

P55

Compact, Rugged Differential Pressure Transmitter

*When it Has to be Right the First Time.
Every Time.*



The P55 is Ideal for:

- **Flight testing**
- **Vehicle testing**
- **Hydraulic systems**
- **Product - Process control testing**

The compact, robust P55 provides cost-effective reliability for severe test environments.

With extreme resistance to shock and vibration, the compact P55 delivers the same high-level performance expected from more delicate differential pressure transducers.

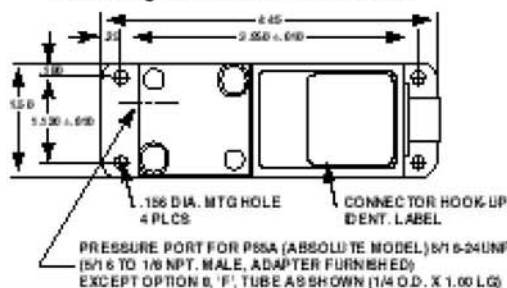
In fact, the P55 withstands shock and vibration that can damage or even destroy other differential pressure transmitters in its class. With variable reluctance sensing technology, the P55 delivers fast dynamic response, high resistance to vibration and superior signal stability through ambient temperature change for a wide variety of low-pressure measurements. The P55 will accept both liquids and gases directly at the sensing diaphragm - and there are no internal isolation fluids to slow the sensor response or cause excessive temperature drift errors.

The lightweight, compact unit measures just 1.5" x 1.5" x 4.5" and includes four mounting holes so that it can be easily secured to any flat surface.

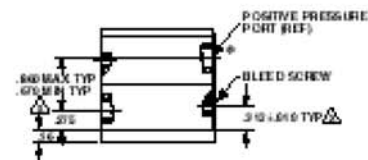
- Wide pressure measuring capability: $\pm 2.22"$ H₂O to 3200 psi in 23 full-scale ranges
- Wet-Wet capability: accepts liquids & gases on both sides of the diaphragm
- Withstands shock and vibration
- Compact size: just 1.5" x 1.5" x 4.5"
- Easy to mount with attached mounting flanges
- NEMA 4 housing resists spray and moisture
- Excellent temperature compensation characteristics
- CE approved version available
- Available in differential and absolute versions
- Proven with five years of superior performance

Outline Drawings and Wiring Diagrams

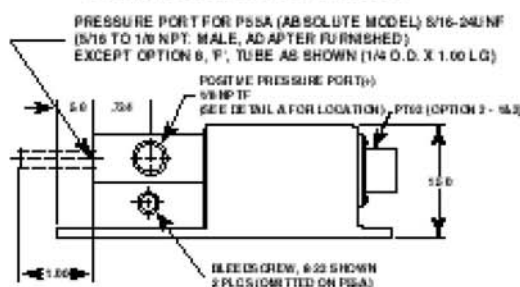
Mounting and Outline Dimensions



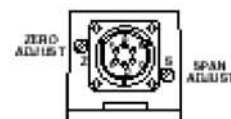
Differential Pressure and Bleed Port Dimensions



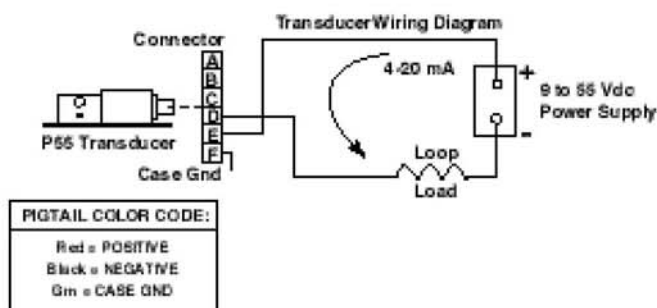
Configuration and Dimensions



Amphenol (formerly Bendix) Connector Configuration



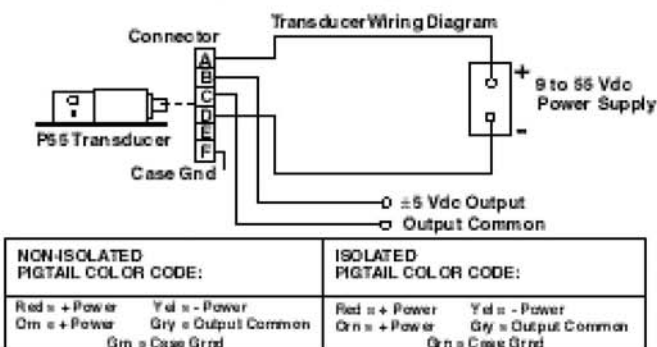
4-20 mA Signal Wiring Diagram



The P55 is available in three output configurations:

- **4-20 mA output**
A true two-wire system which will operate over a supply voltage of 9 to 55 Vdc.
- **DC output**
Provides a ± 5 Vdc signal.
- **Isolated DC output**
Provides a ± 5 Vdc signal, isolated from the power supply by 100 MOhms.

Voltage Output Wiring Diagram



An absolute pressure version with a welded variable reluctance sensor is also provided. Zero and span controls are available for external adjustment. Selection of connector or pigtail wiring options.

P55 - Specifications

RANGES

P55D: ± 0.08 psid to ± 3200 psid
P55A: 0 - 0.08 psia to 0 - 3200 psia

ACCURACY

P55D: $\pm 0.25\%$ FS, including non-linearity, hysteresis and non-repeatability
P55A: $\pm 0.5\%$ FS, as above

OVERPRESSURE:

P55D: 200% FS up to 4000 psi maximum with less than 0.5% FS output shift
P55A: 20 psia, or 200% FS; whichever is greater, up to 4000 psi maximum, with less than 0.5% FS zero shift

LINE PRESSURE

P55D: 3200 psig maximum, with zero shift less than 1% FS/1000 psi

PRESSURE PORTS

P55D: 1/8" NPT female pipe threads, standard. 8-32 bleed screw w/gasket, standard.
P55A: 5/16"-24 UNF-2B with 1/8" male NPT adapter furnished.

ENVIRONMENTAL

Op. Temp Range: -65 to +250 °F
Comp. Temp Range: 0 to 160 °F Standard
 -65 to +250 °F Optional

Temperature Error: $\pm 0.5\%$ FS over standard temperature range
 $\pm 0.9\%$ FS over optional temperature range
 Includes non-linearity & hysteresis

Pressure Media: Liquids and gases compatible with type 410 stainless steel and Inconel

O-Rings: Buna-N standard; Other compounds available

Pressure Cavity Volume: 1.2×10^{-2} Cu. Inch each port
Volumetric Displacement: 6×10^{-4} Cu. Inch FS
Weight: 16 oz.

POWER REQUIREMENTS

Power Supply: 9 to 55 Vdc
Current Requirements For Calibrated Output Options:
1, 2 & 3: 3 mA, 3 wire
4 & 5: 2.5 to 25 mA
6, 7 & 8: 7 mA, 4 wire

SIGNAL OUTPUT

4-20 mA Output: 4 to 20 mA
Isolated DC Output: ± 5 Vdc @ 0.5 mA
DC Voltage Output: ± 5 Vdc @ 0.5 mA
Zero Balance: Adjustable to $\pm 5\%$
Span: Adjustable to 10% FS
Frequency Response: Low pass filter at 250 Hz, -3 DB
Line Regulation: 0.02%
Output Noise: 2 mVrms
Insulation Resistance: 100 MOhms, any terminal to case
P55 w/Isolated DC Output: 100 MOhm @ 500 Vdc, power to signal isolation

ELECTRICAL CONNECTION

Connector: Amphenol (formerly Bendix) PT02A-10-6P
 Amphenol PTO2E-10-6P
 Cannon WK6-32S
Pigtail: 6-inch pigtails stripped and tinned
 24-gage, color-coded as follows:

4-20 mA Output:
 Red = Positive
 Blk = Negative
 Grn = Case Gnd

DC Output:
 Red = + Power
 Yel = - Power
 Orn = + Output
 Gry = - Output
 Grn = Case Gnd

Isolated DC Output:
 Brn = + Power
 Vio = - Power
 Orn = + Output
 Yel = - Output
 Grn = Case Gnd

PRESSURE RANGE CHART

Range Dash No.	PSI	IN HG.	IN H ₂ O	KPA	TORR	CM H ₂ O
20	.125	.25	3.5	.86	6.5	8.80
22	.20	.41	5.5	1.40	10.3	14.0
24	.32	.65	8.9	2.2	16.5	22.5
26	.50	1.02	14.0	3.5	25.8	35.0
28	.80	1.6	22.2	5.5	41.4	56.0
30	1.25	2.5	35.0	8.6	65.0	88.0
32	2.0	4.1	55.0	14.0	103	140
34	3.2	6.5	90	22.0	165	225
36	5.0	10.2	140	35.0	258	350
38	8.0	16.0	222	55.0	414	560
40	12.5	25.0	350	86.0	650	880
42	20	41.0	550	140	1030	1400
44	32	65.0	890	220	1650	2250
46	50	102	1400	350	2580	3500
48	80	160	2220	550	4140	5600
50	125	250	3500	860	6500	8800
52	200	410	5500	1400	10300	14000
54	320	650	8900	2200	16500	22500
56	500	1020	14000	3500	25800	35000
58	800	1600	22200	5500	41400	56000
60	1250	2500	35000	8600	65000	88000
62	2000	4100	55000	14000	103000	140000
64	3200	6500	89000	22000	165000	225000

Ordering Information

MODEL NUMBER

P55D- 4 - N - 4 - 44- S - 4 - A

TYPE OF MEASUREMENT

- D Differential or Gage
- A Absolute

ELECTRICAL CONNECTOR

- 1 PTO2A-10-6P (STD)
- 2 PTO2E-10-6P
- 3 WK6-32S (Cannon)
- 4 1/2" Male NPT with 6" Leads 24-Gage

O-RINGS

- N Buna-N (STD)
- E Ethylene Propylene
- K Kalrez
- L Fluorosilicone
- S Silicone
- T Teflon (2 psi & above)
- V Viton-A

CALIBRATED OUTPUT

	Isolation	-FS	ZERO	+FS
1			0	+5 Vdc
2		-5 Vdc	0	+5 Vdc
3		0	+2.5 Vdc	+5 Vdc
4			4 mA	20 mA
5		4 mA	12 mA	20 mA
6	Yes		0	+5 Vdc
7	Yes	-5 Vdc	0	+5 Vdc
8	Yes	0	+2.5 Vdc	+5 Vdc

PRESSURE RANGE

Range Number from Range & Diaphragm Selection Chart (previous page)

COMPENSATED TEMP RANGE

- S 0 to +160 °F
- W -65 to +250 °F

SENSOR MATERIAL

- 4 410 Stainless Steel
- 5 410 Nickel Plated
- 6 410 Gold Plated
- 7 17-7 PH SST (10 psi & above)

PORT TYPES

- A 1/8"-27 NPTF (port)
& 8-32 Bleed Screw (Differential Transducer)
5/16"-24 Female w/1/8" male NPT adapter (Absolute Transducer)
- B Pressure Port & Bleed Screw Port
Both 1/8"-27 NPTF (410 only) (Differential Transducer)
- E 5/16"-24 Female Per AND10050-2 with 1/8" male NPT adapter (Absolute Only)
- F Pressure Port: 1/4" O.D. x 1" Long Tube (Differential or Absolute Transducer)

MATING ELECTRICAL CONNECTORS



P/N 1280-1002 / PTO6A Amphenol
(formerly Bendix) (STD)
P/N 1281-1002 / PTO6E (Environmental)



P/N 1310-0632 / WK6 Cannon



GENEREX ゼネレクス

211-0016 川崎市中原区市ノ坪 107
Tel. 044-712-6777 Fax. 044-411-2855
E-Mail: s-mikami@generex.co.jp
<http://www.generex.co.jp>



イーステック株式会社

〒160-0004 東京都新宿区四谷2-10-502
電話 03-3358-1923 FAX 03-3358-1905
E-Mail: info@eastek.co.jp