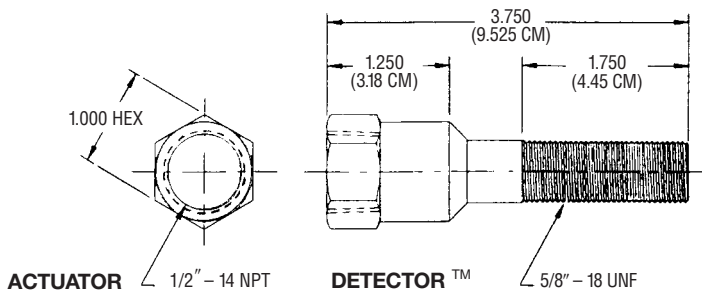




# Series DT Detector™ Position Sensor

## Specifications - Installation and Operating Instructions



**Series DT Detector™ position sensors** consist of two basic components, a hermetically sealed reed switch sensor assembly and a magnetic actuator assembly. A change in state of the contacts in the sensor is initiated by moving the actuator closer to or further away from the sensor target area, either into or away from the reed switch magnetic sensing range. This opens or closes the electrical circuit.

### SENSORS

Detector™ sensors are 316 SS bolts with 5/8"-18 UNF external threads and a 1/2"-14 NPT conduit entrance. The durable SPDT reed switch is potted inside the sensor enclosure.

### ACTUATORS

The actuator is a 316 SS bolt with a magnet embedded in the head. The available actuators provide levels of sensitivity for either 0.1" or 0.5" sensing capability.

### MECHANICAL INSTALLATIONS

1. The sensor(s) and actuator may be mounted in any position. Choose orientation that best fits your needs.
2. Install sensors individually, side-by-side, facing the same direction, at 90° or facing each other at a minimum of 3" apart.
3. Determine desired operating point. Use actuator supplied with sensor, keeping all magnetic materials away from the sensor assembly.
4. Locate sensor and actuator mounting assemblies to assure the actuator will move within the switch sensing area.
5. Adjust setpoints by rotating either the sensor or actuator or both in their respective threaded bracket assemblies. This will move them closer together or farther apart for desired operation.

### MODELS AND ACTUATOR SIZES

Model No.	Description	Sensing Distance
DT1060	Detector™ and standard actuator	0.1" (2.54 mm)
DT1160	Detector™ and high strength actuator	0.5" (12.7 mm)

### SPECIFICATIONS

#### GENERAL

- Housing:** 316 SS.
- Hermetic Seal:** Glass (inert gas).
- Potting:** Epoxy Resin.
- Temperature Range:** -40 to 163°F (-40 to 73°C).
- Optional Switch Life:** 600,000 cycles.
- Sensor Actuation:** Magnetic.

#### ELECTRICAL

- Contacts:** Tungsten, SPDT Form C.
- Current Rating:** 3A @ 125 VAC, 30 VDC.
- Intrinsically Safe:** Simple apparatus (w/barrier).
- Operating/Response Time:** 3.0 m Sec.
- Initial Contact Resistance:** 0.50 ohms (max.).

#### MECHANICAL

- Repeatability:** 0.005 in (.01 cm).
- Hysteresis:** 0.030 in (.08 cm).
- Leads:** Factory sealed with 18" minimum 4 conductor, PVC insulated, 18 AWG - Green/Red/Black/White (Ground/NC/NO/Common).
- Conduit:** 1/2"-14 NPT.
- Weight:** 0.32 lb (145 g), 0.45 lb with actuator (204 g).

#### ELECTRICAL CONNECTIONS

Use a 18 AWG, 4-conductor, shielded cable or 1/2" NPT conduit connectors. For correct wiring refer to the wiring diagram (Ground: Green, NC: Red, NO: Black and Common: White). Long runs of cable or conduit should be supported at the sensor to avoid pulling it out of position. For installation in hazardous locations, check local electrical codes. The Detector™ position sensors are designed to NEMA 4, 4X, 7, 9.

