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 want non-digital 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 unregulated and regulated 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 ±0.3% full scale over pressure and less than ±1.0% full scale over a wide compensated temperature range (±0.5% full scale optional). The 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 optional.

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 9001:2000 control.

Features

- Analog Compensated - Low total accuracy errors for interchangeability and high-speed 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.
- Stainless Steel Construction and Wetted Materials - Resists the corrosive effects of caustic medias or washdowns and 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.

Tel: 215-355-6900
www.ametekpmt.com

Model ACT Pressure Transducer

Specifications

- **Pressure Range:** Vacuum to 3000 psi
- **Reference Accuracy (includes repeatability, hysteresis, non-linearity—BFSL):** ±0.2% full scale TYP, ±0.3% full scale maximum (consult factory for ranges below 15 psi)
- **Null Offset** @ 25ºC < ± 1% FS
- **Span Set** @ 25ºC < ± 1% FS
- **1 Yr. Stability:** <0.25% full scale
- **Thermal Effect On Null (ACT only):** ±2% full scale (±1% typical) TYP over comp range
- **Thermal Effect On Span (ACT only):** ±2% full scale (±1% typical) TYP over comp range (2% maximum)
- **Operating Temperature:** -40°C to 80°C
- **Process Temperature:** -40°C to 100°C
- **Compensated Temperature:** -25°C to 75°C
- **Output:** 0 to 100 mVDC
- **Input Supply Voltage:** 10 VDC
- **Load Limitation:** 1M Ω min.
- **Burst Pressure:** 3x full scale for all ranges except 300 psi and 500 psi units, which have a burst pressure of 750 psi
- **Vibration:** 10G, 55 to 2000 Hz
- **Shock:** 30G
- **EMC:** Rated 3 V/m (requires “PE” option)
- **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	Process Connection		Electrical Termination
	Stainless Steel	Brass	
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 #12162189
Figure 5	1/8 NPT 1/4 NPT 7/16-20 SAE	1/8 NPT 1/4 NPT	Conduit

Dimensions Inches (MM) ▼ Drawing/Output Type — Model ▶	ACT Brass	ACT 316 SST (up to 500PSIG)	ACT >500 PSIG 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

FIG. 1
Shielded Cable
18 Inch, 24 AWG

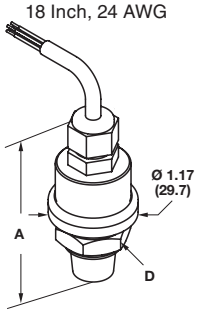


FIG. 2
Includes Mating Connector
DIN43-650-A

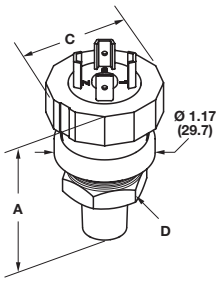


FIG. 3
Includes Mating Connector
DIN43-650-C

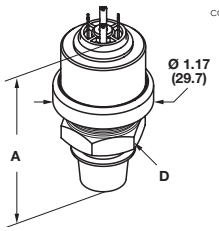


FIG. 4
Includes Mating Connector with 18" Leads

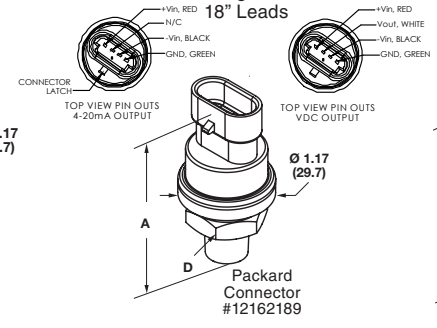
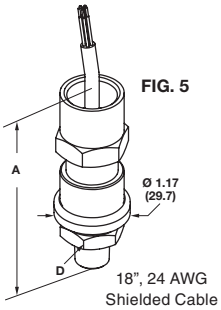
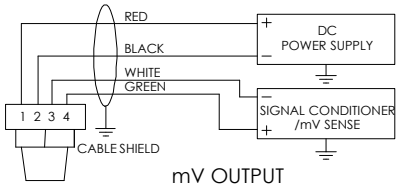


FIG. 5

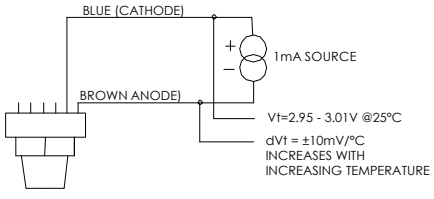


mV OUTPUT	CONNECTOR PINS
+Vin	1
-Vin	2
-S	3
+S	GND

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



mV OUTPUT
TYPICAL WIRING



TEMPERATURE OPTION
TYPICAL WIRING

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Model ACT Pressure Transducer

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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PMT PRODUCTS
820 Pennsylvania Boulevard • Feasterville, PA 19053 • U.S.A.
Tel: 215-355-6900 • Fax: 215-354-1802 • www.ametekpmt.com

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