

Data Sheet

A2 Pressure Transmitter

FEATURES

- Rugged housing
- Highly configurable: wide selection of pressure ranges, pressure connections and electrical terminations
- Output: select voltage or current versions
- Available with externally adjustable zero and span access

TYPICAL USES

- Test stands
- Compressor control
- Hydraulic systems
- Process automation
- Pump and pneumatic systems control



A2
Pressure Transmitter



PERFORMANCE SPECIFICATIONS

| | |
|--|--|
| Reference Temperature: | 70 °F (21 °C) |
| Accuracy Class (Includes non-linearity): | ±0.25%, ±0.5%, ±1.0% of span Terminal Point Method includes: 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: | 100g Peak, 11ms |
| Random Vibration: | 10g RMS, 20-2,000Hz |
| Sweep Vibration: | 50-2,000Hz, 5g peak |
| Position Effect: | ±0.02%, typical |
| Overpressure: | Proof: Burst: |
| ≤300 psi | 1.5 X Range 2 X Range |
| ≥500 to ≤10,000 psi | 1.2 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

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 |

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Electrical Terminations: See ordering code on page 3 for options

PHYSICAL SPECIFICATIONS

Environmental Rating: IP65, NEMA 4X

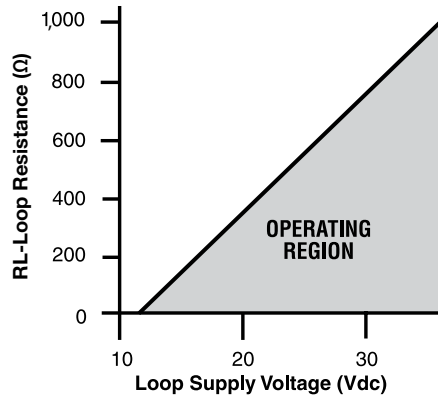
WETTED MATERIAL

| Diaphragm | Process Connection |
|---------------------------------|----------------------|
| 316L Stainless steel or 17-4PH® | 316L Stainless Steel |

NON-WETTED

| Housing |
|---------------------|
| 304 Stainless steel |

LOAD LIMITATIONS 4-20 mA OUTPUT ONLY



$$Vdc_{min} = 12V + (0.022A^* \times (RL))$$

$$R_L = R_s + R_w$$

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: | A2 | S | A | M01 | 05 | F2 | 50# | G | -X6B |
|--|----------|----|---|---|-----|----|----|-----|---|-------|
| Model | | | | | | | | | | |
| A2 - Industrial pressure transmitter | | A2 | | | | | | | | |
| Enclosure | | | | | | | | | | |
| S - Basic | | | S | | | | | | | |
| Z - Zero and span access | | | | | | | | | | |
| Y - Welded with zero & span access | | | | | | | | | | |
| W - Welded w/out zero & span access | | | | | | | | | | |
| 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 - 1/8 NPT Female | | | | | | | | | | |
| F02 - 1/4 NPT Female | | | | | | | | | | |
| F04 - 1/2 NPT Female | | | | | | | | | | |
| F09 - 3/16-18 (1/4)-Female (Aminco®) | | | | | | | | | | |
| FRW - 7/16-20 SAE-Female | | | | | | | | | | |
| MEK - 7/16-20 SAE-Male | | | | | | | | | | |
| MG2 - G1/4 Male | | | | | | | | | | |
| MG4 - G1/2 Male | | | | | | | | | | |
| M01 - 1/8 NPT Male | | | | | M01 | | | | | |
| M02 - 1/4 NPT Male | | | | | | | | | | |
| M04 - 1/2 NPT Male | | | | | | | | | | |
| VM2 - VCR® process connection 1/4" VCR® gland w/ 3/16-18 Male nut | | | | | | | | | | |
| VF2 - VCR® process connection 1/4" VCR® gland w/ 3/16-18 Female nut | | | | | | | | | | |
| S15 - Sanitary seal 1 1/2" 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 | | | | | | | | | | |
| Integral Cable (Pigtail) | | | | | | | | | | |
| F2 - 3' shielded cable (available with enclosure code or S, Z) | | | | | | | F2 | | | |
| P1 - Specify length (available with enclosure code or S, Z) | | | | | | | | | | |
| Hirschmann® Style Form A DIN 43650-A | | | | | | | | | | |
| DN - W/o mating conn. (available with enclosure code or S, Z) | | | | | | | | | | |
| D0 - With mating conn., no cable (available with enclosure code or S, Z) | | | | | | | | | | |
| D2 - With mating conn., 3' cable (available with enclosure code or S, Z) | | | | | | | | | | |
| D1 - With mating conn., specify length (available with enclosure code or S, Z) | | | | | | | | | | |
| 4-Pin Bendix® Style | | | | | | | | | | |
| B4 - W/o mating conn. (available with enclosure code or S, Z, W, Y) | | | | | | | | | | |
| H1 - With mating conn., no cable (available with enclosure code or S, Z, W, Y) | | | | | | | | | | |
| L1 - With mating conn., 3' cable (available with enclosure code or S, Z, W, Y) | | | | | | | | | | |
| P2 - With mating conn., specify length (available with enclosure code or S, Z, W, Y) | | | | | | | | | | |
| 1/2 NPT-M Conduit Shielded Cable (NEMA Rating not valid for ranges ≤300 psi) | | | | | | | | | | |
| C1 - 3' Shielded cable (available with enclosure code W, Y) | | | | | | | | | | |
| C6 - 15' Shielded cable (available with enclosure code W, Y) | | | | | | | | | | |
| C7 - 30' Shielded cable (available with enclosure code W, Y) | | | | | | | | | | |
| P7 - Shielded cable specify length (available with enclosure code W, Y) | | | | | | | | | | |
| 1/2 NPT-M Conduit Flying Leads (NEMA Rating not valid for ranges ≤300 psi) | | | | | | | | | | |
| C2 - 3' Flying leads (available with enclosure code W, Y) | | | | | | | | | | |
| C5 - 10' Flying leads (available with enclosure code W, Y) | | | | | | | | | | |
| M12 Threaded | | | | | | | | | | |
| EW - W/o mating conn. (available with enclosure code or S, Z) | | | | | | | | | | |
| E0 - With mating conn. no cable (available with enclosure code or S, Z) | | | | | | | | | | |
| E2 - With mating conn. 3' cable (available with enclosure code or S, Z) | | | | | | | | | | |
| E1 - With mating conn., specify length (available with enclosure code or S, Z) | | | | | | | | | | |
| 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") | | | | | | | | | | |
| CL - Non-standard calibration | | | | | | | | | | X _ _ |
| K8 - 17-4PH® Stainless steel sensor material | | | | | | | | | | |
| 6B - Cleaned for oxygen service | | | | | | | | | | 6B |

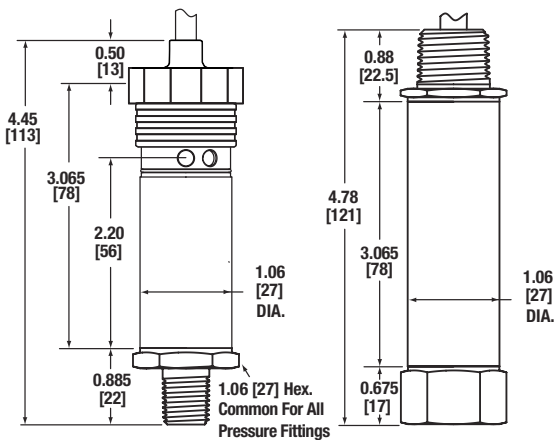
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DIMENSIONS in [] are millimeters

For reference only, consult Ashcroft for specific dimensional drawings

Heavy Industrial (Enclosure S, Z, Y, W)



RANGE TABLE

| | Range | Code | Notes |
|-------------------|------------------|----------------------------|---|
| Vacuum | 0 psi/-14.7 psi | 0#&vac | 17-4PH® SS sensor not available, gauge pressure only |
| | 15 psi/-14.7 psi | 15#&vac | 17-4PH® SS sensor not available, gauge pressure only |
| Compound | 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 | |