

P521



Differential Pressure Transmitter

Precision Grade-- High Line Differential Pressure Measurement

Designed for many markets/applications

Tel-Tru's P521 differential pressure transmitter is designed for end users and OEM 's where ruggedness, high performance, and reliability are required at a competitive price. This product is modular and is configurable to meet our customers' exact needs.

Manufactured for extended life cycle

Every P521 is built using advanced manufacturing techniques to ensure symmetry between the HI and LO ports. Symmetry, along with automated welding procedures and extreme environmental burn-in give Tel-Tru's differential pressure products excellent performance and reliability over time and at high elevated line pressure.

Entirely welded 316L SS pressure cavities

The P521 pressure ports all welded 316L SS 'O'-Ring free design make it ideal for high cyclical applications, capillary filled systems, or applications where a guaranteed leak free system is needed.

Certification

Each P521 transmitter is shipped with a NIST traceable calibration certificate.

CE

Conforms to EN50081-2 and EN50082-2

*Wet / Wet
DP*



Shown with optional Mini-DIN connector

Standard Features

- Ranges from 30 psi through 5k psi*
- 5X over-pressure protection*
- 316L SST wetted parts*
- Stability less than $\pm 0.25\%$ per annum*

Available Options

- Line pressure up to 10k psi*
- 20X over-pressure protection*
- All Hastelloy C-276 wetted parts (available to NACE)*
- Accuracy to $\pm 0.1\%$ FSO*

Note: specifications are subject to change.



Tel-Tru Manufacturing Co.
408 St. Paul Street
Rochester, New York 14605 USA
Phone: 585-232-1440 • 800-232-5335 • Fax: 585-232-3857 • E-mail: info@teltru.com • Web: www.teltru.com

P521 Pressure Transmitter

High Line Differential Pressure Measurement
0-30 psid through 0-5,000 psid



Electrical

Excitation	
P521A, P521B	8-38 Vdc*
P521C	2-15 Vdc
Output	
P521A	4-20 mA
P521B	0-5 Vdc*
P521C	1-2 mV/V*
Zero Balance	= ±1% FSO
FSO Setting	= ±1% FSO
Resolution	Infinite (±.001% FSO usable)
Response Time	
P521A, P521B	< 5 mS
P521C	< 1mS
Insulation Resistance	1000 MO @ 50 Vdc
Reverse Polarity	Protected
Warm-up	< 10 mS
Power Supply Effect	= ±.002% FSO per V input (P521A, P521B)
EMI/RFI	Internal Filtering (P521A, P521B)
Short Circuit Protected	Up to 40 Vdc (P521A, P521B)

Mechanical

Pressure Ranges	
Range a:	0-30 through 0-200 psid
Range b:	0-300 through 0-1,000 psid
Range c:	0-2k through 0-5,000 psid
(Customer may specify any range/eng. unit FOC)	
Line Pressure	
Range a:	1,000 psi
Range b:	3,000 psi
Range c:	10,000 psi
Proof Pressure	5X Full Scale either side (10k psi max)*
Burst Pressure	
Range a:	Minimum 5,000 psi
Range b:	Minimum 10,000 psi
Range c:	Minimum 12,000 psi
Materials	
Wetted Parts	316L SST*
Non-wetted Parts	316L SST plus electrical connector
Pressure Port	¼" -NPT Female*
Electrical Connector	NEMA 4X cable exit (24" cable)*
Dimensions	per outline below
Weight	13 oz

Performance

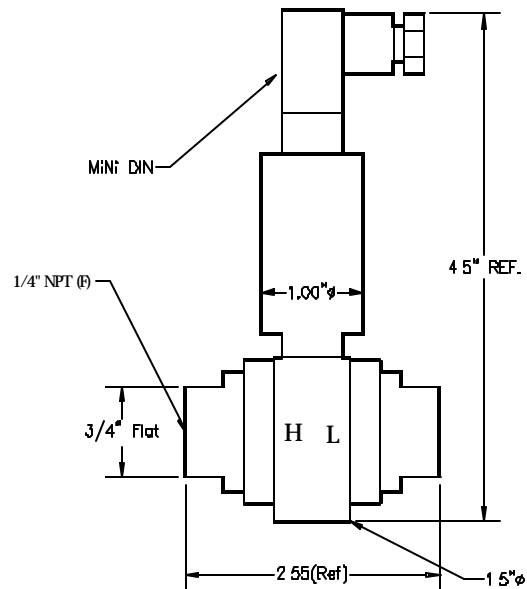
Static Accuracy	= ±0.5% FSO* (BFSL, RSS)
(combined effects of non-linearity, hysteresis & repeatability)	
Static Pressure Effect	
Range a:	= ±1.5% FSO per 1k psi
Range b:	= ±1% FSO per 2k psi
Range c:	= ±1% FSO per 5k psi
Repeatability	= ±0.1% FSO
Temperature Effects	= ±1.5% FSO over comp range
(combined effects of Zero & FSO with reference at 70°F)	
Long Term Stability	= ±0.25% FSO per year

Environmental

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

Note: specifications are subject to change.

Outline



Shown with optional Mini-DIN connector



Tel-Tru Manufacturing Co.
408 St. Paul Street
Rochester, New York 14605 USA
Phone: 585-232-1440 • 800-232-5335 • Fax: 585-232-3857 • E-mail: info@teltru.com • Web: www.teltru.com

TEL-TRU PRESSURE TRANSMITTERS

Differential Series Models P521, P531, and P523

HOW TO ORDER EXAMPLE:

Precision Grade Differential, 4-20 mA, 0.25% Accuracy, 0 to 30 psid, Differential/Unidirectional, 1/4" NPT (F), 2 ft. Wire Pigtail (NEMA 4X)

Example: **P521 A 3 C6A D - 02 A402 -**



MODEL

- P521**
- P531** Low Pressure
- P523** Explosion-Proof

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
(Models P521 and P523 only)

ACCURACY

- 2** 0.50%
- 3** 0.25%
- 6** 0.10% (P531 only)

PRESSURE RANGE

	P521	P531	P523
B1P 0 to 5 in. WC	N/A		
B4P 0 to 10 in. WC	N/A		
B8P 0 to 16 in. WC	N/A		
C2P 0 to 20 in. WC	N/A		
D4P 0 to 50 in. WC	N/A		
D7P 0 to 75 in. WC	N/A		
D9P 0 to 100 in. WC	N/A		
E3P 0 to 150 in. WC	N/A		
E4P 0 to 160 in. WC	N/A		
E5P 0 to 200 in. WC	N/A		
E7P 0 to 250 in. WC	N/A		
E8P 0 to 300 in. WC	N/A		
F3P 0 to 500 in. WC	N/A		
F6P 0 to 750 in. WC	N/A		
<hr/>			
B7A 0 to 15 psid	N/A		
C6A 0 to 30 psid			
D6A 0 to 60 psid			
D9A 0 to 100 psid			
E3A 0 to 150 psid		N/A	
E5A 0 to 200 psid		N/A	
E7A 0 to 250 psid		N/A	
E8A 0 to 300 psid		N/A	
F3A 0 to 500 psid		N/A	
F6A 0 to 750 psid		N/A	
F8A 0 to 1,000 psid		N/A	
H2A 0 to 1,500 psid		N/A	
H5A 0 to 2,000 psid		N/A	
H7A 0 to 2,500 psid		N/A	
H9A 0 to 3,000 psid		N/A	
J4A 0 to 4,000 psid		N/A	
J8A 0 to 5,000 psid		N/A	

OPTIONS

- | | | |
|-------------------------------------------|--|----|
| B1 Mate Bendix 6 pin | | |
| B110 Mate Bendix 6 pin w/ 10' wire | | NA |
| E4 Zero and span controls | | NA |
| E6 100% shunt cal resistor | | |
| A3 Inconel wetted parts | | |
| A7 Hastelloy wetted parts | | |
| B8 Bleed port | | NA |

ELECTRICAL CONNECTION

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

- | | | |
|---------------------------------------------------------|--|--|
| 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 | | |

- | | | |
|-------------------------------------------------|--|----|
| B200 Bendix 6-pin connector | | NA |
| D100 Mini DIN 43650C
connector w/mate | | NA |

* NOTE: Request quote for more than 50' wire

PROCESS CONNECTION

- 02** 1/4" NPT (F)
- 01** 1/4" NPT (M)
- 06** 1/8" NPT (F)
- 62** 316L SS Process Flanges 1/4" NPT

MODE

- D** Differential/Unidirectional
- B** Differential/Bidirectional

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

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



Tel-Tru Mfg. Co. 408 St. Paul St., Rochester, NY 14605 • P: 800.232.5335/585.232.1440 • F: 585.232.3857 • E: info@teltru.com • W: www.teltru.com