

## Model A2 Heavy Industrial Pressure Transmitter



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### 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
- 17-4 PH and 316L SS diaphragm materials available
- 304 SS case
- Six output signals to choose from
- Optional absolute pressure ranges available
- Optional external zero and span potentiometers
- Optional panel meter digital display – see Ashcroft model 2269

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:

Sensor Material 316L SS: ±0.1% Span/year

Sensor Material 17-4PH: <±0.5% Span/year

**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)

<b>Overpressure (F.S.):</b>	<b>Proof</b>	<b>Burst</b>
0#/vac. to 2000 psi	2 x F.S.	min. 3 x F.S.
3000-5000 psi	1.5 x F.S.	min. 3 x F.S.
7500-10,000 psi	1.2 x F.S.	1.5 x F.S.

### ELECTRICAL SPECIFICATIONS

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

		<b>Minimum</b>	<b>Maximum</b>
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
0.5-4.5	(3 Wire)	4.5Vdc	5.5Vdc
Ratiometric			

#### 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:** 17-4PH SS diaphragm and 316L SS pressure port, optional 316L SS diaphragm and pressure port, piezoresistive MEMS sensor with silicone oil fill, (see How to Order Section).

#### Ingress Protection Rating:

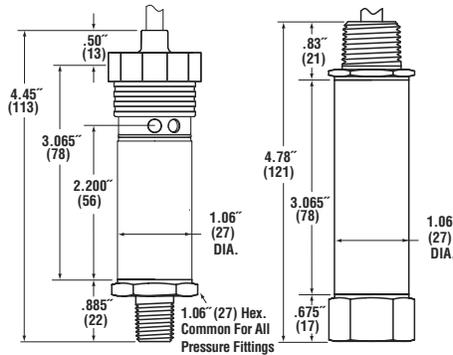
<b>Enclosure</b>	<b>Code</b>	<b>Rating</b>
Basic	(S)	IP65, NEMA 4X
Zero/Span	(Z)	IP65, NEMA 4X
All Welded (w/Z/S)	(Y)	IP65, NEMA 4X
All Welded (w/o Z/S)	(W)	IP67, NEMA 6

#### NOTE:

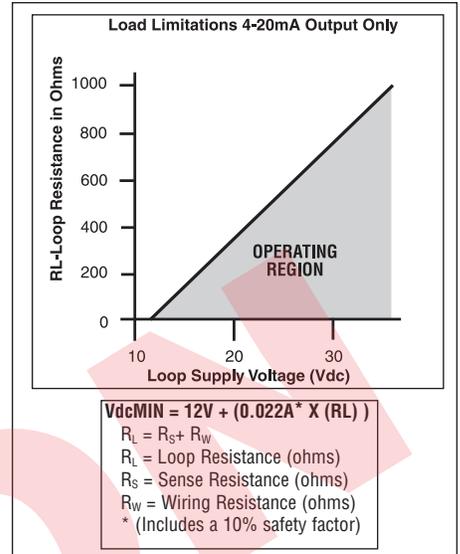
Refer to Ashcroft Model A2X for Explosion / Flame Proof configurations and Ashcroft Model A4 for Intrinsically Safe/Non-Incendive applications.

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### DIMENSIONS dimensions in ( ) are mm



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



### NOTE:

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

### How To Order

<b>A 2</b>								<b>X</b>
<b>Type Configuration</b> (A2)	<b>Accuracy / Temp. Effect<sup>S</sup></b> (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)		<b>Output Signal</b> (05) 0-5 Vdc (10) 0-10 Vdc (15) 1-5 Vdc (16) 1-6 Vdc (RM) 0.5-4.5 Vdc Ratio Metric (42) 4-20mA	<b>Electrical Termination</b> <b>Integral Cable (Pigtail)</b> (F2) 3' shielded cable <sup>(1)</sup> (P1) (specify length) <sup>(1)</sup> <b>Hirschmann Style Form A DIN 43650-A</b> (DN) w/o mating conn. <sup>(1)</sup> (D0) with mate, no cable <sup>(1)</sup> (D2) with mate, 3' cable <sup>(1)</sup> (D1) with mate, (specify length) <sup>(1)</sup> <b>4-Pin Bendix Style</b> (B4) w/o mating conn. <sup>(2)</sup> (H1) with mate, no cable <sup>(2)</sup> (L1) with mate, 3' cable <sup>(2)</sup> (P2) with mate, (specify length) <sup>(2)</sup> <b>½ NPT-M Conduit</b> (C1) 3' shielded cable <sup>(3)</sup> (P7) (specify length) <sup>(3)</sup> <b>½ NPT-M Conduit</b> (C2) 3' flying leads <sup>(3)</sup> (C4) 15' flying leads <sup>(3)</sup> <b>M12 Threaded</b> (EW) w/o mating conn. <sup>(1)</sup> (E0) with mate, no cable <sup>(1)</sup> (E2) with mate, 3' cable <sup>(1)</sup> (E1) with mate, (specify length) <sup>(1)</sup>	<b>Pressure Range</b> (5#) 5 psi* (1000#) 1000 psi (10#) 10 psi* (2000#) 2000 psi (15#) 15 psi* (3000#) 3000 psi (30#) 30 psi* (5000#) 5000 psi (7500#) 7500 psi (60#) 60 psi (10,000#) 10,000 psi (100#) 100 psi (0# & vac.) 0 psi/vac. (150#) 150 psi (15# & vac.) Vac./15 psi* (200#) 200 psi (30# & vac.) Vac./30 psi* (300#) 300 psi (45# & vac.) Vac./45 psi (500#) 500 psi (60# & vac.) Vac./60 psi  *316L Sensor Required	<b>Measurement Type</b> (G) Gauge Pressure Sensor (A) Absolute Pressure Sensor	<b>Optional X-Variations (XCL)</b> Non-standard** calibration <b>(XNS)</b> 316L Sensor Material <b>(X6B)</b> Cleaned For Oxygen Service	
<b>Enclosure</b> (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)	<b>Pressure Connection</b> (M01) ¼ NPT-M (F04) ½ NPT-F (M02) ¼ NPT-M (MG4) G ½ M (F02) ¼ NPT-F (VM2) VCR inlet fitting (MEK) ¾-20 SAE-M ¼" VCR gland with ¾-18 male nut (F09) ¾-18 (¼)-F (VF2) VCR inlet fitting (Aminco) ¼" VCR gland with ¾-18 female nut (M04) ½ NPT-M  (others available upon request)							

**NOTE:** All A2 pressure transmitters include a 9 pt. NIST traceable calibration certificate

<sup>(1)</sup> Available with enclosure code (S, Z)  
<sup>(2)</sup> Available with enclosure code (S, Z, W)  
<sup>(3)</sup> Available with enclosure code (W, Y)

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