

The AMETEK logo features the word "AMETEK" in a bold, black, sans-serif font. A red diagonal line is positioned to the left of the letter "A".

AMETEK[®]

U.S. GAUGE
PMT PRODUCTS

The logo for PMT pressure SENSORS features the word "PMT" in a large, bold, black font, with "pressure" in a smaller, red, lowercase font to its right. Below "PMT" is the word "SENSORS" in a bold, black font. A red asterisk-like symbol is located to the right of "SENSORS". A red circular graphic element is on the left side.

PMT pressure
SENSORS

Model DCT Pressure Transducers

- Digitally Compensated
- Pressure Ranges from 1 psi to 3000 psi
- Available in Brass or Stainless Steel
- Temperature Measurement Option

Model DCT Pressure Transducers

Digitally Compensated Transducers for the OEM!

The Model DCT Pressure Transducer is designed for general industrial and commercial requirements offering excellent performance over a wide range of applications. This model is based on proven micro-machined silicon technology providing high reliability, long-term stability, and low cost relative to competing technologies. AMETEK has been developing and manufacturing high performance pressure sensing products for nearly 100 years, and the DCT brings a new level of accuracy to the AMETEK product portfolio.

This product is offered in a variety of mounting and electrical output options, stainless steel or brass construction, and numerous pressure ranges. It is fully digitally compensated for the effects of pressure and temperature change and calibrated to produce industry standard electrical outputs. The DCT accepts both unregulated and regulated excitation voltages and provides output signals such as 1 to 5 VDC, 1 to 6 VDC, 0 to 5 VDC, 0.5 to 4.5 VDC Ratiometric, 4 to 20mA, or 0 to 100mV. The DCT Transducer is offered in pressure ranges from 1 psi up to and including 3000 psi.

The Model DCT is extremely accurate, less than $\pm 0.3\%$ full scale over pressure and less than $\pm 1.0\%$ full scale over a wide compensated temperature range ($\pm 0.5\%$ 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 DCT 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.

Also available is the ACT, an analog compensated 0-100 mV unit in brass and SST.

The DCT and the ACT are manufactured in the United States under ISO 9001:2000 control.

Features and Benefits

- **Digitally 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.
- **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.
- **Numerous Electrical Outputs**
Can be used with standard process equipment, conventional receivers, and compatible with microprocessors.
- **Rugged, Compact Design**
Easy to package or install.
- **RFI/EMI Protection**
For use in high noise environments.
- **Reverse Polarity Protection**
Installation safety and not damaged by reverse wiring.
- **Custom Designs Available**
Adaptable to special needs.

Specifications

Pressure Range: Vacuum to 3000 psi

Reference Accuracy (includes repeatability, hysteresis, non-linearity—BFSL): $\pm 0.2\%$ full scale TYP, $\pm 0.3\%$ full scale maximum (consult factory for ranges below 15 psi)

Total Error Band (includes temperature effects and null and span set points): $\pm 1\%$ full scale ($\pm 0.5\%$ typical) (consult factory for ranges below 15 psi)

1 Yr. Stability: $<0.25\%$ full scale

Outputs

0 to 100 mVDC	1 to 5 VDC	1 to 6 VDC	0 to 5 VDC	4 to 20 mA	0.5 to 4.5 VDC Ratiometric
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Input Supply Voltage

10 VDC	9 to 30 VDC	9 to 30 VDC	9 to 30 VDC	11 to 30 VDC	4.75 to 5.25 VDC
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Load Limitation

1M Ω min.	50K Ω min.	50K Ω min.	50K Ω min.	900 Ω max.	50K Ω min.
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Thermal Effect On Null (ACT only): $\pm 2\%$ full scale ($\pm 1\%$ typical) TYP over comp range

Thermal Effect On Span (ACT only): $\pm 2\%$ full scale ($\pm 1\%$ 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

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)

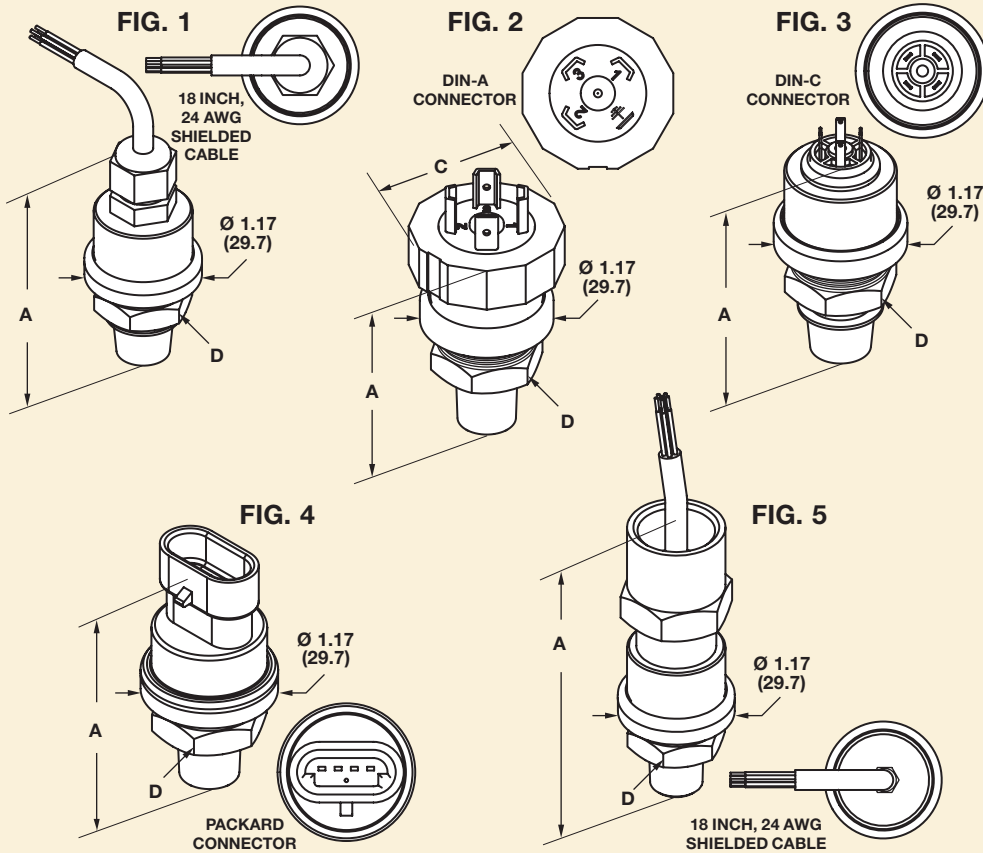
Weight: Less than 5 oz. (140 grams)

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

Consult factory for options not listed here.

DIMENSIONS

DIMENSIONS INCHES (MM)	MODEL ▶	DC1	DC2	DC3	ACT	ACT	ACT
		BRASS	316 SST (UP TO 500 PSIG)	>500 PSIG ALL ABSOLUTE RANGES	BRASS	316 SST (UP TO 500 PSIG)	>500 PSIG ALL ABSOLUTE RANGES
▼ DRAWING / OUTPUT TYPE							
FIG. 1 — CABLE OUTPUT							
DIMENSION A		2.46 (62.5)	2.61 (66.3)	2.84 (72.1)	2.46 (62.5)	2.61 (66.3)	2.84 (72.1)
DIMENSION D		7/8 HEX	7/8 HEX	1-1/8 HEX	7/8 HEX	7/8 HEX	1-1/8 HEX
FIG. 2 — DIN - A OUTPUT							
DIMENSION A		1.86 (47.2)	2.08 (52.9)	2.30 (58.3)	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)	1.37 (34.7)	1.37 (34.7)	1.37 (34.7)
DIMENSION D		7/8 HEX	7/8 HEX	1-1/8 HEX	7/8 HEX	7/8 HEX	1-1/8 HEX
FIG. 3 — DIN - C OUTPUT							
DIMENSION A		1.79 (45.6)	1.87 (47.5)	2.10 (53.2)	1.79 (45.6)	1.87 (47.5)	2.10 (53.2)
DIMENSION D		7/8 HEX	7/8 HEX	1-1/8 HEX	7/8 HEX	7/8 HEX	1-1/8 HEX
FIG. 4 — PACKARD OUTPUT							
DIMENSION A		2.30 (58.3)	2.48 (63.0)	2.69 (68.2)	2.30 (58.3)	2.48 (63.0)	2.69 (68.2)
DIMENSION D		7/8 HEX	7/8 HEX	1-1/8 HEX	7/8 HEX	7/8 HEX	1-1/8 HEX
FIG. 5 — CABLE 1/2 NPT CONDUIT							
DIMENSION A		3.20 (81.2)	3.32 (84.3)	3.55 (90.0)	3.20 (81.2)	3.32 (84.3)	3.55 (90.0)
DIMENSION D		7/8 HEX	7/8 HEX	1-1/8 HEX	7/8 HEX	7/8 HEX	1-1/8 HEX



STAINLESS STEEL MODELS

CONNECTION TYPE	PROCESS CONNECTION	ELECTRICAL TERMINATION
FIG. 1	1/8 NPT 1/4 NPT 7/16-20 SAE	18 INCH 24 AWG SHIELDED CABLE
FIG. 2	1/8 NPT 1/4 NPT 7/16-20 SAE	DIN-43-650-A
FIG. 3	1/8 NPT 1/4 NPT 7/16-20 SAE	INDUSTRIAL DIN-43-650-C
FIG. 4	1/8 NPT 1/4 NPT 7/16-20 SAE	PACKARD CONNECTOR
FIG. 5	1/8 NPT 1/4 NPT 7/16-20 SAE	CONDUIT

BRASS MODELS

CONNECTION TYPE	PROCESS CONNECTION	ELECTRICAL TERMINATION
FIG. 1	1/8 NPT 1/4 NPT	18 INCH 24 AWG SHIELDED CABLE
FIG. 2	1/8 NPT 1/4 NPT	DIN-43-650-A
FIG. 3	1/8 NPT 1/4 NPT	INDUSTRIAL DIN-43-650-C
FIG. 4	1/8 NPT 1/4 NPT	PACKARD CONNECTOR
FIG. 5	1/8 NPT 1/4 NPT	CONDUIT



MODEL NUMBER AND ORDERING INFORMATION

DCT G 0100 B PT 01 1 T

MODEL

DCT = Digital Compensated 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 RANGE *(please refer to chart below)*

XXXX = Pressure range in psi
 BXXX = Pressure range in bar

INPUT/OUTPUT

A = 10 VDC / 0 to 100 mV (Model ACT only)
 B = 11 to 30 VDC / 4 to 20 mA
 C = 9 to 30 VDC / 1 to 6 VDC
 D = 9 to 30 VDC / 1 to 5 VDC
 R = 4.75 to 5.25 VDC / 0.5 to 4.5 VDC Ratiometric
 F = 9 to 30 VDC / 0 to 5 VDC

ELECTRICAL CONNECTION OPTION

PT = 18 in. long, 24 AWG cable
 PE = 18 in. long, 24 AWG cable, double-shielded EMI version (DCT only)
 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

TEMPERATURE MEASUREMENT OPTION

T = Yes (available only with PT or CD electrical connection option)
 Leave Blank = No

STANDARD PRESSURE RANGES

PRESSURE CODE	0001	0006	0015	0030	0060	0100	0150	0200	0300	0500	1000	2000	3000
FULL SCALE PRESSURE (psi)	1	6	15	30	60	100	150	200	300	500	1000	2000	3000

AMETEK U.S. Gauge, PMT Products

For 100 years, industries have relied on U.S. Gauge for accurate and reliable pressure measurements. For over 30 years at PMT Products we have built on this experience and developed a full line of precision electronic pressure transducers and transmitters. This Pressure Measurement Technology group has developed a variety of pressure transducer and transmitter types and sizes.

Our transducers and transmitters use our own sensor elements, manufactured at our facility in Feasterville, PA. These are used in test and measurement, industrial, medical, agricultural, military, and automotive applications. PMT Products transducers and transmitters are available in pressure ranges from 1 to 5000 psi with gauge, vacuum compound, absolute, or sealed reference. All are temperature and pressure compensated.

AMETEK transducers and transmitters are available in low cost, fixed range as well as full featured, field adjustable models with 5:1 span turndown. Process or flush mount connections and CSA, FM, and CENELEC approvals are available. Other PMT Products include pneumatic controllers, level transmitters, level measurement systems, and ultrahigh purity products including gauges, transmitters, and switches.

AMETEK®
 U.S. GAUGE • PMT PRODUCTS

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