

P221

Flush Diaphragm Pressure Transmitter



Precision Grade-- "Non-Filled" Flush Diaphragm Sensor

Designed for the highest system integrity

Tel-Tru's P221 Pressure Transmitter is designed for the OEM and end user where ruggedness, high performance, and reliability are required at a competitive price. **Key feature of the P221 is its non oil-filled sensing element. The sensing diaphragm is machined from a solid piece of steel, and can withstand the most abrasive / cyclical applications. No thin diaphragm to break, to oil or to leak.**

Hastelloy or Inconel sensors available

Manufactured for extended life cycle

The P221 is designed to last in high cyclical environments with or without the presence of water-hammering or spiking. Advanced manufacturing techniques, extreme environmental burn-in and thorough residual stress relieving procedures ensure the P221 maintains its performance over time.

NEMA 4X Packaging

Designed to meet Intrinsically Safe standards

The P221 is designed to meet or exceed the standards for IS. FM/CSA approvals are pending.

Certification

Every P221 is shipped with a NIST traceable calibration certificate.

CE

Conforms to EN50081-2 and EN50082-2

Standard Features

- $\pm = 0.5\%$ FSO Static Accuracy
- NEMA 4X Packaging
- $\pm = 0.25\%$ FSO /YR stability

Available Options

- $\pm = 0.25\%$ FSO Static Accuracy
- Alternate Wetted Materials
- Zero/Span Controls/ Shunt Cal



Note: specifications are subject to change.



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P221 Pressure Transmitter



Precision Grade Flush Diaphragm

0-100 psi through 0-7,500 psi

Product Specifications

Electrical

Excitation	
P221A, P221B	8-38 Vdc*
P221C	2-15 Vdc
Output	
P221A	4-20 mA
P221B	0-5 Vdc*
P221C	1-2 mV/V*
Zero Balance	= ±1% FSO
FSO Setting	= ±1% FSO
Resolution	Infinite (±.001% FSO usable)
Response Time	
P221A, P221B	< 3 mS
P221C	< 0.5 mS
Insulation Resistance	1000 MO @ 50 Vdc
Reverse Polarity	Protected
Warm-up	< 10 mS
Power Supply Effect	= ±.002% FSO per V input (P221A, P221B)
EMI/RFI	Internal Filtering (P221A, P221B)
Short Circuit Protected	Up to 40 Vdc (P221A, P221B)

Performance

Static Accuracy	= ±0.5% FSO* (BFSL, RSS)* (combined effects of non-linearity, hysteresis & repeatability)
Repeatability	= ±0.1% FSO
Temperature Effects	= ±1.5% FSO over comp range* (combined effects of Zero & FSO with reference at 70°F)
Long Term Stability	= ±0.25% FSO per year

Note: specifications are subject to change.

Mechanical

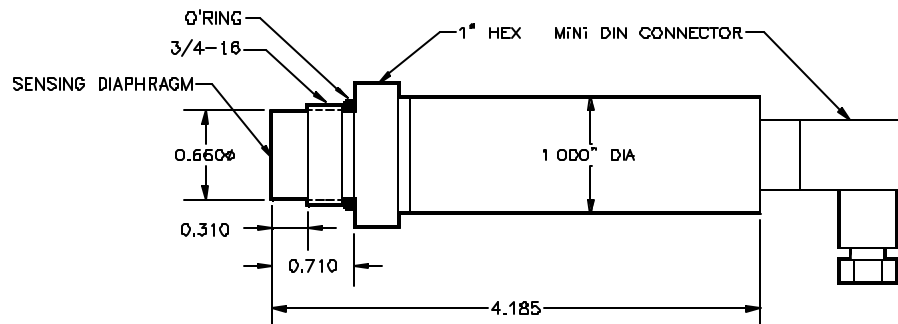
Pressure Ranges	0-100 through 0-7,500 psi (Customer may specify any range/eng. unit FOC) (Absolute, vacuum, compound available options)
Proof Pressure	2X Full Scale*
Burst Pressure	5X Full Scale* (15k psi max)
Materials	
Wetted Parts*	15-5 SST*
Non-wetted Parts	316 SST plus electrical connector*
Pressure Port	3/4-16 UNF Flush with 'O'-Ring*
Electrical Connector	NEMA 4X cable exit (24" cable)*
Dimensions	per outline below
Weight	nominal 10 oz

Environmental

Compensated Temp Range	0 to 170 °F
Operating Temp Range	-40 to 200 °F
Storage Temp Range	-40 to 250 °F

* Options Available

Outline



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TEL-TRU PRESSURE TRANSMITTERS

Flush Series Model P221

HOW TO ORDER EXAMPLE:

Precision Grade Flush Diaphragm, 4-20 mA, 0.25% Accuracy, 0 to 100 psi, Gauge Pressure, 3/4-16 UNF (M) Flush Diaphragm, 2 ft. Wire Pigtail (NEMA 4X), Zero and span controls

Example: P221 A 3 D9A G - 17 A402 - E4



MODEL

P221

OUTPUT

- A 4-20 mA (2-wire)
- B 0-5 Vdc (3-wire)
- C 1-2 mV/V (4-wire)
- K 0-10 Vdc output
(req. 16-38 Vdc excitation)
- N Hart Protocol

ACCURACY

- 2 0.50%
- 3 0.25%

PRESSURE RANGE

Pressure

- D9A 0 to 100 psi
- E3A 0 to 150 psi
- E5A 0 to 200 psi
- E7A 0 to 250 psi
- E8A 0 to 300 psi
- F2A 0 to 400 psi
- F3A 0 to 500 psi
- F4A 0 to 600 psi
- F6A 0 to 750 psi
- F7A 0 to 800 psi
- F8A 0 to 1,000 psi
- H2A 0 to 1,500 psi
- H5A 0 to 2,000 psi
- H7A 0 to 2,500 psi
- H9A 0 to 3,000 psi
- J4A 0 to 4,000 psi
- J8A 0 to 5,000 psi
- K1A 0 to 6,000 psi
- K2A 0 to 7,500 psi

Lower pressures available -- consult factory.

* Changes dimension of housing and cost

PRICES INCLUDE:

- Certificate of Calibration (directly traceable to NIST)

IMPORTANT NOTE:

Available Upon Request--Additional Options (consult factory):

- Process Connections
- Electrical Connections and more than 50' wire
- Pressure Ranges/Unit of Measure

OPTIONS

- G2 Mate Bendix 4 pin
- B1 Mate Bendix 6 pin
- B110 Mate Bendix 6 pin w/ 10' wire
- E4 Zero and span controls
- E6 100% shunt cal resistor
- A3 Inconel wetted parts
- A7 Hastelloy wetted parts
- D3 Improved temp. comp. to 0.5%

ELECTRICAL CONNECTION

- A402 2' wire pigtail (NEMA 4X)
- A405 5' wire pigtail (NEMA 4X)
- A410 10' wire pigtail (NEMA 4X)
- A420 20' wire pigtail (NEMA 4X)
- A430 30' wire pigtail (NEMA 4X)
- *A450 50' wire pigtail (NEMA 4X)

A602 1/2" NPT (M) conduit w/2' wire pigtail

A605 1/2" NPT (M) conduit w/5' wire pigtail

A610 1/2" NPT (M) conduit w/10' wire pigtail

A620 1/2" NPT (M) conduit w/20' wire pigtail

A630 1/2" NPT (M) conduit w/30' wire pigtail

*A650 1/2" NPT (M) conduit w/50' wire pigtail

B100 Bendix 4-pin connector

B200 Bendix 6-pin connector

D100 Mini DIN 43650C connector w/mate

* NOTE: Request quote for more than 50' wire

PROCESS CONNECTION

17 3/4-16 UNF (M) Flush Diaphragm with o-ring

57 BSP 1/2" (M) G1/2

MODE

- G Gauge Pressure Ref.
- A Absolute Pressure Ref.

List prices subject to change without notice (FCA Rochester, NY USA)



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