



TEL-TRU MANUFACTURING COMPANY

PRESSURE TRANSMITTERS



www.teltru.com



World-Class Instruments Since 1916



Threaded 100 Series, cont.

Precision Grade Mid-High Pressure

P151



- High Pressure Cutting Systems
- Industrial Process Control
- Laboratory and Test Equipment
- Stamping Presses

Precision Grade Ultra High Pressure

P161



- High Pressure Cutting Systems
- Industrial Process Control
- Laboratory and Test Equipment
- Stamping Presses

OUTPUTS	SUPPLY	CODE	OUTPUTS	SUPPLY	CODE
4-20 mA (2-wire)	8-38 Vdc	A	4-20 mA (2-wire)	8-38 Vdc	A
0-5 Vdc (3-wire)	8-38 Vdc	B	0-5 Vdc (3-wire)	8-38 Vdc	B
1-2 mV/V (4-wire)	2-15 Vdc	C	1-2 mV/V (4-wire)	2-15 Vdc	C
1-10 Vdc output	16-38 Vdc	K	1-10 Vdc output	16-38 Vdc	K
ACCURACY	CODE		ACCURACY	CODE	
0.50%	2		0.50%	2	
0.25%	3		0.25%	3	
0.10%	6		0.10%	6	
PRESSURE RANGES	CODE		PRESSURE RANGES	CODE	
0-15,000 psi thru 0-60,000 psi	G		0-25,000 psi thru 0-100,000 psi	G	
MODE	CODE		MODE	CODE	
Gauge Pressure Ref.	G		Gauge Pressure Ref.	G	
PROCESS CONN.	CODE		PROCESS CONN.	CODE	
F-250-C (use \leq 60,000 psi)	11		F-250-C (use \leq 60,000 psi)	11	
F-312-C (use $>$ 60,000 psi)	13		F-312-C (use $>$ 60,000 psi)	13	
ELECTRICAL CONN.	CODE		ELECTRICAL CONN.	CODE	
X' wire pigtail (NEMA 4X)	A4XX		X' wire pigtail (NEMA 4X)	A4XX	
1/2" NPT (M) conduit w/X' wire	A6XX		1/2" NPT (M) conduit w/X' wire	A6XX	
Bendix 4-pin conn.	B100		Bendix 4-pin connector	B100	
Bendix 6-pin conn.	B200		Bendix 6-pin connector	B200	
Mini DIN 43650C conn. w/mate	D100		Mini DIN 43650C conn. w/mate	D100	
DIN 43650 conn. w/mate	D200		DIN 43650 conn. w/mate	D200	

Standard Specifications

	P151	P161
Proof Pressure		
2X FS (75 kpsi max)	X	
2X FS (160 kpsi max)		X
Burst Pressure		
3X FS (90 kpsi max)	X	
5X FS (180 kpsi max)		X
Response Time		
<5 ms	X	X
Wetted Materials		
15-5 SS	X	X
Protection Class		
NEMA 4X	X	X
Temperature Performance		
Operating Temp Range (OTR)		
-40/200°F (-40/93.3°C)	X	X
Compensated Temp Range (CTR)		
0/170°F (-17.8/76.7°C)	X	X
Temp Effect on Zero over the CTR		
+0.015% FS/°F (+0.027% FS/°C)	X	X
Temp Effect on Span over the CTR		
+0.015% FS/°F (+0.027% FS/°C)	X	X
Zero and Span Balance		
+1.0% FSO	X	X
Long-Term Stability		
+0.25% FSO/year	X	X
Insulation Resistance		
1000 M-ohms @ 50 Vdc	X	X



Flush 200 Series

Precision Grade Flush Diaphragm

P221



- Adhesives and Plastics Coating Machinery
- Paint Systems
- Sealant Systems
- Slurries
- Non-Filled Flush Diaphragm Process Connection

OUTPUTS	SUPPLY	CODE	OUTPUTS	SUPPLY	CODE
4-20 mA (2-wire)	8-38 Vdc	A	4-20 mA (2-wire)	8-38 Vdc	A
0-5 Vdc (3-wire)	8-38 Vdc	B	0-5 Vdc (3-wire)	8-38 Vdc	B
1-2 mV/V (4-wire)	2-15 Vdc	C	1-2 mV/V (4-wire)	2-15 Vdc	C
0-10 Vdc output	16-38 Vdc	K	0-10 Vdc output	16-38 Vdc	K
ACCURACY	CODE		ACCURACY	CODE	
0.50%	2		0.50%	2	
0.25%	3		0.25%	3	
PRESSURE RANGES	CODE		PRESSURE RANGES	CODE	
0-100 psi thru 0-7,500 psi	G		0-100 psi thru 0-7,500 psi	G	
MODE	CODE		MODE	CODE	
Gauge Pressure Ref.	G		Gauge Pressure Ref.	G	
Absolute Pressure Ref.	A		Absolute Pressure Ref.	A	
PROCESS CONN.	CODE		PROCESS CONN.	CODE	
3/4-16 UNF (M) Flush Diaph w/o-ring	17		3/4-16 UNF (M) Flush Diaph w/o-ring	17	
BSP 1/2" (M) G1/2	57		BSP 1/2" (M) G1/2	57	
ELECTRICAL CONN.	CODE		ELECTRICAL CONN.	CODE	
X' wire pigtail (NEMA 4X)	A4XX		X' wire pigtail (NEMA 4X)	A4XX	
1/2" NPT (M) conduit w/X' wire	A6XX		1/2" NPT (M) conduit w/X' wire	A6XX	
Bendix 4-pin connector	B100		Bendix 4-pin connector	B100	
Bendix 6-pin connector	B200		Bendix 6-pin connector	B200	
Mini DIN 43650C conn. w/mate	D100		Mini DIN 43650C conn. w/mate	D100	
CERTIFICATIONS	CODE		CERTIFICATIONS	CODE	
FM/CSA approvals pending	1000		FM/CSA approvals pending	1000	

Standard Specifications

	P221
Proof Pressure	
2X FS	X
Burst Pressure	
5X FS (15 kpsi max)	X
Response Time	
<3 ms	X
Wetted Materials	
15-5 SS	X
Protection Class	
NEMA 4X	X
Temperature Performance	
Operating Temp Range (OTR)	
-40/200°F (-40/93.3°C)	X
Compensated Temp Range (CTR)	
0/170°F (-17.8/76.7°C)	X
Temp Effect on Zero over the CTR	
+0.015% FS/°F (+0.027% FS/°C)	X
Temp Effect on Span over the CTR	
+0.015% FS/°F (+0.027% FS/°C)	X
Zero and Span Balance	
+1.0% FSO	X
Long-Term Stability	
+0.25% FSO/year	X
Insulation Resistance	
1000 M-ohms @ 50 Vdc	X



Submersible 400 Series

Precision Grade Submersible

P421



- Heavy Slurries
- Hydro Electric
- Level and Depth Measurement
- Waste Water Treatment

Precision Grade Submersible

P431



- Irrigation
- Level and Depth Measurement
- Underground Storage
- Water Resource
- Well Water
- Coal Bed Methane

OUTPUTS	SUPPLY	CODE	OUTPUTS	SUPPLY	CODE
4-20 mA (2-wire)	8-38 Vdc	A	4-20 mA (2-wire)	8-38 Vdc	A
0-5 Vdc (3-wire)	8-38 Vdc	B	0-5 Vdc (3-wire)	8-38 Vdc	B
.5 - 4.5 Vdc output	5 Vdc	J	.5 - 4.5 Vdc output	5 Vdc	J
ACCURACY		CODE	ACCURACY		CODE
0.50%		2	0.25%		3
0.25%		3	0.10%		6
PRESSURE RANGES			PRESSURE RANGES		
0-5 psi thru 0-500 ft. WC			0-3 psi thru 0-15,000 ft. WC		
MODE		CODE	MODE		CODE
Gauge Pressure Ref.		G	Gauge Pressure Ref.		G
PROCESS CONN.		CODE	PROCESS CONN.		CODE
Flush Clog-Free Sensor (w/3" x 1" standoff)		36	4/16-20 UNF (M) w/PVC cap (>15 psi)		15
			7/8-14 UNF (M) w/PVC cap (<15 psi)		20
			Stainless sludge nose		14
			Stainless steel cap		16
ELECTRICAL CONN.		CODE	ELECTRICAL CONN.		CODE
Submersible 1/2" NPT (M) conduit w/40' vented polyurethane cable		G140*	Vented polyurethane cable X'		A2XX
Submersible 1/2" NPT (M) conduit w/X' vented Tefzel cable		G2XX*	Vented Tefzel cable X'		A3XX

*Please contact factory for other lengths

Standard Specifications

	P421	P431
Proof Pressure 2X FS	X	X
Burst Pressure 5X FS	X	X
Response Time <5 ms	X	X
Wetted Materials 316L SS 316 and 15-5 SS	X	X
Protection Class IP68	X	X
Temperature Performance Operating Temp Range (OTR) -40/200°F (-40/93.3°C) Compensated Temp Range (CTR) 0/170°F (-17.8/76.7°C) Temp Effect on Zero over the CTR +0.015% FS/°F (+0.027% FS/°C) Temp Effect on Span over the CTR +0.015% FS/°F (+0.027% FS/°C)	X	X
Zero and Span Balance +1.0% FSO	X	X
Long-Term Stability +0.25% FSO/year	X	X
Insulation Resistance 1000 M-ohms @ 50 Vdc	X	X

Selecting a Pressure Transmitter

Application and environmental conditions affect transmitter selection:

Type of service:

- Oil/gas
- Process
- Power plant general machinery
- OEM
- Waste water, etc.

Fluid conditions

- Static
- Varying pressure
- Pulsation
- Min/max temperatures
- Type of fluid
 - Sour gas
 - Water
 - Steam
 - Sludge, etc.

Various options are available—for proper selection consider:

Output

- Requirements of receiving equipment
- Supply voltage available
- Distance signal will travel

Accuracy

- Application requirement
- Cost

Pressure range


- Pressure limits of application
- Scaling of output signal—best when 50% to 80% of operating range is within mid-scale

Process connection

- Application requirements
- Pressure in system
- Media type being measured

Electrical connection

- Plant standards
- Application requirements

The  mark on Tel-Tru Pressure Transmitters indicates they are in compliance with European Standards, incorporating components designed to protect the device from and neutralize the effects of Radio Frequency Interference (RFI), Electromagnetic Interference (EMI), and Electrostatic Discharge (ESD). This "electrical noise" comes from walkie-talkies (RFI), AC motors used in the vicinity of the transmitter installation (EMI), or from sources within the transmitter itself (ESD).

See www.teltru.com/transmit_pres.asp or the *Pressure Transmitters pricelist* for detailed specifications and range or order information.



Differential 500 Series

Precision Grade Differential



P521

- Hydraulics and Pneumatics
- Laboratory and Test
- Marine and Offshore
- Petrochemical
- Pumps and Compressors

Precision Grade Differential



P523

** Explosion Proof **

- Hydraulics and Pneumatics
- Laboratory and Test
- Marine and Offshore
- Petrochemical
- Pumps and Compressors

Precision Grade Differential



P531

- Hydraulics and Pneumatics
- Laboratory and Test
- Marine and Offshore
- Petrochemical
- Pumps and Compressors

OUTPUTS	SUPPLY	CODE	OUTPUTS	SUPPLY	CODE	OUTPUTS	SUPPLY	CODE
4-20 mA (2-wire)	8-38 Vdc	A	4-20 mA (2-wire)	8-38 Vdc	A	4-20 mA (2-wire)	8-38 Vdc	A
0-5 Vdc (3-wire)	8-38 Vdc	B	0-5 Vdc (3-wire)	8-38 Vdc	B	0-5 Vdc (3-wire)	8-38 Vdc	B
1-2 mV/V (4-wire)	2-15 Vdc	C	1-2 mV/V (4-wire)	2-15 Vdc	C	1-2 mV/V (4-wire)	2-15 Vdc	C
0-10 Vdc output	16-38 Vdc	K	0-10 Vdc output	16-38 Vdc	K	0-10 Vdc output	16-38 Vdc	K
ACCURACY	CODE		ACCURACY	CODE		ACCURACY	CODE	
0.50%	2		0.50%	2		0.50%	2	
0.25%	3		0.25%	3		0.25%	3	
0.10%	6		0.10%	6		0.10%	6	
PRESSURE RANGES	CODE		PRESSURE RANGES	CODE		PRESSURE RANGES	CODE	
0-30 psid thru 0-10,000 psid			0-5 in. WC thru 0-10,000 psi			0-5 in. WC thru 0-100 psid		
MODE	CODE		MODE	CODE		MODE	CODE	
Gauge Pressure Ref.	G		Gauge Pressure Ref.	G		Gauge Pressure Ref.	G	
Differential / Unidirectional	D		Differential / Unidirectional	D		Differential / Unidirectional	D	
Differential / Bidirectional	B		Differential / Bidirectional	B		Differential / Bidirectional	B	
PROCESS CONN.	CODE		PROCESS CONN.	CODE		PROCESS CONN.	CODE	
1/4" NPT (F)	02		1/4" NPT (F)	02		1/4" NPT (F)	02	
1/4" NPT (M)	01		1/4" NPT (M)	01		1/4" NPT (M)	01	
1/8" NPT (F)	06		1/8" NPT (F)	06		1/8" NPT (F)	06	
316L SS Process Flanges 1/4" NPT	62		316L SS Process Flanges 1/4" NPT	62		316L SS Process Flanges 1/4" NPT	62	
ELECTRICAL CONN.	CODE		ELECTRICAL CONN.	CODE		ELECTRICAL CONN.	CODE	
X' wire pigtail (NEMA 4X)	*A4XX		X' wire pigtail (NEMA 4X)	*A4XX		X' wire pigtail (NEMA 4X)	*A4XX	
1/2" NPT (M) conduit w/X' wire pigtail	*A6XX		1/2" NPT (M) conduit w/X' wire pigtail	*A6XX		1/2" NPT (M) conduit w/X' wire pigtail	*A6XX	
Bendix 6-pin connector	B200		Bendix 6-pin connector	B200		Bendix 6-pin connector	B200	
Mini DIN 43650C conn. w/mate	D100		Mini DIN 43650C conn. w/mate	D100		Mini DIN 43650C conn. w/mate	D100	

* Please request quote for more than 50' of wire

CERTIFICATIONS

CSA/CUS Explosion Proof Cert. to Class 1 Div 1 and Class 1 Div 2 Groups A, B, C, D

Standard Specifications

P521 P523 P531

	P521	P523	P531
Proof Pressure			
3X FS (7kpsi max)		X	
5X FS (10 kpsi max)	X		
1000 psi			X
Burst Pressure			
Min 3-12 kpsi	X		
Min 5-12 kpsi		X	
3,000 psi			X
Response Time			
<5 ms	X		
<10 ms		X	X
Wetted Materials			
316L SS		X	X
316L SST	X		
Protection Class NEMA 4X	X		X
Class 1 Div 1		X	
Temperature Performance			
Operating Temp Range (OTR)			
-40/200°F (-40/93.3°C)	X		X
-20/200°F (-29/93.3°C)		X	
Compensated Temp Range (CTR)			
0/170°F (-17.8/76.7°C)	X	X	X
Temp Effect on Zero over the CTR			
+0.015% FS/°F (+0.027% FS/°C)	X	X	X
Temp Effect on Span over the CTR			
+0.015% FS/°F (+0.027% FS/°C)	X	X	X
Zero and Span Balance +1.0% FSO	X	X	X
Long-Term Stability +0.25% FSO/year	X	X	X
Insulation Resistance			
1000 M-ohms @ 50 Vdc	X	X	X



Local Display

Local Readout Display
PTD-1



Specifications

OUTPUTS	SUPPLY
4-20 mA	12-36 Vdc
ACCURACY	0.050%
ELECTRICAL CONN.	Mates with DIN 43650 connector
DISPLAY	LED
MATERIALS	ABS plastic with neoprene gasket
PROTECTION CLASS	NEMA 4X

Loop powered LED display has customer-configurable readout in mA DC, percent of full scale, or engineering units.

TEL-TRU PRESSURE TRANSMITTERS *Range Table and How to Order*

EXAMPLE: Precision Grade Threaded, 4-20 mA, 0.25% Accuracy, 0 to 100 psi, Gage Pressure, 1/4" NPT Male, 2 ft. Wire Pigtail (NEMA 4X). **PART NUMBER:** [P121A3D9AG-01A402](#)

	MODEL	OUTPUT	ACCURACY	RANGE	MODE	PROCESS CONN.	ELECTRICAL CONN.
SELECT:	P121	A	3	D9A	G	01	A402

RANGES	Unit	CODE	Threaded					Flush	Sanitary			Submersible		Differential			
			P121	P131	P141/3	P151	P161	P221	P321	P331	P341	P421	P431	P521	P523	P531	
Vacuum																	
-30" Hg to 0	in. Hg	V1K	X		X				X								
Compound																	
-30" Hg to 15	psi	Z1A	X		X				X								
-30" Hg to 30	psi	Z2A	X		X				X								
-30" Hg to 60	psi	Z3A	X		X				X								
-30" Hg to 100	psi	Z4A							X								
-30" Hg to 200	psi	Z6A							X								
-30" Hg to 300	psi	Z7A							X								
Pressure																	
0 to 3	psi	A8A	X		X				X	X			X				
0 to 5	psi	B1A	X		X				X	X		X	X				
0 to 10	psi	B4A	X		X				X	X		X	X				
0 to 15	psi	B7A	X	X	X				X	X		X	X		X	X	
0 to 20	psi	C2A		X													
0 to 25	psi	C4A		X													
0 to 30	psi	C6A	X	X	X				X	X		X	X	X	X	X	X
0 to 40	psi	D1A		X													
0 to 50	psi	D4A		X													
0 to 60	psi	D6A	X	X	X				X	X		X	X	X	X	X	X
0 to 75	psi	D7A		X													
0 to 100	psi	D9A	X	X	X			X	X	X	X	X	X	X	X	X	X
0 to 150	psi	E3A	X	X	X			X	X		X	X	X	X	X	X	
0 to 200	psi	E5A	X	X	X			X	X		X	X	X	X	X	X	
0 to 250	psi	E7A		X				X	X					X	X		
0 to 300	psi	E8A	X	X	X			X	X		X	X	X	X	X		
0 to 400	psi	F2A		X				X									
0 to 500	psi	F3A	X	X	X			X	X		X	X	X	X	X		
0 to 600	psi	F4A		X				X	X								
0 to 750	psi	F6A	X	X	X			X	X		X	X	X	X	X		
0 to 800	psi	F7A		X				X									
0 to 1,000	psi	F8A	X	X	X			X	X		X			X	X		
0 to 1,500	psi	H2A	X		X			X			X			X	X		
0 to 2,000	psi	H5A	X	X	X			X			X			X	X		
0 to 2,500	psi	H7A		X				X						X	X		
0 to 3,000	psi	H9A	X	X	X			X			X			X	X		
0 to 4,000	psi	J4A		X	X			X			X			X	X		
0 to 5,000	psi	J8A	X	X	X			X			X			X	X		
0 to 6,000	psi	K1A		X				X									
0 to 7,500	psi	K2A	X	X	X			X			X			X	X		
0 to 8,000	psi	K3A		X													
0 to 9,000	psi	Q6A		X													
0 to 10,000	psi	K4A	X	X	X						X			X	X		
0 to 15,000	psi	K7A	X	X		X					X						
0 to 20,000	psi	K8A	X		X	X					X						
0 to 25,000	psi	L1A			X	X	X										
0 to 30,000	psi	L2A				X	X										
0 to 40,000	psi	L4A				X	X										
0 to 50,000	psi	L7A				X	X										
0 to 60,000	psi	L9A				X	X										
0 to 75,000	psi	Q1A					X										
0 to 100,000	psi	Q2A					X										
0 to 10	ft. WC	B4S										X	X				
0 to 50	ft. WC	D4S										X	X				
0 to 100	ft. WC	D9S										X	X				
0 to 250	ft. WC	E7S										X	X				
0 to 500	ft. WC	F3S										X	X				
0 to 750	ft. WC	F6S											X				
0 to 1,000	ft. WC	F8S												X			
0 to 1,500	ft. WC	H2S												X			
0 to 5	in. WC	B1P													X	X	
0 to 10	in. WC	B4P													X	X	
0 to 16	in. WC	B8P													X	X	
0 to 20	in. WC	C2P													X	X	
0 to 50	in. WC	D4P													X	X	
0 to 75	in. WC	D7P													X	X	
0 to 100	in. WC	D9P													X	X	
0 to 150	in. WC	E3P													X	X	
0 to 160	in. WC	E4P													X	X	
0 to 200	in. WC	E5P													X	X	
0 to 250	in. WC	E7P													X	X	
0 to 300	in. WC	E8P													X	X	
0 to 500	in. WC	F3P													X	X	
0 to 750	in. WC	F6P													X	X	

**Additional Products
available from Tel-Tru**



Pressure Gauges

Sanitary Pressure Gauges

Bimetal Thermometers

Sanitary Bimetal Thermometers

Sanitary and Industrial RTDs

Glow Dial Thermometers

Digi-Tel Thermometers

Digi-Tel Sanitary Thermometers

Digi-Tel Temperature Transmitter

Electronic Calibration Instruments

Gas Actuated Thermometers

Vapor Tension Thermometers

Non-Contact Thermometers

Glass Industrial Thermometers

Thermowells

Surface Thermometers



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