

Features

- High accuracy $\pm 0.1\%$ full scale (FS) for ranges to 900 psid (60 bard)
- Excellent stability $\pm 0.1\%$ FS
- Hostile media compatible
- All welded construction
- Choice of electrical and pressure connections

The PDCR 2100 Series is a small, lightweight differential pressure transducer with standard ranges from 0 to 5 psid (0 to 350 mbar) through 0 to 900 psid (0 to 60 bard). It combines high accuracy with good static pressure characteristics, and is available with a variety of pressure connections and electrical terminations.

The wetted parts on the positive and negative connections are manufactured from Hastelloy C276 and 316L stainless steel, which permits the transducer to be used with most types of corrosive media found in

industrial, chemical and research facilities. The compact construction of the PDCR 2100 Series is ideal for aerospace applications where space may be limited. Electron beam welding is utilized for all pressure and media containment seals. This both enhances safety in operation and eliminates the need for periodic replacement of 'O' rings which is necessary with many competitive models.

The transducer incorporates a miniature, micromachined silicon piezoresistive pressure sensor, which features excellent resistance to vibration, shock and acceleration. Exceptional thermal performance is achieved through the use of a proprietary temperature compensation process. Standard accuracy is better than $\pm 0.1\%$ FS, with the option of $\pm 0.06\%$ FS. Stability is better than $\pm 0.1\%$ FS per 12 months.

GE manufactures a complementary range of differential pressure transducers and transmitters for applications where either a high level voltage or current output is preferred. Gauge and absolute pressure transducers and transmitters, measuring from 0 to 1 psi (0 to 70 mbar) through 0 to 10,000 psi (0 to 700 bar), are also available.

PDCR 2100 Series

Druck Wet/Wet Differential Pressure Transducers

PDCR 2100 Series is a Druck product. Druck has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



PDCR 2100 Specifications

Pressure Measurement

Unless otherwise stated, all specifications are established at reference conditions.

Operating Pressure Ranges

5, 10, 15, 20, 30, 50, 75, 100, 150, 200, 300, 500 and 900 psi differential (350, 700 mbar, 1, 1.5, 2, 3.5, 5, 7, 10, 15, 20, 35, 60 bar differential); uni-directional

For other pressure ranges, engineering units and bi-directional calibrations, please contact GE Sensing.

Static/Line Pressure

30, 100, 500, and 1000 psi (2, 7, 35, and 70 bar)

Static pressure up to 2000 psi (140 bar), with maximum 200 psi (15 bar) differential pressure range, is available.

Overpressure

The operating pressures range can be exceeded by the following multiples causing negligible calibration change:

Positive Connection/Side

- 6 X for 5 psi (350 mbar) range
- 4 X for 10 psi (700 mbar) range and above to 2000 psi (140 bar) maximum

Negative Connection/Side

- 4 X for 5 psi (350 mbar) range
- 2 X for ranges 10 psi (700 mbar) to 75 psi (5 bar)
- 150 psi (10 bar) maximum for higher pressure ranges

Pressure Containment

Positive Connection/Side

6 X to 3000 psi (200 bar) maximum

Negative Connection/Side

4 X to 300 psi (20 bar) maximum

Pressure Media

Positive and Negative Connections

Fluids and gases compatible with Hastelloy C276 and 316L stainless steel

Alternative materials are also available (refer to GE Sensing).

Excitation Voltage

10 V at 5 mA nominal

Output Voltage

- 50 mV for 5 psi (350 mbar) range
- 100 mV for 10 psi (700 mbar) range and above

These outputs are for 10 V excitation and are ratiometric to the excitation voltage.

For high level voltage and current outputs, please contact GE Sensing.

Output Impedance

2000 Ω nominal

Load Impedance

Greater than 100 k Ω for quoted performance

Accuracy

Combined effects of non-linearity, hysteresis, and repeatability

- $\pm 0.1\%$ BSL for all ranges
- $\pm 0.06\%$ BSL available on request

Stability

$\pm 0.1\%$ FS per 12 months - typical

Zero Offset

± 3 mV maximum

Span Setting

± 3 mV maximum

Operating Temperature Range

-4°F to 176°F (-20°C to 80°C) standard

Extended operating temperature ranges from -65°F to 250°F (-54°C to 125°C), refer to GE Sensing.

PDCR 2100 Specifications

Temperature Effects

PDCR 21X0

±0.5% FS thermal error band (TEB) from 32°F to 122°F (0°C to 50°C)

PDCR 21X1

±1.5% FS TEB from -5°F to 175°F (-20°C to 80°C)

For special applications, it is possible to provide improved temperature compensation over a wider temperature range.

Vibration

Response less than 0.05% FS/g at 30 g peak
10 Hz - 2 kHz, limited by 0.47 in (12 mm) double amplitude (30 g peak) (BS EN60068-2-6).

Weight

7.7 oz (0.3 kg) nominal

Weight varies according to selected pressure connections and electrical termination.

CE Marked

Marked for electromagnetic compatibility and the pressure equipment directive.

Pressure Connections

- G 1/4 female
- G 1/8 B or G 1/4 B (60° internal core)
- G 1/8 B or G 1/4 B (flat end)
- M14 x 1.5 mm
- 1/4 in NPT male (flat end)
- 1/4 in NPT female
- 7/16 in UNF (1/4 A.N.) as MS33656-4

For other pressure connections, please contact GE Sensing.

Electrical Connection

A range of cable and connector versions are available. Please refer to ordering information and installation drawing.

For other electrical connections, please contact GE Sensing.

Ordering information

Please state the following:

1) Type number

PDCR 21XX

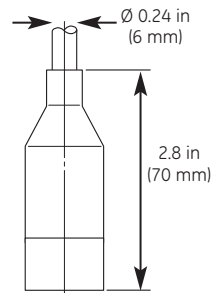
Code	Electrical Connection
1	Integral cable (IP63)
3	Submersible cable (IP68)
6	MIL-C26482 six-pin bayonet
7	DIN 43650 plug and socket

Code	Compensated Temperature Range
0	32°F to 122°F (0°C to 50°C)
1	-4°F to 176°F (-20°C to 80°C)

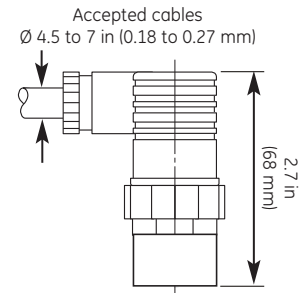
PDCR 21

Use this number to order product

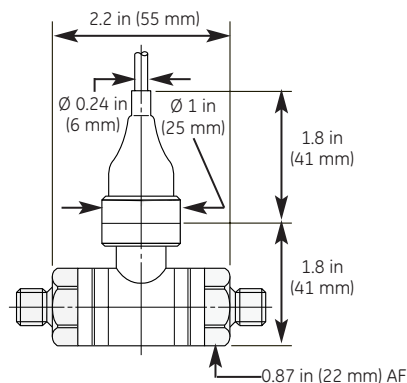
- 2) Differential pressure range
- 3) Static pressure
- 4) Pressure connections
- 5) Cable length (if applicable)



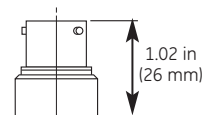
PDCR 213X
Nine core shielded cable assembly (IP68)



PDCR 217X
DIN 43650 plug and socket



PDCR 211X
Integral cable assembly (IP63) six core shielded cable



PDCR 216X
MIL-C26482
six-pin bayonet

PDCR 2100 installation drawing

Electrical Connections

	PDCR 2110 PDCR 2111	PDCR 2130 PDCR 2131	PDCR 2160 PDCR 2161	PDCR 2170 PDCR 2171
Supply +ve	Red	Red	A	3
Supply -ve	White	White	D	1
Output +ve	Yellow	Yellow	B	4
Output -ve	Blue	Blue	C	2
Shield/	N/A	N/A	N/A	N/A

GE
Sensing



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920-216A

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