Data Sheet

ASHCROFT®
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A2X Explosion/Flame Proof Pressure Transmitter

FEATURES
- Rugged housing
- Highly configurable: wide selection of pressure ranges and pressure connections.
- Output: select voltage or current versions

TYPICAL USES
- Oil Field Equipment
- Upstream Oil and Gas Production
- Natural Gas Compression and Transfer Control
- Alternative Energy Projects

A2X
Explosion/Flame Proof
Pressure Transmitter

PERFORMANCE SPECIFICATIONS

Reference Temperature:	70°F (21°C)
Accuracy Class:	±0.25%, ±0.5%, ±1.0% of span Terminal Point Method includes: non-linearity, hysteresis, non-repeatability, zero offset and span setting errors
Best Fit Straight Line (BFSL):	±0.2%, ±0.4%, ±0.5% of span Add ± 0.05% for ranges >5,000 psi
Durability:	>10 million cycles
Stability:	≤±0.25% span/year at reference conditions

ENVIRONMENTAL SPECIFICATIONS

Temperature Effects:	-4°F to 185°F (-20°C to 85°C) ±1.0% of span for ±0.25% accuracy class ±2.0% of span for ±0.5% and ±1.0% accuracy class
Temperature Limits:	Storage: –40°F to 257°F (–40°C to 125°C) Operating: –40°F to 257°F (–40°C to 125°C) Compensated: –4°F to 185°F (–20°C to 85°C)
Humidity Effects:	0-95% R.H. non-condensing (no effects) 0-100% R.H. with welded enclosure (no effects)

FUNCTIONAL SPECIFICATIONS

Response Time:	<2ms	
Pressure Ranges:	Vacuum, gauge, compound and absolute pressure from 0 to 5 psi through 0 to 10,000 psi (Bar ranges available)	
Shock:	100 g Peak, 11 ms	
Random Vibration:	10 g RMS, 20-2,000 Hz	
Sweep Vibration:	50-2,000 Hz, 5 g peak	
Position Effect:	±0.02%, typical	
Overpressure: ≤300 psi ≥500 to ≤10,00 psi	Proof: 1.5 X Range 1.2 X Range	Burst: 2 X Range 1.5 X Range

KEY BENEFITS
- **Provides the user with accurate, reliable, and stable output data**
- **Board microprocessor provides extremely linear and precise performance over the entire pressure and temperature range**
- **Explosion-proof and flame-proof approvals**

ELECTRICAL SPECIFICATIONS

Circuit Protection:	Reverse polarity and mis-wire protected	
Insulation Resistance (Circuit Case):	100 MΩ @ 30 Vdc	
Output Signal:	Supply Voltage: (unregulated)	
	Min.	Max.
0-5 Vdc (3 Wire)	12 Vdc	36 Vdc
0-10 Vdc (3 Wire)	14 Vdc	36 Vdc
1-5 Vdc (3 Wire)	10 Vdc	36 Vdc
1-6 Vdc (3 Wire)	10 Vdc	36 Vdc
4-20 mA (2 Wire)	12 Vdc	36 Vdc
Electrical Termination:	½ NPT Male conduit with flying leads or shielded cable	
Note:	*30 Vdc Max for Intrinsically Safe installations	

All specifications are subject to change without notice.
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ashcroft.com
info@ashcroft.com
1.800.328.8258

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PHYSICAL SPECIFICATIONS

Environmental Rating:	IP65, NEMA 7,9

HAZARDOUS AREA CERTIFICATIONS

Explosion Proof:	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: Ex d IIC T4 NOTE: For 4-20 mA units following approvals also apply: Intrinsically 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

OPTIONAL FEATURES

Sensor Material:	17-4PH Stainless Steel
Calibration:	Non-standard
Consult factory for:	Cleaned for Oxygen services

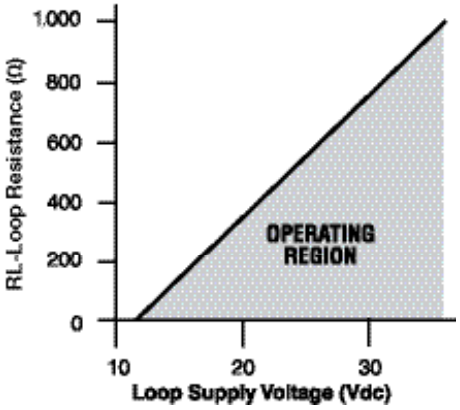
WETTED MATERIAL

Diaphragm	Process Connection
316L SS	316L SS

NON-WETTED

Housing
304 Stainless Steel

LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



Vdc_{Min} = 12V + (0.022A* X (RL))
$R_L = R_S + R_W$
R_L = Loop Resistance (ohms)
R_S = Sense Resistance (ohms)
R_W = Wiring Resistance (ohms)
* (Includes a 10% safety factor)

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ORDERING CODE Example:	A2X	A	M01	05	C2	50#	G	-X6B
Model								
A2X - Explosion/flame proof pressure transmitter	A2X							
Accuracy/Temp. Effects								
A - 0.25%/≤1.0%(-20°C to 85°C)		A						
B - 0.50%/≤2.0%(-20°C to 85°C)								
C - 1.0%/≤2.0%(-20°C to 85°C)								
Pressure Connection								
F01 - ⅛ NPT Female								
F02 - ¼ NPT Female								
F04 - ½ NPT Female								
F09 - 9/16-18 (¼)-Female (Aminco®)								
FRW - 7/16-20 SAE-Female								
M01 - ⅛ NPT Male			M01					
M02 - ¼ NPT Male								
M04 - ½ NPT Male								
MEK - 7/16-20 SAE-Male								
MG2 - G¼ Male								
MG4 - G½ Male								
VM2 - VCR process connection ¼″ VCR gland w/ 9/16-18 Male nut								
VF2 - VCR process connection ¼″ VCR gland w/ 9/16-18 Female nut								
S15 - Sanitary Seal 1½″ Tri-Clamp®								
S20 - Sanitary Seal 2″ Tri-Clamp®								
Output Signal								
05 - 0-5 Vdc				05				
10 - 0-10 Vdc								
15 - 1-5 Vdc								
16 - 1-6 Vdc								
42 - 4-20 mA								
Electrical Termination								
½ NPT-M Conduit Shielded Cable (NEMA Rating not valid for ranges ≤300 psi)								
C1 - 3′ shielded cable								
C6 - 15′ shielded cable								
C7 - 30′ shielded cable								
P7 - Shielded cable specify length								
½ NPT-M Conduit Flying Leads (NEMA Rating not valid for ranges ≤300 psi)								
C2 - 3′ flying leads					C2			
C5 - 10′ flying leads								
Pressure Range (see range table on page 4)								
50# - 50 psi						50#		
Measurement Type								
G - Gauge pressure							G	
A - Absolute pressure								
Option (if including an option(s) must include an "X")								X _ _
CL - Non-standard calibration								
K8 - 17-4PH Stainless Steel sensor material								
6B - Cleaned for oxygen service								6B

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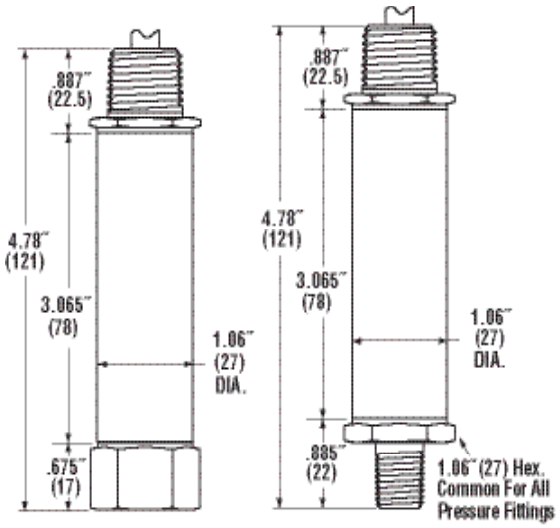
DIMENSIONS in [ ] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

Explosion / Flame Proof Enclosure



A2 RANGE TABLE

	Range	Code	Notes
Vacuum	0 psi/-14.7 psi	0#&vac	17-4PH SS sensor not available, gauge pressure only
Compound	15 psi/-14.7 psi	15#&vac	17-4PH SS sensor not available, gauge pressure only
	30 psi/-14.7 psi	30#&vac	17-4PH SS sensor not available, gauge pressure only
	45 psi/-14.7 psi	45#&vac	Gauge pressure only
	60 psi/-14.7 psi	60#&vac	Gauge pressure only
Positive Pressure	1.5 psi	1.5#	17-4PH SS sensor not available, gauge pressure only, available with accuracies B or C only
	5 psi	5#	17-4PH SS sensor not available, gauge pressure only
	10 psi	10#	17-4PH SS sensor not available, gauge pressure only
	15 psi	15#	17-4PH SS sensor not available
	30 psi	30#	17-4PH SS sensor not available
	50 psi	50#	
	60 psi	60#	
	75 psi	75#	
	100 psi	100#	
	150 psi	150#	
	200 psi	200#	
	300 psi	300#	
	500 psi	500#	
	750 psi	750#	
	1,000 psi	1000#	
	1,500 psi	1500#	
	2,000 psi	2000#	
	3,000 psi	3000#	
	5,000 psi	5000#	
	6,000 psi	6000#	
	7,500 psi	7500#	
	10,000 psi	10000#	17-4PH SS sensor required

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