

## Features

- All-welded titanium construction backed by five-year corrosion warranty
- Accuracy:
  - 1880: <  $\pm 0.1\%$  full scale (FS) best fit straight line (BSL)
  - 1280: <  $\pm 0.25\%$  FS BSL
- Ideally suited for underground fuel tanks
- FM, CSA intrinsically safe, CE marked
- Fluoropolymer™ cable

The PTX/PDCR 1280/1880 Series submersible/depth pressure transducers are specifically designed for depth/level measurements in the groundwater, well water, canals, rivers and other similar applications. The all-titanium construction ensures excellent life in the most hostile environments, including corrosive and hazardous chemical applications. GE backs its titanium

construction with a five year corrosion warranty. standard vented cable is fluoropolymer. Polyurethane cable is available on the Series 1230 or 1830.

The PTX/PDCR 1280/1880 Series sensors are ideal for use in applications where smaller size is an advantage, such as municipal water supply wells, leachate wells, irrigation projects, etc. The titanium construction also makes the devices suitable for seawater and chemical tank measurement applications.

An advanced micromachined silicon piezoresistive pressure sensor provides excellent performance and resistance to shock and vibration. A tough, fluoropolymer cable is attached to the transducer body, providing 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.

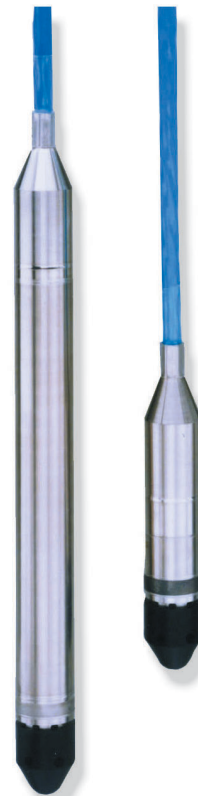
The fully isolated, all titanium design ensures long term reliable measurements in water and wastewater management, industrial, process and marine applications.

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# PTX/PDCR 1280/ 1880 Series

## Druck Submersible Depth/Level Pressure Transmitters/Transducers

PTX/PDCR 1280/1880 is a Druck product. Druck has joined other GE high-technology sensing businesses under a new name—GE Industrial, Sensing.



# PTX/PDCR 1280/1880 Specifications

## General

### Standard Operating Ranges

- 1, 2.5 psi (0.75, 1.5 mH<sub>2</sub>O) gauge
- 5, 10, 15, 20, 30, 50, 75, 100, 150, 200, 300, 500, 900 psi (3.5, 7, 10, 15, 20, 35, 50, 70, 100, 150, 200, 350, 600 mH<sub>2</sub>O) gauge or absolute

*Other ranges and pressure units may be specified.*

### Overpressure

- 10X for range 1 psig (0.75 mH<sub>2</sub>O)
- 8X for 2.5 psi (1.5 mH<sub>2</sub>O)
- 6X for 5 psi (1.5 to 3.5mH<sub>2</sub>O)
- 4X for ranges above 5 psi (3.5 mH<sub>2</sub>O)
- 2000 psi (1400 mH<sub>2</sub>O) maximum

### Pressure Media

Fluids compatible with titanium and Fluoropolymer

### Transduction Principal

Piezoresistive micromachined silicon strain gauge

### Combined Error (Non-Linearity, Hysteresis and Repeatability)

*Series 1880*

±0.1% FS BSL; ±0.06% FS BSL available (consult factory)

*Series 1280*

±0.25% FS BSL

### Temperature Effects Over Compensated Range of 30°F to 86°F (-1°C to 30°C)

*Series 1880*

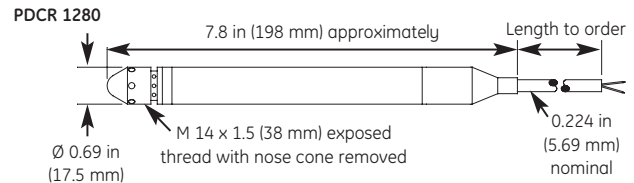
±0.3% FS TEB; ±0.6% for ranges below 5 psi (3.5 mH<sub>2</sub>O)

*Series 1280*

±1% FS TEB; ±2% FS for ranges below 5 psi (3.5 mH<sub>2</sub>O)

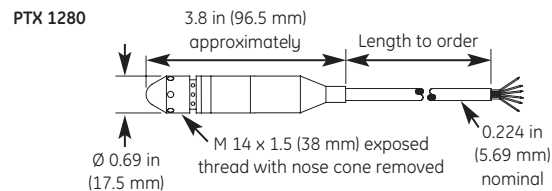
### Resolution

Infinite



#### Electrical Connection

Vented polyurethane cable  
 Red-Positive supply  
 White-Negative supply  
 Yellow-Positive output  
 Blue-Negative output  
 Shield-connected to case  
*Any other conductors not connected.  
 Optional monitor leads: Orange and Black.*



#### Electrical Connection

Vented polyurethane cable  
 Red-Positive supply  
 Black-Negative supply  
 Shield-connected to case  
*Any other conductors not connected.*

*Installation Drawings*

### Insulation Resistance

100 MΩ @ 50 VDC

### Relative Humidity

0 to 100%

### Compensated Temperature Range

30 to 86°F (-2°C to 30°C)

### Operating Temperature Range

-5°F to 140°F (-20°C to 60°C)

## Electrical Characteristics

### Output

*PDCR 1880/1280 Series*

- 2.5 mV/V for range 1 psi (0.75 mH<sub>2</sub>O)
- 5 mV/V for range 2.5 psi (1.5 and 3.5 mH<sub>2</sub>O)
- 10 mV/V for ranges 10 psi and above (7 mH<sub>2</sub>O)

*PTX 1880/1280 Series*

Two-wire, 4 to 20 mA

*Output is ratiometric to power supply (2.5 VDC minimum)*

# PTX/PDCR 1280/1880 Specifications

## Mechanical Characteristics

**Sensor Body**  
Titanium

**Measurement Diaphragm**  
Titanium

**Pressure Connection**  
Open face with protective titanium and flouropolymer

**Electrical Connection**  
Vented flouropolymer cable (specify length)

**Diameter**  
0.69 inches (17.5 mm)

**Weight**  
5 oz (142 g) nominally (excluding cable)

**Compatible Fluids**  
Any fluid compatible with titanium and flouropolymer

**Safety**

- FM, CSA Intrinsically safe
- Class I, Division 1, Groups A,B,C,&D
- EMC Emmissions EN50081-1
- EMC Immunity EN50082-2
- Certification CE marked

**Ingress Protection**  
Type 6/IP68

## Options

- Sink-weight (P/N: DA2608-1-01)
- Monitor leads (PDCR version only)
- FM, CSA or ATEX intrinsically safe certification
- ABS certification
- Threaded pressure port (welded)
  - 1/4 in NPT male
  - 1/8 in NPT male
  - 7/16 UNF male
  - G 1/4 male
  - G 1/8 male

## Accessories

- STE 110 terminal enclosure with desiccant and waterproof vent
- SCU 220 terminal enclosure with desiccant and waterproof vent with 4-20mA signal conditioning (for all millivolt sensors)
- Cable clamp (P/N: 192-373-01)
- Two-wire lightning arrestor (P/N TAS 140-1);  
Four-wire lightning arrestor (P/N: TAS 140-4)
- Descaling kit (P/N: DA2906-1-01)
- DPI 280 digital indicator
- DPI 610 portable field calibrator (specify range)

## Ordering Information

### Please State the Following:

- (1) Type number
- (2) Pressure range
- (3) Cable length
- (4) Options required

*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.