

PTE265

Ceramic Capacitive Pressure Transmitter



Typical Applications

- Industrial Pumps & Compressors
- Refrigeration
- Heating, Ventilation and Air-conditioning (HVAC)
- Steam Sterilizers, Boilers & Dryers
- Test & Monitoring Equipment
- Process Controls
- Facility Management
- Mechanical Engineering
- Filter Restriction
- Fuel Cells
- Hydraulics Systems
- Injection Molding
- Level Measurement
- Water Management
- Power Generators

Standard Full Scale Pressure Ranges

100m Bar up to 100 Bar (Absolute or Gage)

Features

- Robust Ceramic Capacitive Technology
- High Overpressure Capability
- Wet and Dry Media
- Superior Long-term Stability
- Absolute or Gage Configuration
- High EMI/RFI/EMC Performance
- Fault Tolerant Circuitry
- Temperature Compensated Over Wide Range

Description

The PTE265 pressure transmitter has been engineered with advanced electronics for enhanced performance. Specifically designed for pressure measurements from 100 mBar up to 100 Bar, this robust device has a ceramic diaphragm that can withstand exposure to a wide array of compatible liquid and gaseous process media. The mixed-signal CMOS ASIC provides for improved EMI/RFI and accuracy specifications.

The transmitter provides a linear amplified 4 - 20 mA current output proportional to pressure. The PTE265 has low power consumption, superior long-term stability, and excellent repeatability and hysteresis. Other features include over-voltage, reverse polarity, and short circuit protection.

The PTE265 exhibits excellent shock and vibration tolerance, making it an ideal fit for a wide variety of industrial applications. This transmitter can be custom designed to fit specific OEM applications.

Technical Specifications

Pressure ranges from 0 to ...	bar*)	0.25	0.4	0.6	1	1.6	2.5	4	6	10	16	25	40	60	100
Pressure ranges from -1 to ...	barG				0		3		5	10					
Proof pressure	bar*)	1.25	2	3	5	8	12.5	20	18	30	48	75	60	90	150
Burst pressure	bar*)	2.5	4	6	10	16	25	40	30	50	80	125	120	180	300

*) all pressure ranges from 0 to ... are available with gage or absolute reference except 100bar which is absolute only

Electrical

Output Signal	4 - 20 mA, 2 wire
Operating supply voltage	12 - 32 VDC
Load	$\frac{V_{sup} - 12 \text{ VDC}}{0,002 \text{ A}}$ [Ω]
Overvoltage protection	min. 36 VDC
Reverse polarity protection	Yes, up to 32 VDC

Pin assignment

Connector	PIN 1	PIN 2	PIN 3	PIN 4
18 mm DIN 175301-803A	Vsup	Iout	CASE	...

Response time	≤ 5 ms max. to 63 % of full scale pressure with step change on input
Total Error Band *)	±1.0% of span (20°C ≤ T ≤ 80°C) ±2.0% of span (T < 20°C, T > 80°C)

*) Including non-linearity, hysteresis, non-repeatability, temperature coefficients for zero and span, zero point and full scale error.

Temperatures

Environmental	-30 °C to +100 °C (depending on internal seal ring)
Storage	-40 °C to +125 °C (depending on internal seal ring)

Temperature coefficients

TC zero	+/- 0.1% typ. +/- 0.15% max of span / 10 K within temperature range 0 °C to +80 °C
TC span	+/- 0.1% typ. +/- 0.15% max of span / 10 K within temperature range 0 °C to +80 °C

Conformity

RoHS	According to 2002/95/EC RoHS Directive
CE	Pressure equipment directive: 89/336/EEC EMC directive: EN50111 Class B, Group 1, EN55014, EN 50082-2 (1995)

Vibration resistance	5g's Peal-to-Peak Sinusoidal (10 to 2000 Hz)
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Shock resistance	30g's 1/2 Sinewave
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Electrical connector	18 mm DIN 175301-803A
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Ingress protection per IEC 60 529	IP65
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Weight	appr. 150 gram
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Service life	Min. 10 million full pressure cycles
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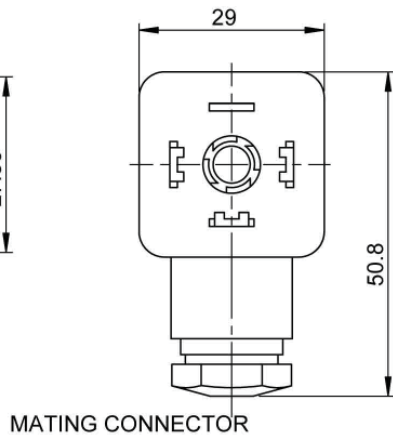
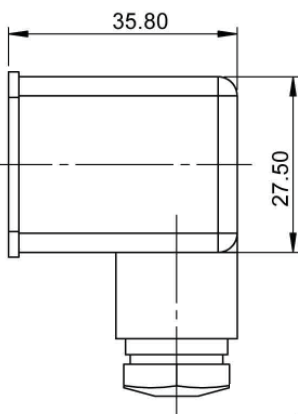
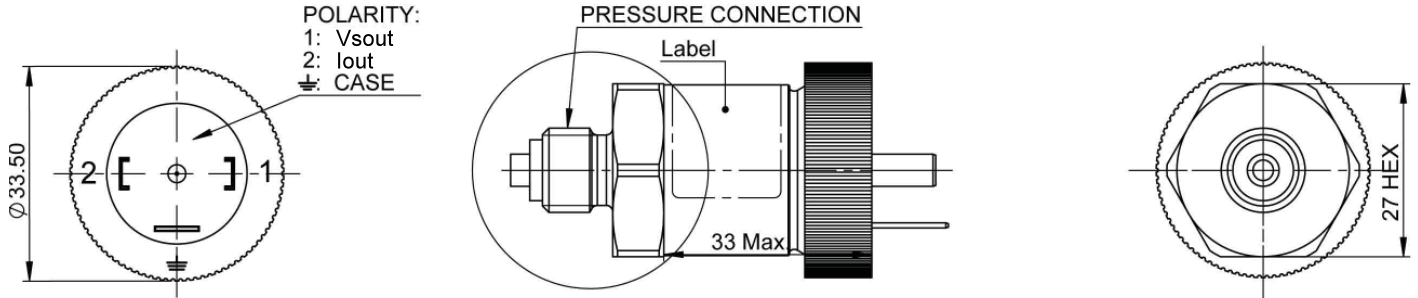
Media

All class II fluids and gases compatible with stainless steel DIN 1.4305 and ceramic Al2O3 with gold coating
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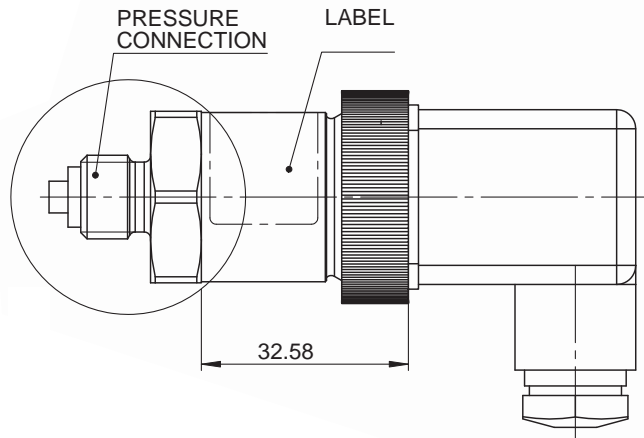
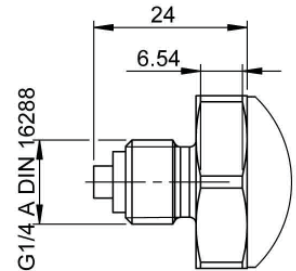
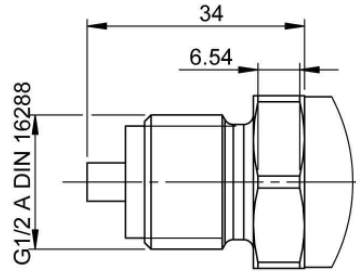
Seal materials

Silicone - VMQ, Nitrile - NBR (Buna), Neoprene - CR, Fluorocarbon - FKM (Viton), Fluorosilicone - FVMQ, Ethylene Propylene - EPDM

Customized versions on request - contact factory for details.



PRESSURE CONNECTION OPTIONS



Dimensions in: mm

How to Order

PTE265 Pressure Transmitter

Pressure Ranges

0.25	0 - 0.25
0.4	0 - 0.4
0.6	0 - 0.6
1	0 - 1
1.6	0 - 1.6
2.5	0 - 2.5
4	0 - 4
6	0 - 6
10	0 - 10
16	0 - 16
25	0 - 25
40	0 - 40
60	0 - 60
100	0 - 100 (only in absolute pressure available)
0	-1 - 0 (only in gage pressure available)
3	-1 - 3 (only in gage pressure available)
5	-1 - 5 (only in gage pressure available)
10	-1 - 10 (only in gage pressure available)

Reference

A	Absolute
G	Gage

	Seal Material	Operating °C	Storage °C
A	Silicone - VMQ	-40 to 125	-40 to 125
B	Nitrile - NBR (Buna)	-34 to 120	-40 to 120
C	Neoprene - CR	-34 to 120	-34 to 120
D	Fluorocarbon - FKM (Viton)	-17 to 125	-17 to 135
E	Fluorosilicone - FVMQ	-40 to 125	-40 to 135
F	Ethylene Propylene - EPDM	-40 to 125	-40 to 125

Pressure Connection

6	G1/2 A DIN 16288
7	G1/4 A DIN 16288

Electrical

D	Mating Connector DIN 175301-803A; PG 11 Flat Gasket: Silicone for temperature -40 to 125°C
E	Without Mating Connector

PTE265 - 10 - A - A - 7 - D

Example: PTE265 - 10A - A - 7D

Description: PTE265 Pressure Transmitter, 0 to 10 Bar Absolute Operating Pressure,
4 - 20 mA/12 to 32Vdc Output/Supply,
Silicone - VMQ External O-Ring Material,
G1/4" Male Pressure Connection, DIN175301-803A Electrical Connection



Before installation and operation, ensure that the appropriate pressure sensor has been selected in terms of pressure range, design and specific measuring conditions. Non-compliance can result in serious injury and/or damage to the equipment.

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