

Model A2 Heavy Industrial Pressure Transmitter



LOOK FOR THIS MARK
ON OUR PRODUCTS

APPLICATIONS:

Test stands, compressor control, hydraulic systems, process automation, pump and pneumatic systems control

FEATURES:

- Pressure ranges from 5 psi through 10,000 psi
- CE mark
- 316L SS wetted materials
- 304 SS case
- Six output signals to choose from
- Optional absolute pressure ranges available
- Optional external zero and span potentiometers

The Ashcroft® A2 pressure transmitter is ideal for a broad spectrum of pressure sensing requirements found in heavy industrial, and test and measurement applications. It offers the instrument specifier a wide choice of construction and performance variables.

The Ashcroft® A2 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): ±.25 ±0.5 ±1.0
Includes non-linearity (Terminal Point Method), hysteresis, non-repeatability, zero offset and span setting errors
Best Fit Straight Line* (BFSL): ±.20 ±.40 ±.50

Includes non-linearity hysteresis, non-repeatability errors
*Add ±.05% for ranges above 5000 psi

Stability:

≤ ±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.

*Consult factory

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 (reverse.)

Vibration Effect:

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

Position Effect: ± 0.02% Typical

CE Mark (standard): EN 61326:1997 + A1: 1998 Annex A Heavy Industrial Immunity (Annex A, Table A.1)
Light Industrial/Residential Emission (Table 4)

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 page 2 for additional option.

ELECTRICAL SPECIFICATIONS

Output Signal: **Supply Voltage: (unregulated)**

		Minimum	Maximum
0-5Vdc	(3 Wire)	12Vdc	36Vdc
0-10Vdc	(3 Wire)	14Vdc	36Vdc
1-5Vdc	(3 Wire)	10Vdc	36Vdc
1-6Vdc	(3 Wire)	10Vdc	36Vdc
4-20mA	(2 Wire)	12Vdc	36Vdc

Power Requirements:

Supply Current: <5mA for voltage outputs

Electrical Terminations: See To Order section (reverse) 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).

Ingress Protection Rating:

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

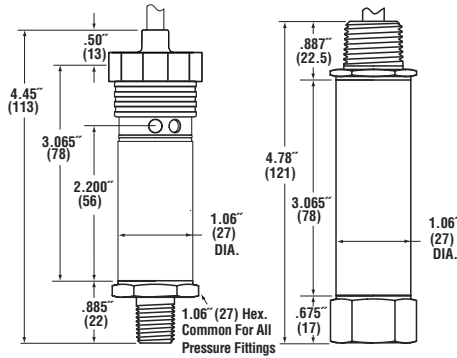
All units less than 500 psi include a small metal sintered filter at the top of the unit. This is necessary to equalize the internal pressure with atmospheric pressure but can be a point of moisture ingress.

NOTE:

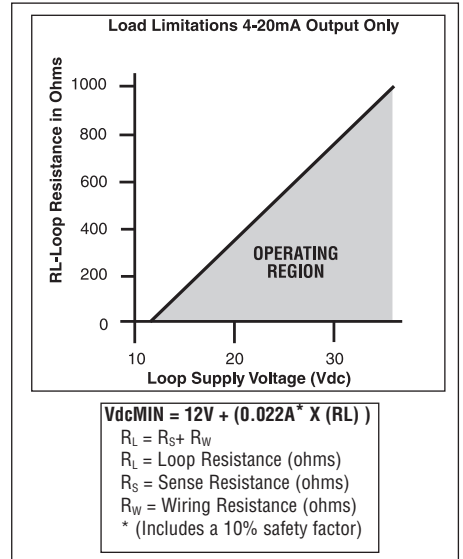
Refer to Ashcroft Model A2X for Explosion / Flame Proof configurations and Ashcroft Model A4 for Intrinsically Safe/Non-Incendive applications.

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DIMENSIONS dimensions in () are mm



HEAVY INDUSTRIAL (ENCLOSURE S, Z, Y, W)



XK8 OVERPRESSURE (F.S.)

	Proof	Burst
0 to 2000 psi	200%	800%
3000 to 5000 psi	150%	300%
7500 to 10,000 psi	120%	150%

NOTE:

Refer to Ashcroft Model A2X for Explosion / Flame Proof configurations and Ashcroft Model A4 for Intrinsically Safe /Non-Incendive applications.

How To Order

A 2									X
Type Configuration (A2)	Accuracy / Temp. Effects (A) 0.25%/±1.0% (-20°C to +85°C) (B) 0.50%/±2.0% (-20°C to +85°C) (C) 1.00%/±2.0% (-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 Integral Cable (Pigtails) (F2) 3' shielded cable ⁽¹⁾ (P1) (specify length) ⁽¹⁾ Hirschmann Style Form A DIN 43650-A (D1) w/o mating conn. ⁽¹⁾ (D0) 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 Shielded Cable (C1) 3' shielded cable ⁽³⁾ (C6) 15' shielded cable ⁽³⁾ (C7) 30' shielded cable (P7) shielded cable (specify length) ½ NPT-M Conduit Flying Leads (C2) 3' flying leads ⁽³⁾ (C5) 10' flying leads ⁽³⁾ M12 Threaded (E1) w/o mating conn. ⁽¹⁾ (E0) with mate, no cable ⁽¹⁾ (E2) with mate, 3' cable ⁽¹⁾ (E1) with mate, (specify length) ⁽¹⁾	Pressure Range (1.5#) 1.5 psi ^{(5),(6),(7)} (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	Pressure Range (750#) 750 psi (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 ⁽⁶⁾	Measurement Type (G) Gauge Pressure Sensor (A) Absolute Pressure Sensor	Optional X-Variations (XCL) Non-standard ⁽⁷⁾ calibration (XK8) 17-4PH SS Sensor Material (X6B) Cleaned For Oxygen Service	
Enclosure (S) Basic (Z) Zero & Span Access (Y) Welded with Zero & Span Access (W) Welded w/out Zero & Span Access (See electrical termination coding for available selections)	Pressure Connection (M01) ½ NPT-M (M02) ¼ NPT-M (F02) ¼ NPT-F (MEK) ½"-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 (others available upon request)								
NOTE: All A2 pressure transmitters include a 9 pt. NIST traceable calibration certificate									
⁽¹⁾ Available with enclosure code (S, Z) ⁽²⁾ Available with enclosure code (S, Z, W) ⁽³⁾ Available with enclosure code (W, Y) ⁽⁴⁾ 17-4PH SS Sensor Required ⁽⁵⁾ 17-4PH SS Sensor Not Available ⁽⁶⁾ Gauge pressure only ⁽⁷⁾ Available only with accuracy B & C									