



FLowsERVE[®]

*Valtek Electro-pneumatic
Transducers*

Valtek Electro-pneumatic Transducer Features

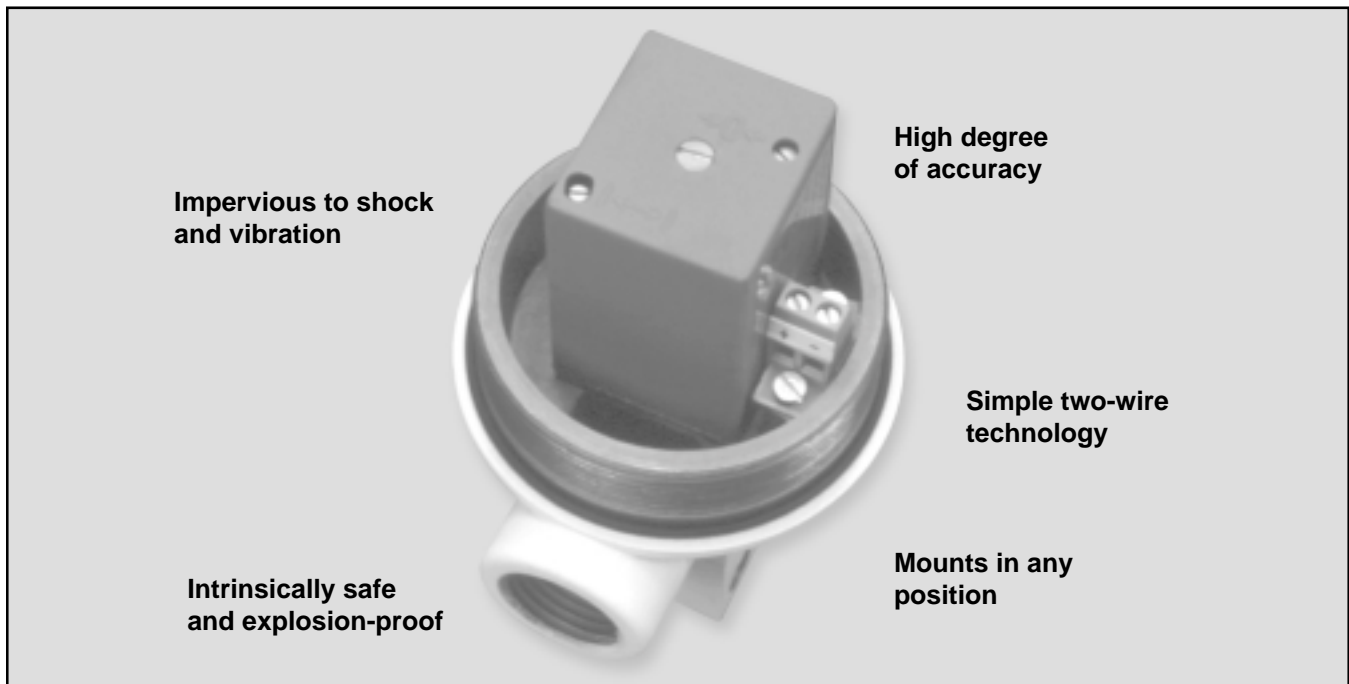


Figure 1: I/P Transducer Features and Advantages

The Valtek® Electro-pneumatic (I/P) Transducer is used to convert a milliamp control signal into a proportional pneumatic signal for pneumatic valve operators. The I/P transducer is used when conditions require that the transducer be located remotely from a positioner equipped actuator, or it may be used directly on a diaphragm actuator. A small volume booster mounted on the bottom of the unit provides the flow capacity to actuate diaphragm operators directly as well as send the command signal over considerable distances to a positioner.

Simple in operation, the I/P transducer uses a stationary coil and a moving magnet with low mass to produce a small-size unit, that may be mounted in any position. It has a fast response time and good repeatability, with a high degree of reliability. The Valtek I/P transducer is intrinsically safe and explosion proof. Its calibration system is designed for easy field adjustment.

When conditions require a valve mounted I/P transducer, along with a positioner, the Valtek Beta positioner with I/P module is recommended.

Features and Advantages

Shock and vibration resistant A low-mass flapper magnet controlled by a powerful, stationary magnetic coil makes the converter resistant to shock, vibration, radio frequency interference (RFI) and electro-magnetic interference (EMI).

Intrinsically safe/explosion-proof The I/P transducer is Factory Mutual approved and intrinsically safe for Class I, II, III, Division I, Groups C, D, E, F and G, when installed with the appropriate energy limiting safety barriers. The unit is also explosion-proof for Class I, Division I, Groups B, C and D; dust-ignitionproof for Class II, Division I, Groups E, F and G; and suitable for Class III, Division 1, hazardous locations, indoors.

Fast response time A signal change of 10 to 90 percent is converted within 0.32 seconds with a line air volume equivalent to 250 feet of 1/4-inch tubing (6.4 cubic inches).

Easy mounting Field mounting is easy with the metal housing and an optional 2-inch pipe mounting bracket.

Rugged housing Explosion and weather-proof protection is insured with a cast aluminum housing and Buna-N O-ring seal. All external surfaces have baked-on enamel paint for additional protection from the environment.

Low air consumption The Valtek I/P transducer uses only 0.08 scfm.

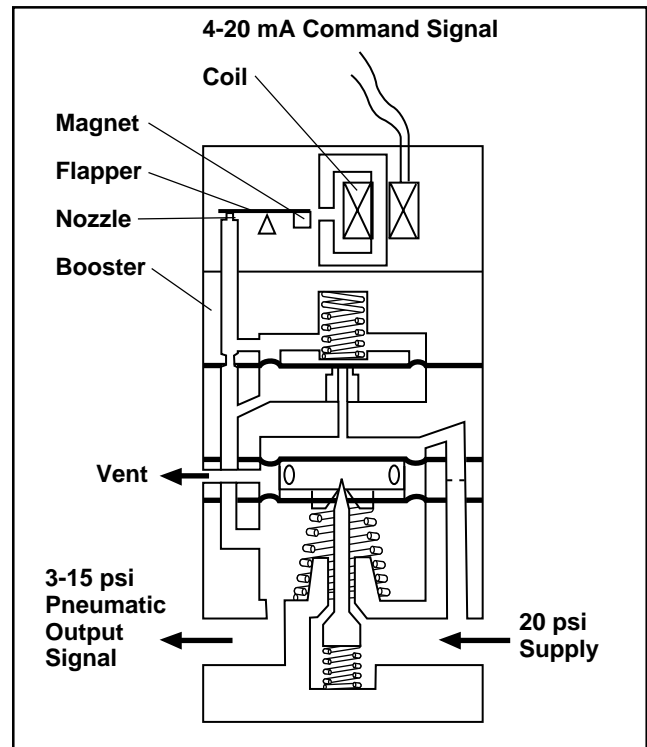
Small size and weight Miniaturization in the converter system means the I/P transducer measures 3.25 x 3.00 x 5.12 (inches) and weighs only 1.34 pounds.

Valtek Electro-pneumatic Transducer

Specifications / Ordering

Table I: Specifications

Input range	4-20 mA
Input resistance	Approximately 200 ohms
Capacitance	Negligible
Output range	3-15 psi
Output characteristic	Linear, direct or reverse
Air capacity	1.6 scfm
Air supply (maximum)	20 psi, ± 1.5 psi (oil, water and dust-free)
Steady state air consumption	0.08 scfm
Linearity	$\leq 0.5\%$
Hysteresis	$\leq 0.3\%$
Response threshold	$\leq 0.1\%$
Temperature influence	$\leq 0.05\% \text{ } ^\circ \text{F}$
Air supply influence	$\leq 0.3\%/1.5$ psi
Position influence	$\leq 0.5\%$
Vibration influence	$\leq 0.5\%$ for an acceleration ≤ 10 G's and a frequency ≤ 80 Hz
Influence of interfering radiation	Not measurable
Response time	10-90% or 90-10% = 0.3 seconds with a volume of 6.05 cubic inches 10-90% = 1.5 seconds with a volume of 60.5 cubic inches 90-10% = 2.5 seconds with a volume of 60.5 cubic inches
Ambient temperature limits	-20° F to +180° F
Connections – Air	1/8-inch NPT
– Electrical	1/2-inch NPT
Weight (pounds)	1.34


Figure 2: Wiring/Piping Schematic

Ordering Information

When ordering an I/P Transducer, please specify the type of mounting required (2-inch pipe, valve).


Figure 3: Transducer on 2-inch Pipe

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Dimensions

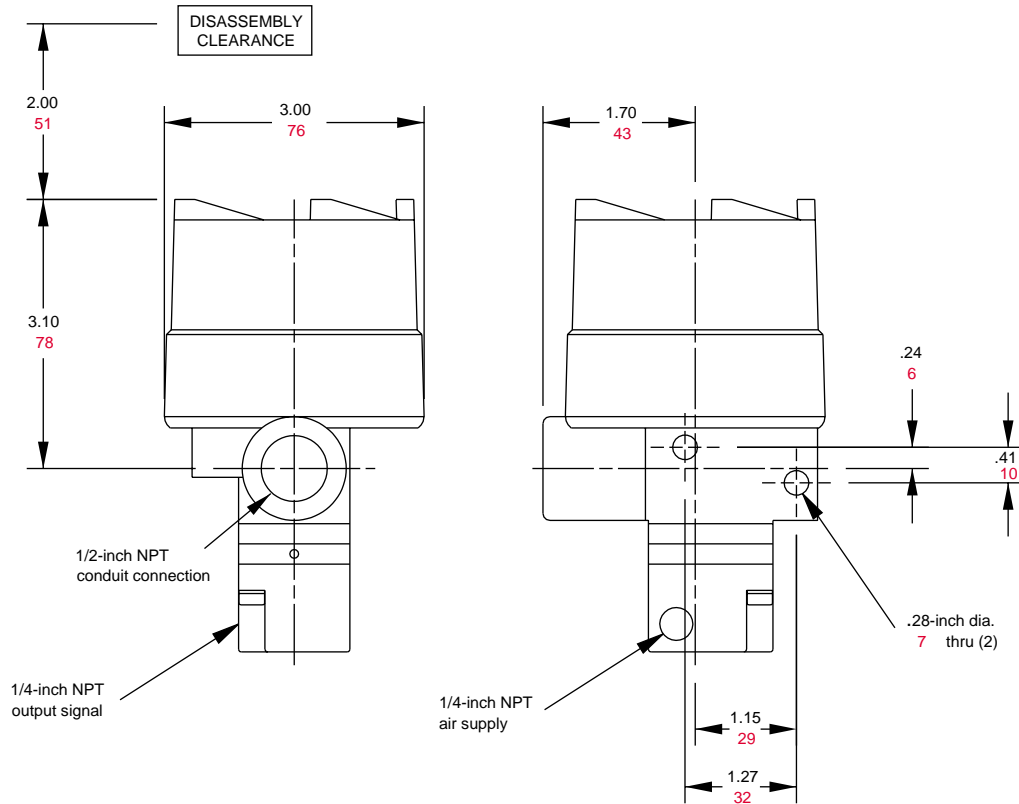


Figure 4: Dimensions (inches / mm)

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For more information, contact:

For more information about Flowserve, contact www.flowserve.com or call USA 972 443 6500

Regional Headquarters

1350 N. Mt. Springs Prkwy.
Springville, UT 84663
Phone 801 489 8611
Facsimile 801 489 3719

12 Tuas Avenue 20
Republic of Singapore 638824
Phone (65) 862 3332
Facsimile (65) 862 4940

12, av. du Québec, B.P. 645
91965, Courtaboeuf Cedex,
France
Phone (33 1) 60 92 32 51
Facsimile (33 1) 60 92 32 99

Quick Response Centers

5114 Railroad Street
Deer Park, TX 77536 USA
Phone 281 479 9500
Facsimile 281 479 8511

104 Chelsea Parkway
Boothwyn, PA 19061 USA
Phone 610 497 8600
Facsimile 610 497 6680

1300 Parkway View Drive
Pittsburgh, PA 15205 USA
Phone 412 787 8803
Facsimile 412 787 1944

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