

APPLICATIONS:

An Ashcroft pressure transducer to meet demanding requirements in general industrial applications:

- Process automation
- Compressor control
- Hydraulic systems
- Engine monitoring
- Pump control
- Pneumatics
- Refrigeration equipment
- Presses
- Machine Tools
- Other general industrial applications

Important features include:

- 0.25% accuracy class
- Ranges 30 psi through 20,000 psi
- Broad temperature capability
- All-welded pressure construction
- Proven polysilicon thin film sensor
- Precision ASIC based electronics
- High EMI/RFI immunity rating
- Highly configurable
- Voltage and current outputs
- Choice of electrical connections
- Optional Panel Meter, see Ashcroft model DM61



CE
LOOK FOR THIS MARK ON OUR PRODUCTS

PERFORMANCE SPECIFICATIONS

Ref. Temperature, 21°C ±1°C (70°F, ±2°F)

Accuracy:

Static Accuracy Class: ±0.25% of span (BFSL Method) including non-linearity, hysteresis, non-repeatability at reference temperature

Temperature Effect:

-20°C to 85°C <±1% of Span – Total Error Band
-40°C to -20°C <±1.5% of Span – Total Error Band
85°C to 125°C <±1.5% of Span – Total Error Band
Total Error Band includes the combined effects of non-linearity (Terminal Point Method), hysteresis, non-repeatability, temperature and zero offset and span setting errors. For higher performance availability consult factory

Stability: Less than ±0.25% span/year

Durability: Tested to 50 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature:

Compensated -40 to 125°C (-40 to 257°F)
Operating -40 to 125°C (-40 to 257°F)
Storage -40 to 125°C (-40 to 257°F)

Humidity: 0 to 100% R.H., no effect

FUNCTIONAL SPECIFICATIONS

Select from over 25 pressure ranges starting at 30 psi and running through 20,000 psi. Compound (vacuum & pressure) ranges are also available, see below.

Overpressure (F.S.):	Proof	Burst
750 psi & below	200% F.S.	1000% F.S.
1500-3000 psi	200% F.S.	500% F.S.
4000-6000 psi	150% F.S.	500% F.S.
7500 psi	120% F.S.	500% F.S.
10,000-20,000 psi	120% F.S.	240% F.S.

Vibration: Random vibration (20 g) over temperature range (-40° to 125°C). Exceeds typical MIL. STD. requirements

Shock: 100gs, 6 ms

Drop Test: Withstands 1 meter on concrete 3 axis

Response Time: Less than 1 msec

Warm-up Time: Less than 500 msec typical

Position Effect: Less than ±0.01% span, typical

ELECTRICAL SPECIFICATIONS

Output Signals Available:

Voltage Output	Excitation	Supply Current
0-5 Vdc, 3 wire	9-36 Vdc	5mA
0-10 Vdc, 3 wire	14-36 Vdc	5mA
1-5 Vdc, 3 wire	9-36 Vdc	4mA
1-6 Vdc, 3 wire	9-36 Vdc	4mA

Ratiometric Output

0.5-4.5 Vdc, 3 wire 5 Vdc ±0.5 Vdc 3.5mA

Current Output

4-20mA, 2 wire 9-36 Vdc

Reverse Polarity & Miswired Protected: Yes

Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: Greater than 100 megohms at 100 Vdc

Approvals/Certifications: CE

PHYSICAL SPECIFICATIONS

Pressure Connection: 304 stainless steel

Sensor Material: 17-4PH SS

Housing: 20% Glass Reinforced Nylon,

Fire retardant to UL94 V1

Available Process Connections (Male):

1/8 NPT, 1/4 BSP, 1/4 NPT, G1/4 B, 7/16-20 UNF-2A

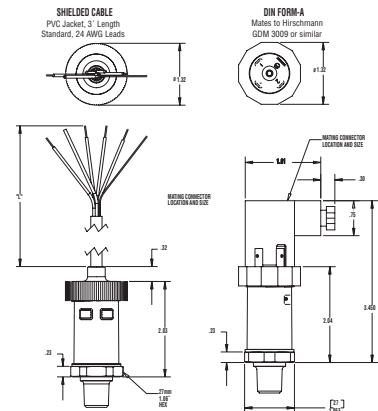
For other connections consult factory

Environmental Rating: Enclosure meets NEMA 4X, IP65

ELECTRICAL TERMINATION

- Pigtail: 3 feet of shielded cable, PVC jacket, 24 AWG, leads
- DIN 43 650-A
- Bendix style 4 pin, PTO 2A-8-4P or similar
- M12 x 1, 4 pin, circular style

DIMENSION DRAWINGS



M12 and Bendix style termination designs share similar dimensions to those shown above.

TO ORDER THE T2 PRESSURE TRANSDUCER:

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<p>Type Configuration (T2)</p> <p>Accuracy ±0.25% Static Accuracy Class (BFSL) ±1.00% Total Error Band -20°C to +85°C ±1.50% Total Error Band -40°C to -20°C, 85°C to 125°C</p>			<p>Output Signal</p> <p>05= 0-5 Vdc 10= 0-10 Vdc 15= 1-5 Vdc 16= 1-6 Vdc 42= 4-20mA RM = 0.5-4.5 Vdc Ratio Metric to 5Vdc supply</p>	<p>Electrical Connection</p> <p>DIN 43 650-A – Mates to Hirschmann GDM 3009 or similar DN = no mating conn. D0 = w/mating conn., no cable D2 = w/mating conn. 3' shielded cable M12 – Mates to Hirschmann 933 172-100 or similar EW = no mating conn. E0 = w/mating conn. no cable E2 = w/mating conn. & 3' shielded cable Circular 4 Pin – Mates to Amphenol Bendix PTO6A-8-4S-SR or similar B4 = no mating conn. H1 = w/mating conn., no cable L1 = w/mating conn. 3' shielded cable Pigtail – Shielded cable with PVC Jacket and 24 AWG leads F2 = w/3' cable length F3 = w/6' cable length Consult factory for additional cable lengths</p>	<p>Pressure Ranges</p> <p>psi Ranges</p> <p>30# = 30 psi 50# = 50 psi 60# = 60 psi 100# = 100 psi 150# = 150 psi 200# = 200 psi 300# = 300 psi 400# = 400 psi 500# = 500 psi 750# = 750 psi 1000# = 1000 psi 1500# = 1500 psi 2000# = 2000 psi 3000# = 3000 psi 4000# = 4000 psi 5000# = 5000 psi 6000# = 6000 psi 7500# = 7500 psi 10000# = 10000 psi 15000# = 15000 psi 20000# = 20000 psi</p>	<p>Measurement Type</p> <p>G = Gauge pressure, vented housing</p> <p>For sealed housing (PSI) consult factory</p>	<p>Optional X-Variations</p> <p>Consult factory for available options</p>
	<p>Pressure Connection</p> <p>M01 1/8 NPT-male M02 1/4 NPT-male MEK 1/16-20 SAE-male MS2 1/4-19 BSP male MG2 G 1/4 B male M76 1/16-20 SAE UNJF-3A w/37° Cone (-4AN)</p> <p>Consult Factory Other Connections</p>					<p>Compound Ranges</p> <p>30# & vac = 30 psi/-14.7 psi 45# & vac = 45 psi/-14.7 psi 60# & vac = 60 psi/-14.7 psi 85# & vac = 85 psi/-14.7 psi 100# & vac = 100 psi/-14.7 psi 150# & vac = 150 psi/-14.7 psi 200# & vac = 200 psi/-14.7 psi 300# & vac = 300 psi/-14.7 psi</p>	
						<p>Ranges in bar, kPa and mPa are also available</p>	

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our web site at www.ashcroft.com

APPLICATIONS:

A new Ashcroft pressure transducer to meet demanding requirements in applications involving:

- Off-road vehicles
- Construction machinery
- Compressor control
- HVAC and refrigeration
- Agricultural implements
- Process automation and control
- Hydraulic and pneumatic sensing
- Pump monitoring

Important features include:

- 1% total error band accuracy†
- Broad temperature capability
- All-welded pressure construction
- High EMI/RFI rating
- Ranges 30 psi through 20,000 psi
- Housing IP67 rating
- Diagnostic rails
- Polysilicon thin film sensor

† Tighter accuracy performance available, consult factory.



PERFORMANCE SPECIFICATIONS

Ref. Condition 21°C ±1°C (70°F ±2°F)

Accuracy:

Total Error Band includes combined effects of temperature, non-linearity (Terminal Point Method), hysteresis, non repeatability, zero offset and span setting errors

±1% of Span: From -20 to 85°C (-4 to 185°F)

±1.5% of Span: From -40 to -20°C (-40 to -4°F)

±1.5% of Span: From 85 to 125°C (185 to 257°F)

Note: Static accuracy ±0.25% of span BFSL (Best Fit Straight Line Method); includes non-linearity, hysteresis and non-repeatable effects at reference temperature 72°F (21°C)

Stability: Less than ±0.25% span/year

Durability: Tested to 50 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature:

Compensated -40 to 125°C (-40 to 257°F)

Operating -40 to 125°C (-40 to 257°F)

Storage -40 to 125°C (-40 to 257°F)

Humidity: 0 to 100% R.H., no effect

FUNCTIONAL SPECIFICATIONS

Select from over 25 pressure ranges starting at 30 psi and running through 20,000 psi gauge. Compound (vacuum & pressure) ranges are also available, see "To Order" below.

Overpressure (F.S.):	Proof	Burst
750 psi & below	200% F.S.	1000% F.S.
1500-3000 psi	200% F.S.	500% F.S.
4000-6000 psi	150% F.S.	500% F.S.
7500 psi	120% F.S.	500% F.S.
10,000-20,000 psi	120% F.S.	240% F.S.

Vibration: Random vibration (20 g) over temperature range (-40° to 125°C). Exceeds typical MIL-STD. requirements

Shock: 100gs, 6 ms

Drop Test: Withstands 1 meter on concrete 3 axis

Response Time: Less than 1 msec

Warm-up Time: Less than 500 msec typical

Position Effect: Less than ±0.01% span, typical

ELECTRICAL SPECIFICATIONS

Output Signals Available:

Voltage Output	Excitation	Supply Current
0-5 Vdc, 3 wire	9-36 Vdc	5mA
0-10 Vdc, 3 wire	14-36 Vdc	5mA
1-5 Vdc, 3 wire	9-36 Vdc	4mA
1-6 Vdc, 3 wire	9-36 Vdc	4mA
0.5-4.5 Vdc, 3 wire	9-36 Vdc	4mA

Ratiometric Output

0.5-4.5 Vdc, 3 wire 5 Vdc ±0.5 Vdc 3.5mA

Current Output

4-20mA, 2 wire 9-36 Vdc

Reverse Polarity & Miswired Protected: Yes

Insulation Breakdown Voltage: 100 Vac

Insulation Resistance: Greater than 100 megohms at 100 Vdc

Approvals/Certifications: CE

PHYSICAL SPECIFICATIONS

Pressure Connection: 304 stainless steel

Sensor Material: 17-4PH SS

Housing: 20% Glass Reinforced Nylon, Fire retardant to UL94 V1

Available Process Connections (Male):

See How to Order section below

For other connections consult factory

Environmental Rating: IP67

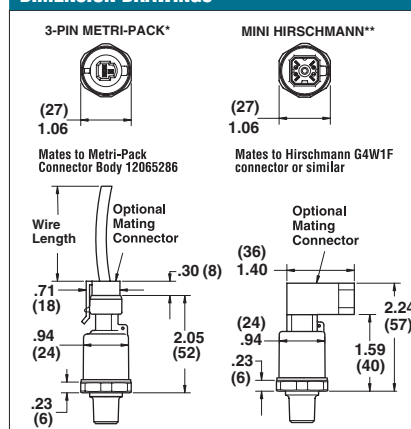
ELECTRICAL TERMINATION

- Shielded Cable: 3' standard, 24 AWG, PVC Jacket
- Flying Lead: 3' standard, 18 AWG
- Metri-Pack 150 series*
- Hirschmann G series**

*Metri-Pack is a trademark of Delphi Packard Electric Systems

** Trade Mark of Richard Hirschmann of America, Inc.

DIMENSION DRAWINGS



Shielded cable and flying lead designs share similar dimensions to those shown.

TO ORDER THE G2 PRESSURE TRANSDUCER:

<p>G 2</p> <p>Type Configuration (G2)</p>	<p>7</p> <p>Accuracy</p> <p>±1.0% Total Error Band -20°C to 85°C</p> <p>±1.5% Total Error Band -40°C to -20°C, 85 to 125°C</p>	<p>05 = 0-5 Vdc</p> <p>10 = 0-10 Vdc</p> <p>15 = 1-5 Vdc</p> <p>16 = 1-6 Vdc</p> <p>42 = 4-20mA</p> <p>45 = 0.5-4.5 Vdc 9-36 Vdc supply</p> <p>RM = 0.5-4.5 Vdc Ratio Metric to 5Vdc supply</p>	<p>05 = 0-5 Vdc</p> <p>10 = 0-10 Vdc</p> <p>15 = 1-5 Vdc</p> <p>16 = 1-6 Vdc</p> <p>42 = 4-20mA</p> <p>45 = 0.5-4.5 Vdc 9-36 Vdc supply</p> <p>RM = 0.5-4.5 Vdc Ratio Metric to 5Vdc supply</p>	<p>Electrical Connection</p> <p>Metri-Pack†</p> <p>G1 = no mating conn.</p> <p>G2 = mating conn. 3' cable</p> <p>G3 = mating conn. 10' cable</p> <p>G1 = mating conn. w/customer specified length</p> <p>Hirschmann G Series**</p> <p>HM = no mating conn.</p> <p>M1 = with mating conn. no cable</p> <p>M2 = mating conn. 3' cable</p> <p>P9 = mating conn. w/customer specified length</p> <p>Flying Leads</p> <p>W2 = 1m flying leads</p> <p>W9 = customer specified length</p> <p>Shielded Cable</p> <p>F2 = 3' shielded cable</p> <p>F3 = 10' shielded cable</p> <p>F1 = customer specified length</p> <p>M12, 4-pin</p> <p>EW = w/out mating conn.</p> <p>E0 = w/mating conn. No cable</p> <p>E2 = w/mating conn./Cable 3 ft.</p> <p>E1 = w/mating conn./Cable Customer defined length</p>	<p>Deutsch DT Series DT04-3P</p> <p>DT = w/out mating conn.</p> <p>T2 = w/1m, 3' cable</p> <p>T3 = w/3m, 10' cable</p> <p>T1 = w/mating conn. cable customer defined length</p> <p>Deutsch DTM Series DTM04-3P</p> <p>DS = w/out mating conn.</p> <p>A2 = w/1m, 3' cable</p> <p>S3 = w/3m, 10' cable</p> <p>S1 = w/mating conn. cable customer defined length</p> <p>AMP Superseal</p> <p>AP = w/out mating conn.</p> <p>A2 = w/1m, 3' cable</p> <p>A3 = w/3m, 10' cable</p> <p>A1 = w/mating conn. cable customer defined length</p> <p>DIN 43650 Form C</p> <p>DC = no mating conn.</p> <p>N1 = with mating conn. no cable</p> <p>N2 = mating conn. 3' cable</p> <p>N3 = mating conn. 10' cable</p> <p>N9 = mating conn. w/customer specified length</p>	<p>Pressure Ranges</p> <p>psi Ranges</p> <p>30# = 30 psi</p> <p>50# = 50 psi</p> <p>60# = 60 psi</p> <p>100# = 100 psi</p> <p>150# = 150 psi</p> <p>200# = 200 psi</p> <p>300# = 300 psi</p> <p>400# = 400 psi</p> <p>500# = 500 psi</p> <p>750# = 750 psi</p> <p>1000# = 1000 psi</p> <p>1500# = 1500 psi</p> <p>2000# = 2000 psi</p> <p>3000# = 3000 psi</p> <p>4000# = 4000 psi</p> <p>5000# = 5000 psi</p> <p>6000# = 6000 psi</p> <p>7500# = 7500 psi</p> <p>10000# = 10000 psi</p> <p>15000# = 15000 psi</p> <p>20000# = 20000 psi</p>	<p>Measurement Type</p> <p>G = Gauge Pressure</p>	<p>Optional X-Variations</p> <p>Consult Factory for Available Options</p>
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Ranges in Bar, m kPa and mPa are also available
 Consult Factory for Other Connections
 *Metri-Pack is a trademark of Delphi Packard Electric Systems.
 ** Trademark of Richard Hirschmann of America, Inc.

APPLICATIONS

Oil field equipment, upstream oil and gas production, natural gas compression and transfer control, alternative energy projects

BENEFITS AND FEATURES

- cUL and ATEX listed
- FM intrinsically safe approvals (see note under Optional Hazardous Area Classifications below)
- CSA intrinsically safe approvals (see note under Optional Hazardous Area Classifications below)
- Choice of 0.25, 0.50 or 1.0% accuracy
- Pressure ranges from 5 psi through 10,000 psi
- CE mark
- 316L SS wetted materials, 17-4 PH optional

- 304 SS case
- Six output signals to choose from
- Optional absolute pressure ranges available

The Ashcroft® AX2 pressure transmitter is ideal for a broad spectrum of pressure sensing requirements requiring approvals for explosion/flame proof.

The Ashcroft® A2X is designed and manufactured to provide the user with accurate, reliable, and stable output data. This is accomplished through the use of an on board microprocessor, that is programmed during a unique digital compensation process, to provide extremely linear and precise performance over the entire specified pressure and temperature range.



LOOK FOR THESE MARKS ON OUR PRODUCTS

PERFORMANCE SPECIFICATIONS

Reference Temperature: 70°F (21°C)

Accuracy, Three Classes (% Span):

Includes non-linearity ±.25 ±0.5 ±1.0
(Terminal Point Method), hysteresis, non-repeatability, zero offset and span setting errors)
Best Fit Straight Line* (BFSL): ±.20 ±.40 ±.50
*Add ±.05% for ranges above 5000 psi

Stability:

Sensor Material 316L SS or 17-4PH SS: ≤±0.25%
Span/year @ reference conditions

Durability: Greater than 10 million cycles

ENVIRONMENTAL SPECIFICATIONS
Temperature Limits:

Storage: -40 to +125°C (-40 to 257°F)
Process: -40 to +125°C (-40 to 257°F)
Operating: -40 to +125°C (-40 to 257°F)
Compensated*: -20 to +85°C (-4 to 185°F)

*Consult factory for other options

Temperature Effects: -20 to +85°C (-4 to 185°F)

- 1.0% of Span for .25% Accuracy Class
- 2.0% of Span for .50% and 1.0% Accuracy Classes

Humidity Effects: No performance effects from 0 to 95% relative humidity, non-condensing, 0-100% RH with "W" enclosure.

FUNCTIONAL SPECIFICATIONS

Response Time: <2ms

Pressure Ranges: Vacuum, gauge, compound and absolute pressure from 0-5 psi through 0-10,000.

Equivalent ranges in bar available. See order guide section (below.)

Vibration Effect:

Shock: 100g Peak, 11ms
Random: 10g RMS, 20-2000Hz
Sweep: 50-2000Hz, 5g peak

Position Effect: ±0.02% Typical

Approvals/Certifications: CE, Hazardous Area

Certifications - see following section for details

Overpressure (F.S.)*: Proof Burst

0#/vac. to 300 psi	1.5 x F.S.	min. 2 x F.S.
500-10,000 psi	1.2 x F.S.	1.5 x F.S.

*For higher overpressure ratings use XK8 option.
See below for additional option.

ELECTRICAL SPECIFICATIONS

Output Signal: Supply Voltage: (unregulated)

	Minimum	Maximum
0-5Vdc (3 Wire)	12Vdc	30Vdc
0-10Vdc (3 Wire)	14Vdc	30Vdc
1-5Vdc (3 Wire)	10Vdc	30Vdc
1-6Vdc (3 Wire)	10Vdc	30Vdc
4-20mA (2 Wire)	12Vdc	30Vdc

Power Requirements:

Supply Current: <5mA for voltage outputs

Electrical Terminations:

See To Order below for Options

Circuit Protection:

Reverse polarity and mis-wire protected

Insulation Resistance (Circuit to Case):

100Mohm @ 30Vdc

PHYSICAL SPECIFICATIONS

Case: Material 304SS

Wetted Materials: 316L SS diaphragm and pressure port. Optional 17-4PH SS diaphragm and 316L SS pressure port (see How to Order Section).

Environmental Rating: IP65; NEMA 7,9

HAZARDOUS AREA CERTIFICATIONS
Explosion Proof – cUL (USL/CNL):

Class I, Div. 1 & 2, Groups A, B, C and D
Class II, Div. 1 & 2, Groups E, F and G

Flame Proof – ATEX: Specify A2X

II 2 G

Ex d IIC T4

NOTE: For 4-20mA units following approvals also apply:

Intrinsically Safe – FM/CSA:

Class I, Div. 1

Class I, Div. 2, Non-Incendive

Refer to Ashcroft drawing #825A022 for wiring and installation requirements.

NOTE: Refer to Ashcroft Model A2 for Heavy Industrial, non-Hazardous rated configurations and Ashcroft Model A4 for Intrinsically Safe/non-Incendive applications.

TO ORDER THE A2X EXPLOSION/FLAME PROOF PRESSURE TRANSMITTERS:

A	2	X							X		
Type Configuration (A2X)	Accuracy/Temp. Effects (A) 0.25%/±0.5% (-20°C to +85°C) (B) 0.50%/±1.0% (-20°C to +85°C) (C) 1.00%/±1.0% (-20°C to +85°C)		Output Signal (05) 0-5 Vdc (10) 0-10 Vdc (15) 1-5 Vdc (16) 1-6 Vdc (42) 4-20mA	Electrical Termination ½ NPT-M Conduit Flying Leads (C2) with 3' leads (C5) with 10' leads Shielded Cable (C1) with 3' cable (C6) with 15' cable (C7) with 30' cable (P7) with customer defined length	Pressure Range (1.5#) 1.5 psi ^{(5),(6)} (5#) 5 psi ^{(5),(6)} (10#) 10 psi ^{(5),(6)} (15#) 15 psi ⁽⁵⁾ (30#) 30 psi ⁽⁵⁾ (50#) 50 psi (60#) 60 psi (75#) 75 psi (100#) 100 psi (150#) 150 psi (200#) 200 psi (300#) 300 psi (500#) 500 psi	Measurement Type (G) Gauge Pressure Sensor (A) Absolute Pressure Sensor	Optional X-Variations (XCL) Non-standard** calibration (XK8) 17-4PH SS Sensor Material (X6B) Cleaned For Oxygen Service				
	Pressure Connection (M01) ½ NPT-M (MG4) G ½ M (M02) ¼ NPT-M (VM2) VCR inlet fitting (F02) ¼ NPT-F ¼" VCR gland with (MEK) ¾"-20 SAE-M ¾"-18 male nut (F09) ¾"-18 (¼)-F (VF2) VCR inlet fitting (Aminco) (M04) ½ NPT-M ¾"-18 female nut (F04) ½ NPT-F				(1000#) 1000 psi (1500#) 1500 psi (2000#) 2000 psi (3000#) 3000 psi (5000#) 5000 psi (7500#) 7500 psi (10,000#) 10,000 psi ⁽⁴⁾ (0# & vac.) 0 psi/vac. ^{(5),(6)} (15# & vac.) Vac./15 psi ^{(5),(6)} (30# & vac.) Vac./30 psi ^{(5),(6)} (45# & vac.) Vac./45 psi ⁽⁶⁾ (60# & vac.) Vac./60 psi						
					(4) 17-4PH SS Sensor Required (5) 17-4PH SS Sensor Not Available (6) Gauge pressure only		**Minimum 10 pieces for non-standard pressure ranges.				

Note: All A2X pressure transmitters include a 9 pt. NIST traceable calibration report

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our
web site at www.ashcroft.com

Type A4 Inherently Safe and Non-Incendive Pressure Transmitter

APPLICATIONS

Oil field equipment, upstream oil and gas production, natural gas compression and transfer control, alternative energy projects

BENEFITS AND FEATURES

- FM and CSA listings
- Choice of 0.25, 0.50 or 1.0% accuracy
- Pressure ranges from 5 psi through 10,000 psi
- CE mark
- 316L SS wetted materials, 17-4 PH optional
- 304 SS case in standard, welded or explosion proof construction
- Optional absolute pressure ranges available
- Zero and span access (Basic Enclosure)

The Ashcroft® A4 pressure transmitter is ideal for a broad spectrum of pressure sensing requirements where Inherently Safe or Non-Incendive hazardous location ratings are required.

The Ashcroft® A4 is designed and manufactured to provide the user with accurate, reliable, and stable output data. This is accomplished through the use of an on board microprocessor, that is programmed during a unique digital compensation process, to provide extremely linear and precise performance over the entire specified pressure and temperature range.



PERFORMANCE SPECIFICATIONS

Reference Temperature: 70°F (21°C)

Accuracy, Three Classes (% Span):

Includes non-linearity ±.25 ±0.5 ±1.0 (Terminal Point Method), hysteresis, non-repeatability, zero offset and span setting errors)
 Best Fit Straight Line* (BFSL): ±.20 ±.40 ±.50
 *Add ±.05% for ranges above 5000 psi

Stability:

Sensor Material 316L SS or 17-4PH SS: ≤±0.25% Span/year @ reference conditions

Durability: Greater than 10 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:

Storage: -40 to +125°C (-40 to 257°F)
 Process: -40 to +125°C (-40 to 257°F)
 Operating: -40 to +125°C (-40 to 257°F)
 Compensated*: -20 to +85°C (-4 to 185°F)
 *Consult factory for other options

Temperature Effects: -20 to +85°C (-4 to 185°F)

- 1.0% of Span for .25% Accuracy Class
- 2.0% of Span for .50% and 1.0% Accuracy Classes

Humidity Effects: No performance effects from 0 to 95% relative humidity, non-condensing, 0-100% RH with "W" enclosure.

FUNCTIONAL SPECIFICATIONS

Response Time: <2ms

Pressure Ranges: Vacuum, gauge, compound and absolute pressure from 0-5 psi through 0-10,000. Equivalent ranges in bar available. See order guide section (below.)

Vibration Effect:

Shock: 100g Peak, 11ms
 Random: 10g RMS, 20-2000Hz
 Sweep: 50-2000Hz, 5g peak

Position Effect: ±0.02% Typical

Approvals/Certifications: CE, Hazardous Area

Certifications - see following section for details

Overpressure (F.S.)*: **Proof** **Burst**
 0#/vac. to 300 psi 1.5 x F.S. min. 2 x F.S.
 500-10,000 psi 1.2 x F.S. 1.5 x F.S.

*For higher overpressure ratings use XK8 option. See below for additional option.

ELECTRICAL SPECIFICATIONS

Output Signal: Supply Voltage: (unregulated)

4-20mA* (2 Wire) **Minimum** **Maximum**
 12Vdc 30Vdc*

Ratiometric

Power Requirements & Entity Parameters:

See I&M manual

Electrical Terminations:

See To Order below for Options

Circuit Protection:

Reverse polarity and mis-wire protected
Insulation Resistance (Circuit to Case):
 100Mohm @ 30Vdc

PHYSICAL SPECIFICATIONS

Case: Material 304SS

Wetted Materials: 316L SS diaphragm and pressure port. Optional 17-4PH SS diaphragm and 316L SS pressure port (see How to Order Section).

Environmental Rating:

Enclosure	Code	Rating
Basic	(S)	IP65, NEMA 4X
All Welded (w/o Z/S)	(W)	IP67, NEMA 6*

HAZARDOUS AREA CERTIFICATIONS

Inherently Safe - FM/CSA:

Intrinsic Safety: Class I, II and III Div.1 and 2, Groups A, B, C, D, F and G per entity requirements see Ashcroft drawing # 825A022

Non-Incendive: Class I, II and III Div. 2, Groups A, B, C, D, F and G, no barriers needed

NOTE:

Refer to Ashcroft Model A2 for Heavy Industrial, non-hazardous rated configurations and Ashcroft Model A2X for Explosion/Flame Proof applications.

*(varies with pressure range)

TO ORDER THE A4 INTRINSICALLY SAFE & NON-INCENDIVE PRESSURE TRANSMITTER

<div style="border: 1px solid black; padding: 2px;">A 4</div> <p>Type Configuration (A4)</p>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Accuracy/Temp. Effects (A) 0.25%/±0.5% (-20°C to +85°C) (B) 0.50%/±1.0% (-20°C to +85°C) (C) 1.00%/±1.0% (-20°C to +85°C)</p>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Output Signal (42) 4-20mA</p>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Electrical Termination Integral Cable (Pigtail) (F2) 3' shielded cable⁽¹⁾ (P1) (specify length)⁽¹⁾ Hirschmann Style Form A DIN 43650-A (DN) w/o mating conn.⁽¹⁾ (DO) with mate, no cable⁽¹⁾ (D2) with mate, 3' cable⁽¹⁾ (D1) with mate, (specify length)⁽¹⁾ 4-Pin Bendix Style (B4) w/o mating conn.⁽²⁾ (H1) with mate, no cable⁽²⁾ (L1) with mate, 3' cable⁽²⁾ (P2) with mate, (specify length)⁽²⁾ ½ NPT-M Conduit w/Pigtail (C1) 3' shielded cable⁽³⁾ (P7) (specify length)⁽³⁾ ½ NPT-M Conduit (C2) 3' flying leads⁽³⁾ (C5) 10' flying leads⁽³⁾ Hirschmann "E" Series M12 Threaded (EW) w/o mating conn.⁽¹⁾ (EO) with mate, no cable⁽¹⁾ (E2) with mate, 3' cable⁽¹⁾ (E1) with mate, (specify length)⁽¹⁾</p>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Pressure Range**</p> <table border="0"> <tr> <td>(1.5#) 1.5 psi^{(5),(6)}</td> <td>(750#) 750 psi</td> </tr> <tr> <td>(5#) 5 psi^{(5),(6)}</td> <td>(1000#) 1000 psi</td> </tr> <tr> <td>(10#) 10 psi^{(5),(6)}</td> <td>(1500#) 1500 psi</td> </tr> <tr> <td>(15#) 15 psi⁽⁵⁾</td> <td>(2000#) 2000 psi</td> </tr> <tr> <td>(30#) 30 psi⁽⁵⁾</td> <td>(3000#) 3000 psi</td> </tr> <tr> <td>(50#) 50 psi</td> <td>(5000#) 5000 psi</td> </tr> <tr> <td>(60#) 60 psi</td> <td>(7500#) 7500 psi</td> </tr> <tr> <td>(75#) 75 psi</td> <td>(10,000#) 10,000 psi⁽⁴⁾</td> </tr> <tr> <td>(100#) 100 psi</td> <td>(0# & vac.) 0 psi/vac.^{(5),(6)}</td> </tr> <tr> <td>(150#) 150 psi</td> <td>(15# & vac.) Vac./15 psi^{(5),(6)}</td> </tr> <tr> <td>(200#) 200 psi</td> <td>(30# & vac.) Vac./30 psi^{(5),(6)}</td> </tr> <tr> <td>(300#) 300 psi</td> <td>(45# & vac.) Vac./45 psi⁽⁶⁾</td> </tr> <tr> <td>(500#) 500 psi</td> <td>(60# & vac.) Vac./60 psi</td> </tr> </table>	(1.5#) 1.5 psi ^{(5),(6)}	(750#) 750 psi	(5#) 5 psi ^{(5),(6)}	(1000#) 1000 psi	(10#) 10 psi ^{(5),(6)}	(1500#) 1500 psi	(15#) 15 psi ⁽⁵⁾	(2000#) 2000 psi	(30#) 30 psi ⁽⁵⁾	(3000#) 3000 psi	(50#) 50 psi	(5000#) 5000 psi	(60#) 60 psi	(7500#) 7500 psi	(75#) 75 psi	(10,000#) 10,000 psi ⁽⁴⁾	(100#) 100 psi	(0# & vac.) 0 psi/vac. ^{(5),(6)}	(150#) 150 psi	(15# & vac.) Vac./15 psi ^{(5),(6)}	(200#) 200 psi	(30# & vac.) Vac./30 psi ^{(5),(6)}	(300#) 300 psi	(45# & vac.) Vac./45 psi ⁽⁶⁾	(500#) 500 psi	(60# & vac.) Vac./60 psi	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Measurement Type (G) Gauge Pressure Sensor (A) Absolute Pressure Sensor</p>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Optional X-Variations (XCL) Non-standard** calibration (XK8) 17-4pH SS Sensor Material (X6B) Cleaned For Oxygen Service</p>
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<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Enclosure (S) Basic (W) Welded w/out Zero & Span Access</p>	<div style="border: 1px solid black; width: 20px; height: 20px; margin: 0 auto;"></div> <p>Pressure Connection (M01) ½ NPT-M (M02) ¼ NPT-M (F02) ¼ NPT-F (MEK) ¾-20 SAE-M (F09) ¾-18 (¼)-F (Aminco) (M04) ½ NPT-M (F04) ½ NPT-F (MG4) G ½ M (VM2) VCR inlet fitting ¼" VCR gland with ¾-18 male nut (VF2) VCR inlet fitting ¼" VCR gland with ¾-18 female nut</p>	Others available upon request																														

Note: All A4 units include a 9 point NIST traceable calibration report

Consult factory for guidance in product selection
 Phone (203) 378-8281 or visit our web site at www.ashcroft.com

(1) Available with enclosure code (S)
 (2) Available with enclosure code (S, W)
 (3) Available with enclosure code (W)
 (4) 17-4PH SS Sensor Required
 (5) 17-4PH SS Sensor Not Available
 (6) Gauge pressure only

** Minimum 10 pieces for non-standard pressure ranges.

APPLICATIONS

Engine / Turbine Test Stands, Remote Monitoring Systems, On-Vehicle Test Installations.

FEATURES

- **Compact Design**
- **Choice of 0.15% or 0.20% Accuracy**
- **All Stainless Steel Wetted Materials**
- **Standard Nine-Point NIST Traceable Calibration Report**

The Ashcroft® H2 precision pressure transducer is ideal for measuring and controlling challenging hydraulic and pneumatic applications. This is accomplished through the use of a unique digital compensation process. The high-accuracy and performance combined with its rugged construction provides the user with a highly reliable and safe sensor platform.


PERFORMANCE SPECIFICATIONS

Analog Output (4-20mA / 0-5Vdc / 0-10Vdc):

Accuracy: ±0.20% Span or ±0.15% Span
(includes zero/span offsets, non-linearity, hysteresis and repeatability)

Temperature Effects:

Zero / Span: ±0.01% Span /°C – from 23°C (73.4°F) reference temperature

Stability: < ±0.25% span/year

Durability: Tested to 10 million cycles

Vibration: 20g (IEC 68-2-6 and IEC 68-2-36)

Shock: 1000g (IEC 68-2-32)

Response Time: 4msec (10-90%)

Position Effect: None

Output Resolution: ±0.02% Span

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:

Storage: –40 to +105°C (–40 to 221°F)

Operating: –20 to +85°C (–4 to 185°F)

Compensated*: –10 to +80°C (–14 to 176°F)

*Consult factory for other options

Humidity Effects: 0 to 95% relative humidity, non-condensing

FUNCTIONAL SPECIFICATIONS

Proof Pressure: 2X Range (2000 psi & below)

1.5X Range (3000 to 5000 psi)

1.2X Range (7500 psi & above)

Burst Pressure: 8X Range (2000 psi & below)

3X Range (3000 psi to 5000 psi)

1.5X Range (7500 psi & above)

Insulation Voltage: 50Vdc 100MΩ min

Approvals/Certifications: CE, RoHS

ELECTRICAL SPECIFICATIONS

Output Signal: 4-20mA / 0-5Vdc / 0-10Vdc

Supply Voltage: 9-32Vdc (4-20mA Version); 2 wires

12-32Vdc (Voltage Versions); 3 wires

Circuit Protection: Overvoltage and reverse polarity protection 36V

Insulation Resistance: <100MΩ @ 30V

PHYSICAL SPECIFICATIONS

Enclosure: 304SS

Ingress Rating: IP65 (Ranges 300 psi & below)

IP67 (Ranges above 300 psi)

Electrical Termination: Refer to “How to Order” section

Pressure Connection: Refer to “How to Order” section

Weight: Approx. 120 grams (3.86 ounces)

Media: Fluids and gases compatible with 304SS (pressure connection) and 17-4 pH SS (sensor diaphragm)

TO ORDER THE H2 PRECISION PRESSURE TRANSDUCER:

<div style="border: 1px solid black; padding: 2px; display: inline-block;">H2</div> Type Configuration (H2)	<div style="border: 1px solid black; width: 15px; height: 15px; display: inline-block;"></div> Accuracy (2) ±0.15% (3) ±0.2%	<div style="border: 1px solid black; width: 20px; height: 15px; display: inline-block;"></div> Pressure Connection (M02) ¼ NPT-male (M76)* ½-20 UNJF-3A 37° Cone (MEK) ½-20 UNF-2A (SAE #4) (MGA) ¼ A (DIN3852-E)	<div style="border: 1px solid black; width: 20px; height: 15px; display: inline-block;"></div> Output Signal (42) 4-20mA (05) 0-5 Vdc (10) 0-10 Vdc	<div style="border: 1px solid black; width: 20px; height: 15px; display: inline-block;"></div> Electrical Connection (B6) 6 Pin Bendix (MIL-C-26482) (EW) M12 Type 4 pin (F2) 3' Shielded Cable (DN) Hirschmann 43650-A	<div style="border: 1px solid black; width: 40px; height: 15px; display: inline-block;"></div> Pressure Ranges	<div style="border: 1px solid black; width: 20px; height: 15px; display: inline-block;">X</div> Optional X-Variations (XRH) NIST Traceable 9 Point Calibration Report (XNH) Wired Stainless Steel Tagging (X6B) Oxygen Cleaning																																
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Note: Consult factory for special ranges or for other units (ie. bar / mPa / kPa)

**Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our
web site at www.ashcroft.com**

Type KM15 Rugged, Compact Transducer for the High Volume OEM

APPLICATIONS:

High Volume Pressure Sensing in: Off Road Equipment, Construction Machinery, Compressors, Pump Control

BENEFITS & FEATURES

- RoHS compliant
- Compact size
- All welded sensor
- -40/120°C operating temp
- Rugged SS construction
- IP 67 ingress rating
- Ranges through 7500 psi

The Ashcroft® KM15 Pressure Transducer is the ideal choice for the high volume OEM who requires an economical yet durable pressure transducer. The KM15 marries a proven polysilicon thin film sensor to a high performance ASIC to provide a highly accurate, stable, and rugged pressure sensing instrument.



LOOK FOR THIS MARK ON OUR PRODUCTS

PERFORMANCE SPECIFICATIONS

Ref. Condition 23°C ±2° (73°F)

Accuracy: Includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors – Terminal Point method:

±0.5% Span, 100 psig Span and above

±1.0% Span, 75 psig Span and below

Stability: ±0.25% Span/year

Interchangeability: < .5% Span

Durability: Tested to 50 million cycles

ENVIRONMENTAL SPECIFICATIONS

Temperature:

Storage -40/120°C (-40/250°F)

Operating -40/120°C (-40/250°F)

Compensated -30/120°C (-25/250°F)

Humidity: 0/100%R.H., no effect

Thermal Coefficients: -30 to 120°C (-25 to +250°F)

Zero

Span

±0.01%/°C (±0.0055%/°F)

±0.01%/°C (±0.0055%/°F)

FUNCTIONAL SPECIFICATIONS

Ranges:

vac/0 psi*	0/15 psi	0/750 psi
vac/15 psi*	0/30 psi	0/1000 psi
vac/30 psi*	0/50 psi	0/1500 psi
vac/50 psi*	0/75 psi	0/2000 psi
vac/75 psi*	0/100 psi	0/3000 psi
vac/100 psi*	0/150 psi	0/5000 psi
vac/150 psi*	0/200 psi	0/7500 psi
vac/200 psi*	0/300 psi	
vac/300 psi*	0/500 psi	

Overpressure (F.S.):

Overpressure (F.S.):	Proof	Burst
750 psi & below	2 x range	10 x range
1500 psi	2 x range	5 x range
3000 psi	2 x range	5 x range
5000 psi	1.5 x range	5 x range
7500 psi	1.2 x range	5 x range

Vibration: Random to 1 KHz, 20 g's

Shock: 50 g's, 11 msec

Drop Test: No effect 1 meter drop on concrete

Response Time: Less than 1msec

Position Effect: Less than 0.01% F.S.

ELECTRICAL SPECIFICATIONS

Output Signal Options:

Output	Excitation	Supply Current
0.5-4.5 Vdc (ratiometric)	5 Vdc ± .5 Vdc	10mA typical
1-5 Vdc	8-32 Vdc	10mA typical

Reverse Polarity Protection: Yes

Insulation Breakdown Voltage: (Circuit to case)

150 Vac/1 min.

Insulation Resistance: (Circuit to Case)

100M ohm min.@50 Vdc.

Warm-up Time: <25 msec

Approvals/Certifications: CE, RoHS

PHYSICAL SPECIFICATIONS

Pressure Connection Options: see "To Order" below

Pressure Connection: 304 SS

Housing: 304 SS

Sensor Material: 17-4 PH SS

Electrical Termination: see "To Order" below

- Metri Pack 150 Series
- Shielded Cable

- Flying Lead
- Sumitomo HW090

Environmental Rating: IP67

Weight: Approx. 2 oz. (60g)

OPTIONS

Throttle screws

Custom mating harness

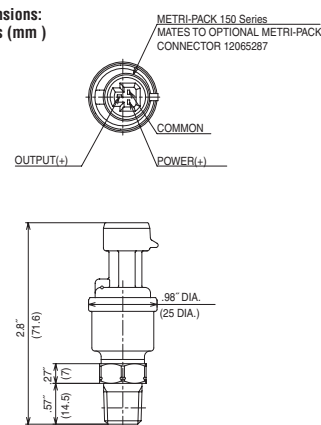
Special cleaning (for O₂)

Non-standard pressure ranges

Alternate process connections

Special calibration/accuracy

Dimensions:
Inches (mm)



Shielded cable termination and flying lead termination is also available.

TO ORDER THE KM10 PRESSURE TRANSDUCER:

K M 1 5

Model Type
(KM15)

□

Accuracy Class
(5) 0.50%
(100 psi & above)
(7) 1.0%
(75 psi & below)

□ □ □ □

Pressure Connection
(MO1) 1/8 NPT-M
(MO2) 1/4 NPT-M
(M38) 3/8-24 UNF-2A
(MEK) 7/16-20 UNF-2A
(FRW) 7/16-20 UNF-2B
(M10) M10 x 1
(M14) M14 x 1.5
(MR3) R 3/8
(MR2) R 1/4
(MG3) G 3/8
(MG2) G 1/4

□ □

Output Signal
(15) 1-5 Vdc
(RM) Ratiometric
0.5-4.5 Vdc

□ □

Electrical Termination
For Metri-Pack 150 Series
Integral Connector
(G0) No mating connector
(G2) Mating connector
w/36" cable
(G1) Mating connector
w/custom length
For Shielded Cable
(F2) 36" PVC sheath
(P1) Other length
For Flying Leads
(12) 12 inch length
(24) 24 inch length
(36) 36 inch length

□ □ □ □ □ #

Pressure Range

PSI	PSI*
Vac./0	0/100
Vac./15	0/150
Vac./30	0/200
Vac./50	0/300
Vac./75	0/500
Vac./100	0/750
Vac./150	0/1000
Vac./200	0/1500
Vac./300	0/2000
0/15	0/3000
0/30	0/5000
0/50	0/7500
0/75	*Sealed Sensor

X □ □ □

Special Features
(XTS) Throttle
(XGB) Oxygen cleaning
Additional Options
(Consult Factory)

Consult factory for guidance in product selection and minimum order quantities required
Phone (203) 378-8281 or visit our
web site at www.ashcroft.com

Type K1 Thin Film Pressure Transducer/Transmitter For Industrial Applications

APPLICATIONS:

Hydraulic, refrigeration, machine tool, test/measurement, pump control, HVAC, medical, construction equipment and all general purpose industrial process applications

BENEFITS & FEATURES:

- 0.5% and 1.0% accuracy
- Vac.-20,000 psi pressure range
- FM approved (optional)
- Superior long-term stability and repeatability
- Stainless steel NEMA 4X enclosure
- Current/voltage output
- Wide range of electrical connections available

The Ashcroft® K1 is a proven and versatile pressure transducer/transmitter incorporating polysilicon thin film technology. Modern low-pressure chemical vapor deposition methods provide simple, stable molecular bonds between a proven metal diaphragm and a polysilicon strain gage bridge. There are no epoxies or bonding agents to contribute to signal instability or drift.

The integral metal diaphragm and polysilicon bridge are virtually unaffected by shock, vibration or mounting.

These transmitters are offered in many standard pressure ranges with either current or voltage output signals. Transmitter performance is directly traceable



to the National Institute of Standards and Technology and specifications are conservatively stated. A calibration test certificate is available with each transmitter.

PERFORMANCE SPECIFICATIONS

Accuracy Class (Span):

See page 270-271 for definitions
Includes non-linearity ±0.5% ±1.0%
(Terminal Point Method), hysteresis, non-repeatability, zero offset and span setting errors

Interchangeability ±0.5% ±1.0%

Durability: 10⁸ cycles with negligible performance change

Stability: ±0.5% Span/yr

ENVIRONMENTAL SPECIFICATIONS

Temperature Limits:

Storage: -54 to 121°C (-65 to +250°F)
Operating: -28 to 82°C (-20 to +180°F)
Comp. Range: -28 to 71°C (-20 to +160°F)

Thermal Coefficients: (68°F (20°C) ref.)

% Span/°F

Standard:	0.5%	1%
ZERO	±0.028%	±0.04%
SPAN	±0.028%	±0.04%

Optional:

ZERO	±0.014%	N/A
SPAN	±0.014%	N/A

Multiply thermal zero coefficients by 1.5 on 0/30 psi, vac./15 range and by 3 on 0/15 and vac./0 ranges

Humidity:

No performance effect at 95% relative humidity-noncondensing

FUNCTIONAL SPECIFICATIONS

Standard Ranges (psi) gauge, compound:

0/15*	0/300	0/5000*	vac./60*
0/30*	0/500	0/7500*	vac./45*
0/60*	0/750	0/10,000*	vac./30*
0/100	0/1000	0/15,000*	vac./15*
0/150	0/2000	0/20,000*	vac./0*
0/200	0/3000		

*1% accuracy ranges only.
Consult factory for nonstandard ranges.

Overpressure Limits (F.S.):

	15-2000	3000-5000	7500-20,000
Proof	200%	150%	120%
Burst	800%	300%	150%

Vibration Sweep:

Less than ±0.1% Span effect for 0-2000 Hz at 20 g's in any axis

Shock: Less than ±0.05% Span effect for 100 g's, 20ms shock in any axis

Response Time: Less than 5 ms

Position Effect: Less than 0.01% Span

ELECTRICAL SPECIFICATIONS

Output Signal (consult factory for options):

4-20mA (2 wire)
1-5 Vdc (3 wire)
1-6 Vdc (3 wire)
1-11 Vdc (3 wire) (minimum excitation 15 Vdc)

Power Requirements: 10-36 Vdc unregulated, <3mA for voltage output

PHYSICAL SPECIFICATIONS

Environmental Rating: NEMA 4X (NEMA 1 only if <500 psig if electrical termination is Bendix® or Hirschmann®)

Weight: 2 oz. (approx. w/o cable)

Reverse Polarity Protected

Supply Current: <3mA for voltage output

MATERIALS:

Case: 300 series stainless steel

Cable: No. 24 AWG, 36" PVC, shielded, vented, UL approved

Diaphragm: 17-4 PH stainless steel

Standard Process Connections: (316 stainless steel)

1/8 NPT male or female

1/4 NPT male or female

1/4 SAE-J-514 (male)

9/16-18 UNF 2B AMINCO (female) required for pressures over 10,000 psi

Other connections available

HAZARDOUS LOCATION CERTIFICATIONS

Factory Mutual  **Approvals***

Intrinsically Safe for use in:

Class I, II, III, Div. 1, Groups A, B, C, D, F, G when used with safety barriers in accordance with Ashcroft drawing 71B212 Sht (1-3).

Nonincendive for: Class I, Div. 2, Groups A, B, C, D
Special Protection for: Class II, III, Div. 2, Group F, G

*Note: Available with 4-20mA output only

TO ORDER THIS TYPE K1 TRANSDUCER/TRANSMITTER:

Select:

1. Type Configuration (K1) 

2. Accuracy/TC _____
(3) 0.50%, ±0.014%/°F (5) 0.50%, ±0.028%/°F
(7) 1.0%, ±0.040%/°F

3. Pressure Connection _____
(M01) 1/8 NPT-M (F01) 1/8 NPT-F (M02) 1/4 NPT-M (F02) 1/4 NPT-F
(MEK) 7/16-20-M (F09) aminco 9/16-18-Female

4. Output Signal _____
(42) 4-20mA (15) 1/5 Vdc (16) 1/6 Vdc (11) 1/11 Vdc

5. Electrical Termination _____
(F2) 36" cable, shielded, PVC sheathing (B4) Bendix 4-pin # PT02A-8-4P* (HM) Hirschmann miniature
(B6) Bendix 6-pin # PT02A-10-6P* (B8) WP Bendix 4-pin # PT02E-8-4P*
(B9) WP Bendix 6-pin # PT02E-10-6P* (C1) 1/2 NPT-M Conduit w/36" Cable

6. Pressure Range _____
(Vac./0) Vac./0 through (20000) 20,000 psi (see standard ranges). Call for more options.

7. Hazardous Area Approvals _____
(XFM) FM Approval Option: 4-20mA output only

*Mating connector available as necessary

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our
web site at www.ashcroft.com

Type KX Flush Mount Thin Film Pressure Transducer/Transmitter For Pulp and Paper Applications

APPLICATIONS:

Pulp/paper, waste water, spray booths and all heavy medium pumping processes

BENEFITS & FEATURES:

- Available with PMC adapter (shown)
- Flush-mounted integral 316 stainless steel diaphragm
- Stainless steel NEMA 4X enclosure
- Current/voltage output

The Ashcroft® KX transmitter combines the proven benefits of poly-silicon thin film performance with the utility of a flush-mounting sensing diaphragm. Modern low-pressure chemical vapor deposition methods provide simple, stable molecular bonds between a proven metal diaphragm and a polysilicon strain gage bridge. There are no epoxies or bonding agents to contribute to signal instability or drift.

tribute to signal instability or drift.

The flush sensing element is provided by an integral, silicone filled stainless steel diaphragm seal. The small sensing area and low internal volume ensure accurate measurement under severe conditions.

The polysilicon strain resistors combine very low noise levels with very high signal output. There are no semiconductor (p-n) junctions to change with temperature, time or use. The integral metal diaphragm and polysilicon bridge are virtually unaffected by shock, vibration or mounting position.

These transmitters are offered in many standard pressure ranges with either current or voltage output signals. Transmitter performance is directly traceable to the National Institute of Standards and Technology and specifications are conservatively stated.



PERFORMANCE SPECIFICATIONS

Accuracy Class (Span):

Includes non-linearity, hysteresis, non-repeatability, zero offset and span setting errors) $\pm 1\%$

Best fit straight line (BFSL) $\pm 0.75\%$

ENVIRONMENTAL SPECIFICATIONS

Temperature

Storage $-65/+250^{\circ}\text{F}$

Operating $-20/+180^{\circ}\text{F}$

Compensated $-20/+160^{\circ}\text{F}$

Thermal Coefficients: (68°F ref.) % Span/°F

Standard:

ZERO $\pm 0.04\%$

SPAN $\pm 0.04\%$

Humidity:

No performance effect at 95% relative humidity – noncondensing

FUNCTIONAL SPECIFICATIONS

Standard Ranges (psi)

0/100 0/500 0/3000

0/150 0/750 0/5000

0/200 0/1000

0/300 0/2000

Consult factory for nonstandard ranges.

Overpressure: (F.S.)

0/100- 0/3000

0/2000 0/5000

Proof 200% 150%

Burst 800% 300%

Vibration Sweep:

Less than $\pm 0.1\%$ Span effect for 0-400 Hz at 20 g's in any axis

Shock:

Less than $\pm 0.1\%$ Span effect for 20 g's 20ms shock in any axis

ELECTRICAL SPECIFICATIONS

Output Signal:

4-20mA (2 wire)

1-5 Vdc (3 wire)

1-6 Vdc (3 wire)

Power Requirements:

10-36 Vdc unregulated

Supply Current:

Less than 3mA for voltage output

Output Impedance:

100 ohms

Circuit to Case Insulation Resistance:

100 M ohms @ 50 Vdc

PHYSICAL SPECIFICATIONS

Environmental Rating: NEMA 4X

Weight:

10 oz (approx. without cable)

MATERIALS

Case: 300 series stainless steel

Connection: 316 stainless steel

Cable:

No. 24 AWG, 36 PVC, shielded, vented, UL approved

Diaphragm: 316Ti stainless steel

Standard Process Connection:

G-1/2 metric pipe thread*

O-ring seal (max. 150 psi)

1/2 NPT male pipe thread used in conjunction with XWB, XWC and XWE screw-on adapters

*Mating connector available upon request

OPTIONS

Flush weldnut (XWB)

Recessed weldnut (XWC)

Weldnut plug (XWD)

Paper mill adapter (shown in photo) (XWE)

Halocarbon fill (XWG)

Warning: Sensitive Diaphragm

TO ORDER THIS TYPE KX TRANSDUCER/TRANSMITTER:

Select:

1. Type Configuration (KX) KX 7
2. Accuracy 7
(7) 1.0%, $\pm 0.04\%/^{\circ}\text{F}$
3. Pressure Connection MG4 RS1 O-Ring Seal (max. 150 psi) M04 1/2 NPT M
4. Output Signal 15 16 42
(15) 1-5 Vdc (16) 1-6 Vdc (42) 4-20mA
5. Electrical Termination C1 DN RT
(C1) 1/2 NPT-M Conduit w/36" cable (DN) 43650 connector (RT) 1/2 NPT with RTD Head (4-20mA only)
(M1) DIN 43650 with mating connector G4WIF (M2) DIN 43650 with mating connector G4WIF w/36" cable
6. Pressure Range (See standard ranges)
7. Optional X-Variations (See above options)

Consult factory for guidance in product selection
Phone (203) 378-8281 or visit our
web site at www.ashcroft.com

