



ELECTRONIC PRESSURE MEASUREMENT PRODUCTS

Model ACT Analog Compensated Pressure Transducer

DESCRIPTION

The Model ACT builds upon the successful DCT product line by offering an Analog Compensated Transducer with 0 to 100mV output. The Model ACT is ideal for OEM customers that desire high-speed differential outputs into their control system. The Model ACT is available in brass and stainless steel.

This product is offered in a variety of mounting options, stainless steel or brass construction, and numerous pressure ranges. It is fully compensated for the effects of pressure and temperature change and calibrated to produce industry standard electrical outputs. The ACT accepts both regulated and pulsed excitation voltages and provides output signals such as 0 to 100mV. The ACT Transducer is offered in pressure ranges from 1 psi up to and including 3000 psi.

The Model ACT is extremely accurate, less than $\pm 0.3\%$ full scale over pressure. The universal design incorporates a stainless steel isolation diaphragm and 316 stainless steel construction for use with most media types. An economical non-isolated brass transducer, used for clean, dry media is also available.

The ACT offers premium performance and versatility of use for many applications, both for the general industrial end user and original equipment manufacturers (OEM). It combines precision along with the durability to operate under difficult environmental conditions.

The ACT is manufactured in the United States under ISO 9001:2008 control.

FEATURES

- Analog Compensated - Low total accuracy errors for interchangeability and high precision measurements.
- Multiple Pressure Port Options - Ease of installation and attachment and no adapters required.
- Numerous Weatherproof Electrical Connection Options - Quick hook-up and remote applications.
- Available in Stainless Steel Construction and Wetted Materials - Resists the corrosive effects of caustic medias or washdowns and is compatible with a variety of media.
- 0.2% Typical Accuracy - Offers superior accuracy to competitive models and can be used on critical applications.
- Factory Calibrated for Pressure and Temperature - No need for field calibration. Plug and play reliability.
- Wide Pressure Ranges and Types (PSIG, PSIA, PSIS, Compound) - Can be used in a variety of applications. PSIA and compound units can be used for vacuum to absolute or atmospheric pressures.
- Rugged, Compact Design - Easy to package or install.
- Custom Designs Available - Adaptable to special needs.

Analog Compensated Transducers (ACT)

with various output options





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SPECIFICATIONS

Pressure Range: Vacuum to 3000 psi (brass limited to 500 psi)

Reference Accuracy (includes repeatability, hysteresis, non-linearity – BFSI): ±0.2% full scale TYP, ±0.3% full scale maximum (consult factory for ranges below 15 psi)

1 Yr. Stability: <0.25% full scale

Thermal Effect On Null: ±2% full scale (±1% typical) TYP over compensated range

Thermal Effect On Span: ±2% full scale (±1% typical) TYP over compensated range (2% maximum)

Operating Temperature: -40°C to 80°C

Process Temperature: -40°C to 100°C

Compensated Temperature: -5°C to 55°C

Output: 0 to 100 mVDC @ 10 VDC

Maximum Input Supply Voltage: 10 VDC, output ratiometric with input from 2V to 10 VDC

Output Resistance: 3.5 KΩ to 6 KΩ

Burst Pressure: 3x full scale for all ranges except 300 and 500 psi units, which have a burst pressure of 750 psi; higher over-pressure upon request

Vibration: 10G, 55 to 2000 Hz

Shock: 30G

Process Wetted Material: 316L stainless steel; (borosilicate silicon, RTV, epoxy on brass models)

Housing Material: Aluminum or ULTEM (for Packard connector)

Process Connection: 7/16-20 SAE, 1/8 NPT, 1/4 NPT*

Electrical Connection: Cable, DIN, Packard, conduit (1/2 NPT only)*

Weight: Less than 5 oz. (140 grams)

Temperature Measurement Option: Additional linear temperature measurement available, please consult factory

* Other options available. Consult factory.

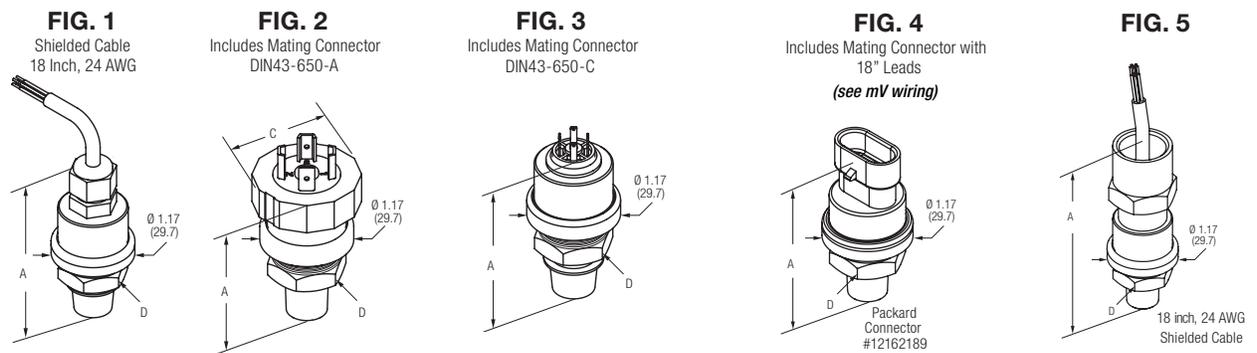
| Connection Type | Process Connection | | Electrical Termination |
|-----------------|-----------------------------------|--------------------|----------------------------------|
| | Stainless Steel | Brass ≤ 500 psi | |
| Figure 1 | 1/8 NPT 1/4 NPT 7/16-20 SAE | 1/8 NPT 1/4 NPT | 18 inch 24 AWG Shielded Cable |
| Figure 2 | 1/8 NPT 1/4 NPT 7/16-20 SAE | 1/8 NPT 1/4 NPT | DIN-43-650-A |
| Figure 3 | 1/8 NPT 1/4 NPT 7/16-20 SAE | 1/8 NPT 1/4 NPT | Industrial DIN-43-650-C |
| Figure 4 | 1/8 NPT 1/4 NPT 7/16-20 SAE | 1/8 NPT 1/4 NPT | Packard Connector |
| Figure 5 | 1/8 NPT 1/4 NPT 7/16-20 SAE | 1/8 NPT 1/4 NPT | Conduit |



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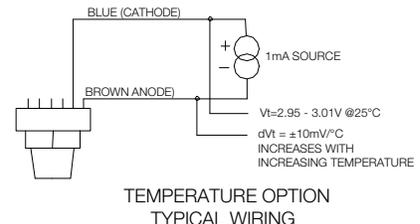
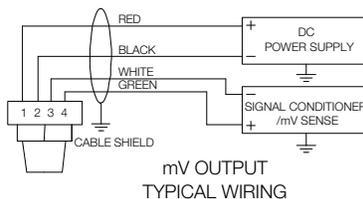
Model ACT Analog Compensated Pressure Transducer

| Model ▶ | ACT | ACT | ACT |
|---|-----------------------------------|----------------|---|
| Dimensions – Inches (mm) | | | |
| ▼ Drawing/Output Type | Brass (up to 500 PSIG) | 316 SST | >500 PSIG and all absolute ranges |
| Figure 1 — Cable Output | | | |
| Dimension A | 2.46 (62.5) | 2.61 (66.3) | 2.84 (72.1) |
| Dimension D | 7/8 HEX | 7/8 HEX | 1-1/8 HEX |
| Figure 2 — DIN - A Output | | | |
| Dimension A | 1.86 (47.2) | 2.08 (52.9) | 2.30 (58.3) |
| Dimension C | 1.37 (34.7) | 1.37 (34.7) | 1.37 (34.7) |
| Dimension D | 7/8 HEX | 7/8 HEX | 1-1/8 HEX |
| Figure 3 — DIN - C Output | | | |
| Dimension A | 1.79 (45.6) | 1.87 (47.5) | 2.10 (53.2) |
| Dimension D | 7/8 HEX | 7/8 HEX | 1-1/8 HEX |
| Figure 4 — Packard Output | | | |
| Dimension A | 2.30 (58.3) | 2.48 (63.0) | 2.69 (68.2) |
| Dimension D | 7/8 HEX | 7/8 HEX | 1-1/8 HEX |
| Figure 5 — Cable 1/2 NPT Conduit | | | |
| Dimension A | 3.20 (81.2) | 3.32 (84.3) | 3.55 (90.0) |
| Dimension D | 7/8 HEX | 7/8 HEX | 1-1/8 HEX |



| mV OUTPUT | CONNECTOR PINS |
|-----------|----------------|
| +Vin | 1 |
| -Vin | 2 |
| -S | 3 |
| +S | GND |

PIN-OUTS FOR DIN TYPE CONNECTORS (figs. 2&3)





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Model Numbering:

| | | | | | | | |
|--|---|------|---|----|----|---|---|
| ● ACT Pressure Transducer | | | | | | | |
| ACT Analog compensated transducer (mV output only) | | | | | | | |
| ● Pressure type | | | | | | | |
| G | Gauge pressure | | | | | | |
| A | Absolute pressure | | | | | | |
| V | Vacuum (use pressure code 0015) | | | | | | |
| S | Static pressure (1000, 2000, and 3000 psi ranges) | | | | | | |
| C | Compound (-14.7 psi to full scale) | | | | | | |
| ● Pressure ranges | | | | | | | |
| 0001 | to 1 psi full scale | | | | | | |
| 0006 | to 6 psi full scale | | | | | | |
| 0015 | to 15 psi full scale | | | | | | |
| 0030 | to 30 psi full scale | | | | | | |
| 0060 | to 60 psi full scale | | | | | | |
| 0100 | to 100 psi full scale | | | | | | |
| 0150 | to 150 psi full scale | | | | | | |
| 0200 | to 200 psi full scale | | | | | | |
| 0300 | to 300 psi full scale | | | | | | |
| 0500 | to 500 psi full scale | | | | | | |
| 1000 | to 1000 psi full scale | | | | | | |
| 2000 | to 2000 psi full scale | | | | | | |
| 3000 | to 3000 psi full scale | | | | | | |
| XXXX | Custom ranges available | | | | | | |
| ● Input/Output | | | | | | | |
| A | 10 VDC / 0 to 100 mV | | | | | | |
| ● Electrical connection option* | | | | | | | |
| PT | 18 in. long, 24 AWG cable | | | | | | |
| PK | Packard (4 PIN # 12162189) | | | | | | |
| DA | DIN 43 650-A | | | | | | |
| DC | DIN 43 650-C (Industrial Type) | | | | | | |
| CD | Conduit; 1/2 NPT female | | | | | | |
| ● Pressure connection type* | | | | | | | |
| 01 | 1/8 NPT | | | | | | |
| 02 | 1/4 NPT | | | | | | |
| 03 | 7/16-20 SAE (stainless steel only) | | | | | | |
| ● Pressure connection material | | | | | | | |
| 1 | 316L stainless steel | | | | | | |
| 2 | Brass (500 psi or less) | | | | | | |
| ● Temperature measurement option | | | | | | | |
| T | Yes (available only with PT or CD electrical connection option) | | | | | | |
| Leave Blank | No | | | | | | |
| ACT | G | 0100 | A | PT | 01 | 1 | T |

* Consult factory for additional options



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