

## PDCR 35/D Series

### Miniature Depth/Level Pressure Transducer

- High accuracy:  $\pm 0.1\%$  BSL
- Totally submersible: Molded integral cable
- Overpressure capability:  $< 4X$  rated pressure
- Thermal stability:  $\pm 0.5\%$  TEB  $30^\circ$  to  $86^\circ\text{F}$
- Titanium construction
- Less than 0.4" outside diameter

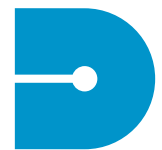


The PDCR 35/D depth pressure transducer has been designed for level measurements in applications where space is very restricted. With a body diameter of only 0.39 inches, it provides an important installation advantage in small diameter monitor wells, bore holes and stand pipes. The transducer is available in vented gauge (standard) and sealed gauge (option) ranges from 0 - 10 to 500 psi. The all-titanium body construction of this model ensures long term and reliable measurements in ground water, reservoir, stream and ocean applications.

The transducer incorporates a miniature, silicon piezoresistive pressure sensor which features excellent resistance to shock and vibration. The standard accuracy is 0.1% FS with the option of 0.06% FS. Outstanding temperature performance is achieved by a proprietary thermal compensation process.

A tough, vented, polyurethane cable is molded to the transducer to provide a high integrity, waterproof assembly. The cable is strengthened with Kevlar so that there is no measurable elongation when the cable is lowered into deep wells. External suspension wire, to prevent electrical or mechanical damage of the cable, is therefore not necessary with the PDCR 35/D.

For applications where very long cable length or current outputs are required, Druck offers a complementary range of submersible pressure transmitters providing 4-20 mA output.



### Miniature Depth/Level Pressure Transducer

#### SPECIFICATION

##### Operating Ranges

Available in gauge ranges as follows:

PSI G	Feet of Water
10	23.1
15	34.7
25	58
50	115
100	231
200	462
300	693
500	1155

For sealed gauge ranges, please contact factory.

##### Overpressure

The rated pressure can be exceeded by 4X causing negligible calibration change.

##### Pressure Media

Fluids compatible with quartz, titanium and the polyurethane cable. If the pressure media is applied only to the pressure port and the transducer is not totally submerged then it will only contact quartz and titanium.

##### Transduction Principal

Integrated silicon strain gauge bridge.

##### Excitation Voltage

10 Vdc regulated at 8mA max. Polarity is important.

##### Output Voltage

100mV

For pressure ranges 10 psi through 500 psi with standard accuracy.

For V or mA outputs, please contact factory.

##### Output Impedance

2000 ohms nominal

##### Load Impedance

Greater than 100 Ohms for quoted performance.

For lower load impedance, please specify.

##### Resolution

Infinite

##### Combined Non-linearity, Hysteresis, and Repeatability

±0.1% BSL for all ranges

±0.06% BSL available on request. Lower

outputs may be applicable, please refer to manufacturer.

##### Zero Offset

±5mV standard

##### Span Setting

±10mV standard

More accurate settings of zero and span are available on request.

##### Operating Temperature Range

-5°F to +175°F standard (-20°C to +80°C)

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

##### Natural Frequency

56kHz for 10 psi increasing to 360kHz for 500 psi.

##### Acceleration Sensitivity

0.003% FSO/g for 10 psi decreasing to 0.0002% FSO/g for 500 psi.

##### Mechanical Shock

1000g for 1 ms in each of three mutually perpendicular axes will not affect calibration.

##### Weight

0.6 oz. nominal

##### Electrical Connection

3 ft. cable supplied as standard. This is molded to transducer body with polyurethane to provide watertight connection. Continuous lengths up to 500 ft. can be supplied. Please refer to manufacturer if longer lengths are required.

Cable specification:

6 conductor (24 AWG) shielded -shield connected to transducer body Polyurethane outer jacket- 0.224" diameter Kevlar strength member #29/1500 Denier Nylon vent tube

Weight in air, 44 lbs per 1000 ft. nominal Weight in water, 10 lbs per 1000 ft. nominal Breaking strength, 200 pounds.

This tough customized cable has been strengthened with Kevlar so that there is no measurable cable elongation that could result in electrical breakdown.

##### Pressure Connection

A Delrin cone is fitted as standard.

##### Optional Pressure Connection

Titanium front end with side pressure ports incorporating a female 10-24 UNC thread for the purpose of adding weight. (P/N 222-053)

Please refer to manufacturer for other pressure connections.

#### ASSOCIATED PRODUCTS

##### Ranges Below 10 PSI With Fluid Isolation

Refer to PDCR 1830 Series

##### 4-20mA Output

Refer to PTX 1830 Series

##### Deep Wells Small Bores

Refer to PDCR 1830 Series

##### Signal Conditioning

Refer to SCU 220, DPI 260 and DPI 280 Series

##### Remote Termination Box

Refer to STE 110 or SCU 220

#### ORDERING INFORMATION

Please state the following:

- (1) Type number
- (2) Pressure range
- (3) Temperature range
- (4) Cable length
- (5) Pressure media

For non-standard requirements please specify in detail.

##### Shipping, Storage and Handling

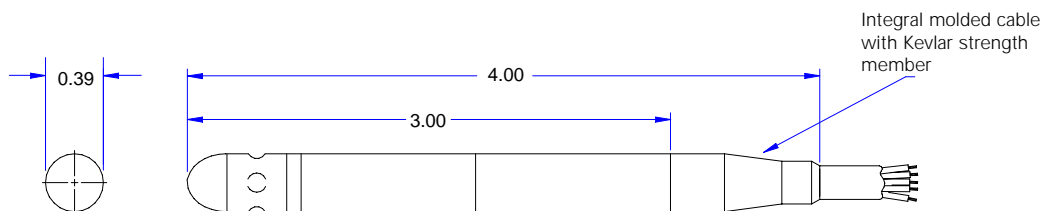
Each transmitter is purged with clean dry nitrogen and shipped with desiccant to prevent moisture ingress during transit.

Continuing development sometimes necessitates specification changes without notice.

Druck is an ISO 9001 registered company.



#### INSTALLATION DRAWINGS: Dimensions in inches



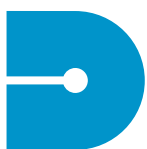
##### Monitor Lead Option

- Orange Monitor supply positive
- Black Monitor supply negative

(This option requires an additional 1/2" body length)

##### Electrical Connection

- 6 core shielded/vented cable
- Red Positive supply
- White Negative supply
- Yellow Positive output
- Blue Negative output



Druck Incorporated

Representative

Druck

GE Druck PDCR 35/D

Distributor: ThermX Southwest 800-284-3769

[www.thermx.com](http://www.thermx.com)