circuit (indicator off).
Note: If an open circuit is not maintained (indicator comes on), thread the sensor clockwise until the indicator turns off. Ensure the sensor does not contact the piston.
7. Pull up slightly on the sensor without allowing the sensor to rotate. Using a 5/16 in. wrench, carefully tighten the hex nut to 10 to 12 in.-lb (1.1 to 1.3 N·m).
Note: The indicator should remain off and the split washer appear flat.
8. Cycle the actuator 3 to 5 times at an actuator pressure of 100 +/- 3 psig (6.8 +/- 0.20 bar). Verify the indicator turns on and off.
9. Repeat the cycling at an actuator pressure of 60 +/- 3 psig (4.1 +/- 0.20 bar). Verify the indicator turns on and off.
10. If the indicator does not turn on and off properly, loosen the sensor and repeat steps 5 through 9.

