



**GE Druck**

## **1730/1740 Series**

Submersible Level Pressure Sensors



- Ranges from 1.5 mH<sub>2</sub>O to 600 mH<sub>2</sub>O
- Accuracy  $\pm 0.25\%$
- Fully welded 17.5 mm 316 stainless construction
- Pulse power operation
- Polyurethane and hydrocarbon resistant cables
- Full range of installation accessories

The 1730/1740 series has been developed as a general purpose, hydrostatic liquid level sensor, designed to work in low powered, arduous applications, including surface water, ground water and tank level.

It is the latest generation of submersible products manufactured by GE Druck over the past 30 years and features high performance, micro-machined silicon technology, packaged in a fully welded 316 stainless steel assembly.

Application specific features include a Kevlar strain relieved vented cable, internal condensation protection and an IP68 injection moulded cable assembly, which guarantees sensor operation over an extended lifetime.

The PDCR 1730/1740 (mV) and PTX 1730/1740 (mA) are available with fixed cable lengths for quick delivery and a range of OEM specific variants, including digital performance characterisation and temperature measurement capability for data logger manufacturers.

# PDCR/PTX 1730/1740 Series

## Submersible Level Pressure Sensors

### STANDARD SPECIFICATIONS

#### Pressure Measurement

##### Operating Pressure Ranges

###### PDCR 1730/1740 (mV)

1.5, 3.5, 7, 10, 15, 20, 35, 50, 70, 100, 150, 200, 350, 600 mH<sub>2</sub>O gauge

###### PTX 1730/1740 (mA)

Any zero based full scale (FS) from 1.5 mH<sub>2</sub>O through to 600 mH<sub>2</sub>O gauge can be specified.

Other specifiable units: ftH<sub>2</sub>O, bar, mbar, psi, etc

#### Overpressure

The operating pressure range can be exceeded by the following multiples with negligible effect on calibration.

6 x for 1.5 mH<sub>2</sub>O range

4 x for ranges up to 3.5 mH<sub>2</sub>O

2 x for ranges up to 600 mH<sub>2</sub>O

#### Pressure Containment

10 x for ranges up to 3.5 mH<sub>2</sub>O

4 x for ranges up to 600 mH<sub>2</sub>O (1400 mH<sub>2</sub>O max)

#### Media Compatibility

Fluids compatible with 316 stainless steel, polyurethane cable or Hytrel 6018 (cable) and EPDM (nose cone).

#### Excitation Voltage

**PDCR 1730/1740 (mv)** 10V at 1 mA nominal

**PTX1730/1740 (mA)** 9 to 30Vdc across terminals for pulse power operation refer to technical note

#### Output Signal

##### PDCR 1730/1740

50 mV for ranges 1.5 and 3.5 mH<sub>2</sub>O

100 mV for ranges 7 mH<sub>2</sub>O and above

##### PTX 1730/1740

4 to 20 mA proportional to the span

### Performance Specification

#### Accuracy

Combined effects of Non-linearity, Hysteresis and Repeatability:  $\pm 0.25\%$  FS BSL maximum

#### Zero Offset & Span Setting

##### PDCR 1730/1740

Maximum:  $\pm 3$  mV

##### PTX 1730/1740

Maximum:  $\pm 0.1$  mA

#### Long-Term Stability

$\pm 0.2\%$  FS typically per annum

#### Operating Temperature Range

-20°C to 60°C

#### Temperature Effects

$\pm 0.5\%$  FS TEB over -2°C to 30°C

For 1.5 mH<sub>2</sub>O range multiply x 2

#### Insulation Resistance

Greater than 100 M $\Omega$  at 500 Vdc

#### Common Mode Voltage (mV only)

Nominally 50% of excitation voltage

#### Output Impedance (mV only)

5k $\Omega$  nominal.

#### RFI/EMC CE Certification

EMC emissions - EN 50081-2

EMC immunity - EN 50082-2

#### Voltage Spike Protection (mA only)

Units will withstand a 600 V voltage spike (EN 61000-4-5:1995) applied between all excitation lines and case.

#### Mechanical Shock

20 g peak 1 ms half sine pulse in each of 3 mutually perpendicular axes will not affect performance.

### Physical Specification

#### Pressure Connection

G<sup>1</sup>/<sub>4</sub> (female) with recessed open face diaphragm, fitted with protective EPDM nose cone.

#### Electrical Connection

1730: Vented polyurethane cable with integral Kevlar strain relief cord rated to 54 kg load. Water ingress protection IP68 to 700 mH<sub>2</sub>O.

1740: Vented Hytrel 6108 cable (hydrocarbon resistant)

#### Fixed Cable Lengths

2, 6, 10, 15, 20, 25, 30, 40, 60, 90, 120 metres. Variable cable lengths available from 120 to 600 metres.

### ACCESSORIES

- (A)STE Sensor Termination Enclosure (202-034-01)
  - (B)17.5 mm Slimline Sink Weight (222-116-01)
  - (C)Cable Clamp System (192-373-01)
  - (D)Econometrical Calibrator Adaptor (DA2536-1-01)
  - (E)360° Rotatable Calibration Adaptor (DA4112-3-01)
- for accessory details refer to product note

### DOCUMENTATION

Statement of conformity and installation notes supplied as standard.

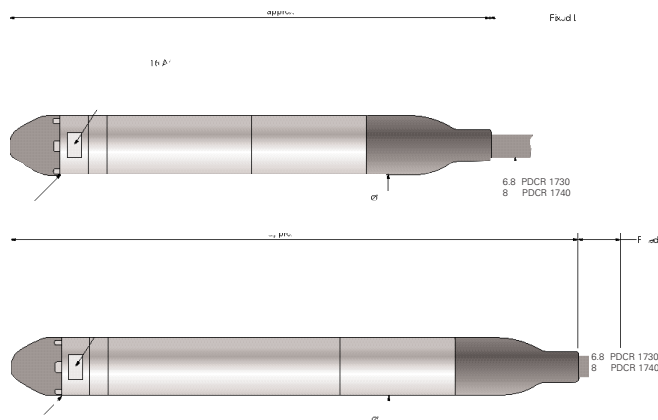
### ORDERING INFORMATION

Please state the following:

- (1) Model PDCR 1730 or PTX 1730  
- Polyurethane cable  
Model PDCR 1740 or PTX 1740  
- Hytrel 6108 cable
- (2) Pressure range and pressure units
- (3) Fixed cable length required
- (4) Accessories (order as separate items)

**Continuing development sometimes necessitates specification changes without notice**

### INSTALLATION DRAWINGS - Dimensions mm



#### Electrical Connections

PDCR 1730 - Polyurethane cable  
PDCR 1740 - Hytrel 6108 cable

Red: Supply positive  
White: Supply negative  
Yellow: Output positive  
Blue: Output negative  
Screen wire connected to case  
Remaining cores not connected

PTX 1730 - Polyurethane cable  
PTX 1740 - Hytrel 6108 cable

Red: Supply positive  
Blue: Supply negative  
Screen wire connected to case  
Remaining cores not connected