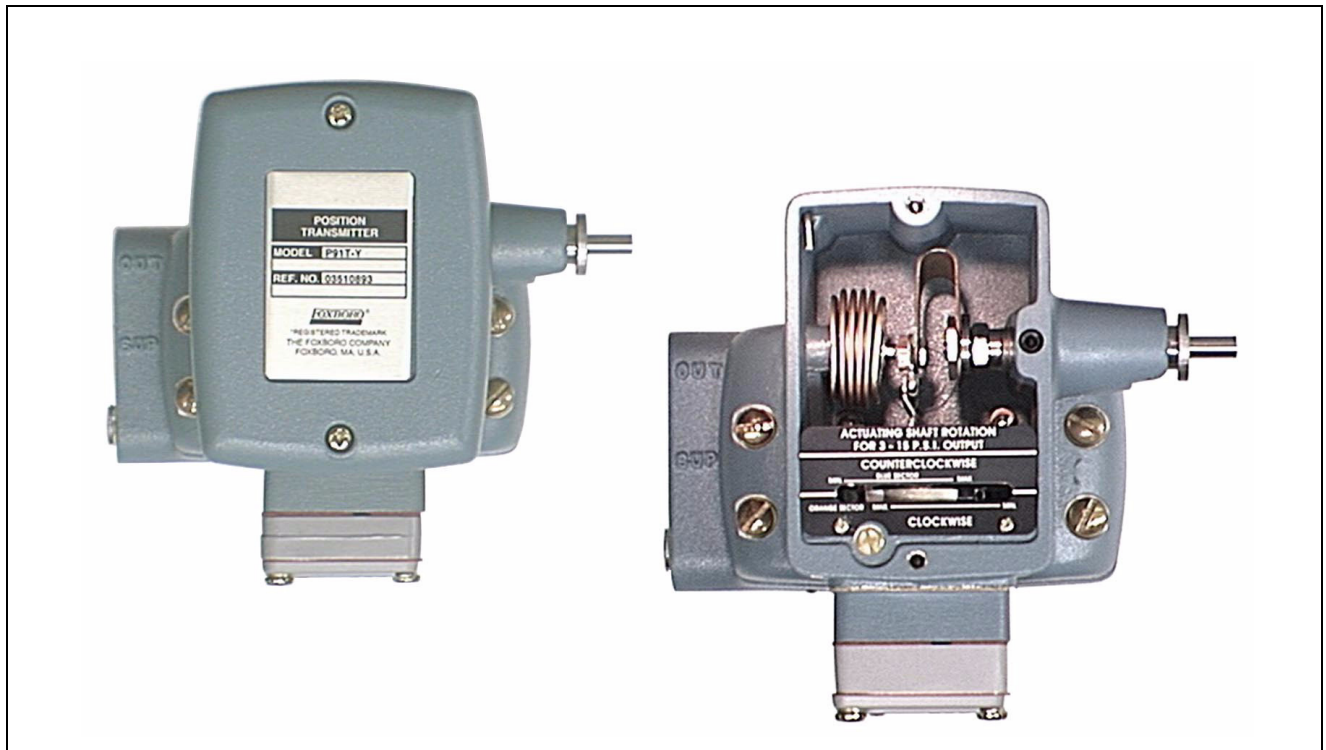


Model P91T Pneumatic Position Transmitter



The P91T Pneumatic Position Transmitter measures changes in angular position of its operating lever. It transmits a standard 20 to 100 kPa or 3 to 15 psi pneumatic output signal proportional to either the clockwise or counterclockwise rotation of the lever.

INTRODUCTION

The position transmitter produces a definite output air pressure for each position of its actuating lever. The actuating lever may be connected to a moving mechanism either directly or through a suitable linkage. A 20 to 100 kPa or 3 to 15 psi output can be obtained for any span of rotational motion from a minimum of 5° to a maximum of 30°. By repositioning the actuating lever on the transmitter input shaft, this span of rotational motion may be shifted anywhere in a plane perpendicular to the input shaft. Lever travel is restricted by a stop pin at the end of the input shaft.

OPERATING ADJUSTMENTS

All adjustments are readily accessible from the front of the transmitter. Factory alignment of the flapper-nozzle system simplifies field calibration.

PRECISE, SENSITIVE, AND ACCURATE

The transmitter has a fast response and is simple to adjust. There are a minimum number of moving parts, which are of stainless steel, beryllium copper, bronze, or nylon.

LIGHT AND COMPACT

The durable, lightweight, die-cast aluminum case is designed for field use and is readily adapted for mounting on other equipment. Bleed air from the mechanism purges the case and, together with the gasketed cover, inhibits ingress of vapor and dust.

STANDARD SPECIFICATIONS

Repeatability

0.25% of span

Linearity

0.5% of span

Dead Band

0.01 degree angular rotation for perceptible output change.

Supply Pressure

140 kPa (20 psi) \pm 10%

Supply Pressure Effect

Less than 1% of span for a 20 kPa (3 psi) change in supply pressure.

Ambient Temperature Limits

-30 and +80°C (-20 and +180°F)

Output Signal

20 to 100 kPa or 3 to 15 psi, as specified

Span (Angular Rotation)

Adjustable from 5 to 30 degrees

Air Consumption

1.3 m³/h (0.8 scfm) at standard conditions

Case

Die-cast aluminum with a corrosion-resistant vinyl finish, or equivalent.

Actuating Lever

Stainless steel rod, 250 mm (10 in) long and 6 mm (0.25 in) diameter. Transmitter can be provided with or without actuating lever.

Connections

Tapped for 1/4 NPT

Approximate Mass

2.2 kg (5 lb)

OPTIONAL FEATURES

Air Sets

Combination fixed or adjustable air filter pressure regulators. Available without a pressure gauge, or with a pressure gauge having a 60 psi and 4 bar scale, or a 400 kPa and 4 kg/cm² scale. Air set is mounted to P25A, P50A, or P110A Diaphragm Actuator yoke, and connected to the position transmitter. Select Model Code Optional Suffix -L, -M, -N, -P, -Q, or -R.

Transmitter Assembled to Invensys Foxboro Valve

The P91T is assembled, calibrated, and yoke-mounted to a Invensys Foxboro Control Valve. Specify Model Code Optional Suffix -F.

ORDERING INSTRUCTIONS

1. Model Number
2. Optional Features
3. Tag

MODEL CODE

| Description | Model |
|--|--------------|
| CP Pneumatic Position Transmitter | P91T |
| Feedback | |
| Position Transmitter with Rod | -Y |
| Position Transmitter without Rod | -N |
| Optional Selections | |
| Position Transmitter Assembled, Calibrated, and Yoke Mounted to a <i>Invensys</i> Foxboro Valve (Must Specify -N above) | -F |
| Adjustable Filter Regulator | -L |
| Adjustable Filter Regulator with 0 to 60 psi/0 to 4 bar Gauge | -M |
| Adjustable Filter Regulator with 0 to 400 kPa/0 to 4 kg/cm ² Gauge | -N |
| Fixed Filter Regulator | -P |
| Fixed Filter Regulator with 0 to 60 psi/0 to 4 bar Gauge | -Q |
| Fixed Filter Regulator with 0 to 400 kPa/0 to 4 kg/cm ² Gauge | -R |
| Example: P91T-N-FM | |

OTHER M&I PRODUCTS

Invensys Foxboro provides a broad range of measurement and instrument products, including solutions for pressure, flow, analytical, positioners, temperature, controlling and recording. For a listing of these offerings, visit the Invensys Foxboro web site at:

www.foxboro.com/instrumentation

DIMENSIONS – NOMINAL

mm
in

