

AT200VP

Specialty Level Instrument

Valve positioner K-TEK Products



Introduction

The AT200 Valve Positioner is a compact, high accuracy valve position transmitter that uses ABB's patented Magnetostrictive sensing technology. In the valve positioning application, the transmitter is bolted to the yoke of the actuator with two mounting brackets that are supplied with the transmitter. A third bracket is secured to the stem connector. This bracket holds the magnet that provides the signal to the transmitter. The clearance between the magnet and the sensing tube of the AT200 is approximately 1/4" (6.35mm). This dimension is not critical and can vary slightly along the length of the transmitter. The magnet should not contact the sensing tube at any point in its travel. The brackets supplied with the transmitter do not include mounting holes. These will be drilled in the field to accommodate the various sizes of actuators that will be encountered. The transmitter is calibrated in place by using either the integral pushbuttons or LCD. The vertical alignment of the transmitter is not critical and the zero and span can be set anywhere along the active portion of the transmitter. There is an unusable range of 2" (50.8 mm) at the transmitter and 3.5" (88.9 mm) on the bottom end of the sensing tube.

Features

- High accuracy .01 % of full scale with patented magnetostrictive sensing technology
- No direct connection between valve stem and transmitter
- Microprocessor based
- Simple calibration: pushbutton or HART Protocol
- Never requires recalibration
- Dual compartment housing with separate field terminal compartment
- Field replaceable module
- Built-in RFI/EMI filter

Options

- Local indication with scrolling LCD display
- HART protocol output
- Honeywell DE output
- Foundation Fieldbus output
- Glass viewing window
- 316L SS enclosure
- 21-segment strapping table

SPECIFICATIONS

Electronic Transmitter

Housing Type	Explosion Proof Powder Coated Cast Aluminum, Dual Compartment Standard Optional 316L Stainless Steel, Dual Compartment
Electrical Connection	1/2" FNPT
Mounting	Includes magnet with valve stem bracket and two (2) activator yoke mounting brackets
Measuring Range	0.5 - 30 ft. (0.15 - 9.1 m)
Repeatability	0.005% of full scale or 0.015", whichever is greater
Non-Linearity	0.01% of full scale or 0.35", whichever is greater
Accuracy	0.01% of full scale or 0.050", whichever is greater
Loop Supply Voltage	13.5 to 36 VDC
Polarity Protection	Diode in series with loop
Output	Standard 4-20 mA _{dc} ; Manual field calibration via pushbuttons; Optional: HART protocol, Honeywell DE, Foundation Fieldbus ITK4.01 Compliant
Dampening	Field Adjustable by means of pushbuttons. Range: 0.1 to 36 seconds
Burnout	Jumper selectable upscale (21 mA _{dc}) or downscale (3.6 mA _{dc})
Temperature	-40 to 170°F (-40 to 77°C) ambient
Humidity	0 to 100% R.H., non-condensing
Sensor Tube	
Material	316L Stainless Steel standard
Approvals	FM Factory Mutual Research Corp and CSA Canadian Standards Association Hazardous XP/ I / 1 / ABCD / T6; DIP / II, III / 1 / EFG / T6 IS / I / 1 / CD / T4—ELE0001 / A [excludes RI (secondary analog output) & Honeywell DE option] NI / I / 2 / ABCD / T4 Type 4X ATEX: Flameproof: Ⓔ II 1/2 GD EEx d IIC T6 T80°C; Ⓓ 02 ATEX 132659 Intrinsically Safe: Ⓔ II 1/2 GD EEx ia IIB T6; Ⓓ 02 ATEX 132658 [excludes RI secondary analog output) & Honeywell DE option] Ingress protection classification: IP67

ORDERING INFORMATION

AT200/a/b/c/d/e/f/g/h:

/a Mounting

- B** Bottom Connected Electronic Housing
- BW** Bottom Connected Electronic Housing with Window cover
- T** Top Connected Electronic Housing
- TW** Top Connected Electronic Housing with Window Cover

/b Transmitter Configuration

- L** Standard Local Transmitter
Process Temperature up to 200°F (93°C)

/c Transmitter Housing

- A** Standard Dual Compartment Aluminum Housing
- S** Dual Compartment Stainless Steel Housing

/d Probe Type

- R1** 5/8" OD Probe Standard

/e Electronic Module with One Analog Output

- X** None
- M4A** One Level, LCD Indicator. HART Protocol or Honeywell DE Protocol (Default is HART)
Add "D" suffix to module option for Honeywell DE (class 0 support)
Add "F" suffix to module option for Foundation Fieldbus ITK 4.01 compliant
Add "S" suffix to module option for 21 segment strapping table (not available with "D" suffix)

/f Second Analog Output (Hart protocol only)

- X** None
- RI** Second Electronic Module with One Analog Output and LCD Indicator
Notes: 1. Available only with HART Protocol module M4A
2. Housing type will be the same as primary transmitter housing (/c above)

/g Approvals

- FM** Factory Mutual and CSA Canadian Standard Association
- CEX** ATEX Flameproof, NEPSI
- CEI** ATEX I.S., NEPSI

/h Measuring Length

- ML** Specify the measuring length in inches or mm



Available Accessories:

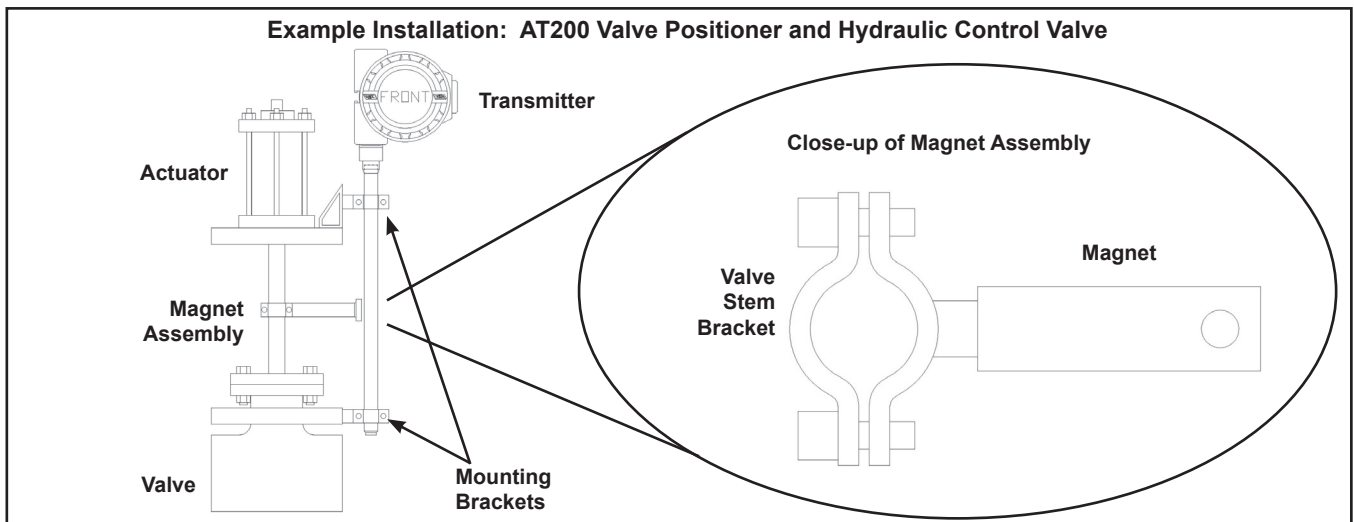
VP: Valve Positioning Transmitter (This ordering code is required to order AT200 with positioning capabilities)

MGT: Magnet Assembly (includes magnet with valve stem bracket and two actuator yoke mounting brackets)

Note: **This accessory is required.** Please specify the following: Valve Type/Size, Actuator Type/Size, and Valve Stem length and O.D. dimensions.

VI-Transmitter: Vibration Isolator (One Isolator includes: one rubber grommet one (1) split ring collar and one mounting bracket)

M20 ISO Fitting: M20 Female Electrical Connection



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