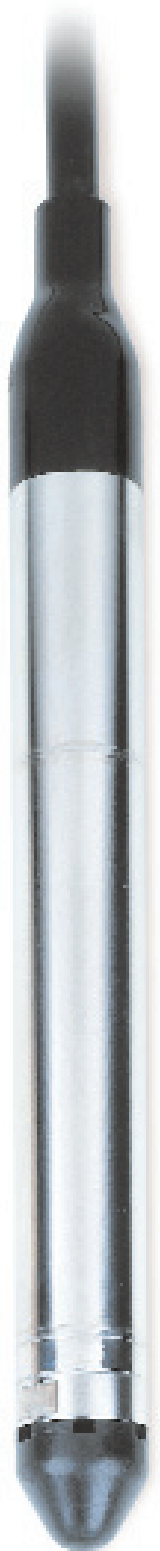




GE Druck

1730/1740 Series

Submersible Level Pressure Sensors



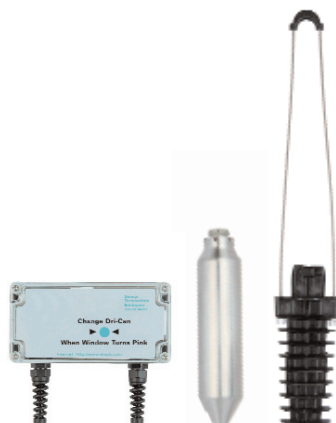
- Ranges from 1.5 mH₂O to 600 mH₂O
- Accuracy $\pm 0.25\%$
- Fully welded 17.5 mm 316 stainless construction
- Pulse power operation
- Polyurethane and hydrocarbon resistant cables
- Full range of installation accessories

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 mH₂O gauge

PTX 1730/1740 (mA)

Any zero based full scale (FS) from 1.5 mH₂O through to 600 mH₂O gauge can be specified.

Other specifiable units: ftH₂O, 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 mH₂O range

4 x for ranges up to 3.5 mH₂O

2 x for ranges up to 600 mH₂O

Pressure Containment

10 x for ranges up to 3.5 mH₂O

4 x for ranges up to 600 mH₂O (1400 mH₂O 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) 10 V at 1 mA nominal

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

Output Signal

PDCR 1730/1740

50 mV for ranges 1.5 and 3.5 mH₂O

100 mV for ranges 7 mH₂O 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: ± 3 mV

PTX 1730/1740

Maximum: ± 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 mH₂O range multiply x 2

Insulation Resistance

Greater than 100 M Ω at 500 Vdc

Common Mode Voltage (mV only)

Nominally 50% of excitation voltage

Output Impedance (mV only)

5k Ω 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

G¹/₄ (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 mH₂O.

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) Economical 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.

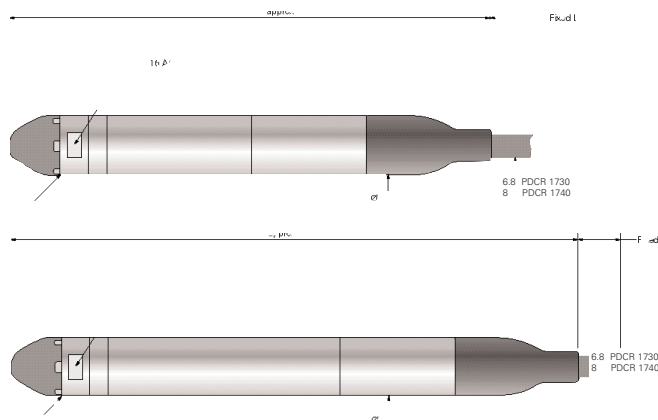
ORDERING INFORMATION

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