

Model A2 Heavy Industrial and Hazardous Location Pressure Transmitter



LOOK FOR THESE MARKS ON OUR PRODUCTS

APPLICATIONS:

Test stands, compressor control, hydraulic systems, oil field equipment, upstream oil and gas production, natural gas compression and transfer control

FEATURES:

- FM, UL, CSA and ATEX listings available
- Choice of 0.25, 0.50 or 1.0% accuracy
- Intrinsically safe and explosion proof approvals
- Pressure ranges from 5 psi through 10,000 psi
- CE mark is standard
- 17-4 pH and 316L SS diaphragm materials available
- 304 SS case in standard, welded or explosion proof construction
- Six output signals to choose from
- Optional absolute pressure ranges available
- Available externally adjustable zero and span access
- Optional panel meter digital display – see Ashcroft model 2269

The Ashcroft® A2 Pressure Transmitter is ideal for a broad spectrum of pressure sensing requirements in heavy industrial, hazardous location 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 ±.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 below.

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 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)**

		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
0.5-4.5	(3 Wire)	4.5Vdc	5.5Vdc

Ratiometric

*For Intrinsically Safe see entity parameters for supply voltage and load limits. Refer to Ashcroft Drawing #825A022

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: Two Options (see How to Order section)

A.) 17-PH SS diaphragm with 316L SS pressure port

B.) 316L SS diaphragm and pressure port (piezoresistive

MEMS sensor with silicone oil fill)

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
Explosion Proof	(X)	IP65, NEMA 7,9

OPTIONAL HAZARDOUS AREA CERTIFICATIONS

Explosion Proof – UL: Specify A2X

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

CE II 2 G

Ex d IIC T4

Intrinsically Safe – FM/CSA:

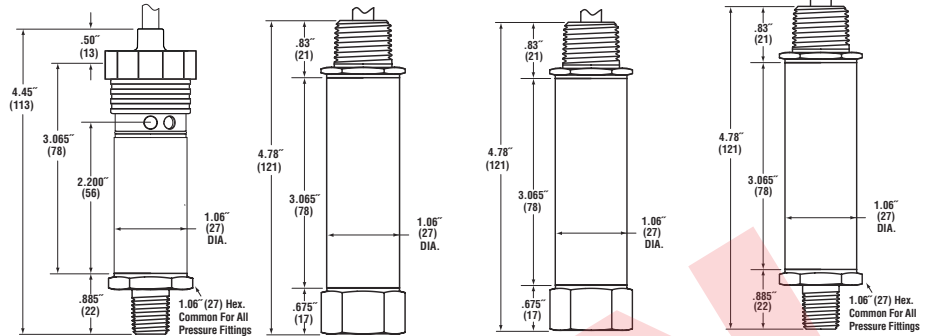
Class I, Div. 1: Standard when specifying enclosure S or W and 4-20mA output.

Class I, Div. 2, Non-Incendive: Standard when specifying enclosure S or W and 4-20mA output.

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

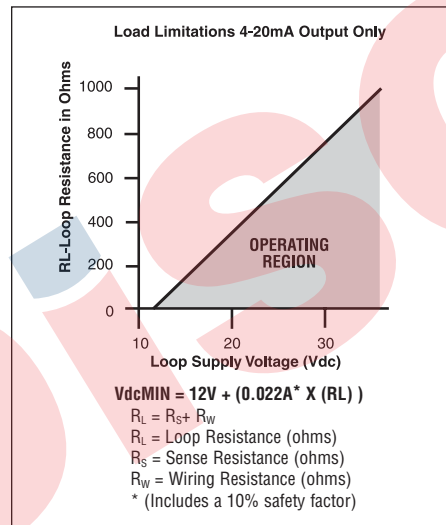
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DIMENSIONS dimensions in () are mm



**HEAVY INDUSTRIAL (ENCLOSURE S, Z, Y, W)
INTRINSICALLY SAFE (ENCLOSURE S, W)**

EXPLOSION PROOF (ENCLOSURE X)



How To Order

A 2								X
Type Configuration (A2)	Accuracy / Temp. EffectS		Output Signal	Electrical Termination	Pressure Range	Measurement Type	Optional X-Variations (XCL)	
(S) Basic (Z) Zero & Span Access (Y) Welded with Zero & Span Access (W) Welded w/out Zero & Span Access (Electrical Termination; 4-Pin Bendix or 1/2" Conduit with cable or flying leads) (X) Explosion-Proof Enclosure (Electrical Termination; C2, C4)	(A) 0.25%/±0.5% (-4°C to +85°C) (B) 0.50%/±1.0% (-4°C to +85°C) (C) 1.00%/±1.0% (-4°C to +85°C)		(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	Integral (Pigtail) (F2) 3' shielded cable (P1) (specify length) Hirschmann Style Form A DIN 43650-A (DN) w/o mating conn. (D0) with mate, no cable (D2) with mate, 3' cable (D1) with mate, (specify length) 4-Pin Bendix Style (B4) w/o mating conn. (H1) with mate, no cable (L1) with mate, 3' cable (P2) with mate, (specify length) 1/2" NPT-M Conduit (C1) 3' shielded cable (P7) (specify length) 1/2" NPT-M Conduit (C2) 3' flying leads (C4) 15' flying leads M12 Threaded (EW) w/o mating conn. (E0) with mate, no cable (E2) with mate, 3' cable (E1) with mate, (specify length)	(5#) 5 psi* (10#) 10 psi* (15#) 15 psi* (30#) 30 psi* (60#) 60 psi (100#) 100 psi (150#) 150 psi (200#) 200 psi (300#) 300 psi (500#) 500 psi (750#) 750 psi *316L Sensor Required	(G) Gauge Pressure Sensor (A) Absolute Pressure Sensor	Non-standard** calibration (XNS) 316L Sensor Material (X6B) Cleaned For Oxygen Service	
HAZARDOUS AREA USE: A. Explosion Proof (UL) and Flameproof (ATEX) – Specify enclosure “X”, all outputs available. B. Intrinsically Safe (FM and CSA); Class I, Div. 1: – Specify enclosure “S” or “W” and 4-20mA output. Class I, Div. 2, Non-Incendive: – Specify enclosure “S” or “W” and 4-20mA output. See Ashcroft drawing #825A022 for wiring and installation requirements. NOTE: All A2 pressure transmitters include a 9 pt. traceable calibration certificate								

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