PDCR/PTX 1730 Series

Druck

Submersible Level Pressure Sensors

1730 SERIES

- Ranges from 1.5 to 600 mH_2O
- Millivolt and milliamp output
- 17.5 mm diameter package
- ±0.25% accuracy
- Pulse power operation
- System accessories

The 1730 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 contents.

It is the latest generation of submersible products manufactured by Druck over the past 27 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 (mV) and PTX 1730 (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.

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STANDARD SPECIFICATION

Pressure Measurement

Operating Pressure Ranges
PDCR 1730 (mV)
1.5, 3.5, 7, 10, 15, 20, 35, 50, 70, 100, 150, 200, 350, 600 mH_2O gauge
PTX 1730 (mA)
Any zero based full scale (FS) from 1.5 mH_2O through to 600 mH_2O gauge can be specified.

Other specifiable units: ftH2O, bar, mbar, psi, inH_2O, Kpa, kg/cm2

Overpressure
The operating pressure range can be exceeded by the following multiples with negligible effect on calibration.
6 x for 1.5 mH_2O range
4 x for ranges up to 3.5 mH_2O
2 x for ranges up to 600 mH_2O

Pressure Containment
10 x for ranges up to 3.5 mH_2O
4 x for ranges up to 600 mH_2O (1400 mH_2O max)

Pressure Media
Fluids compatible with 316 stainless steel, Polyurethane (cable) and EPDM (nose cone).

Excitation Voltage
PDCR 1730 (mv) 10V at 1mA nominal

PTX1730 (mA) 9 to 30Vdc across terminals

pulse power operation refer to technical note

Output Signal
PDCR 1730
50 mV for ranges 1.5 and 3.5 mH_2O
100 mV for ranges 7 mH_2O and above
PTX 1730
4 to 20 mA proportional to the span

Performance Specification

Accuracy
Combined effects of Non-linearity, Hysteresis and Repeatability: ±0.25% FS BSL maximum

Zero Offset & Span Setting
PDCR 1730
Maximum: ± 3 mV
PTX 1730
Maximum: ±0.1mA

Long Term Stability
± 0.2% FS typically per annum

Operating Temperature Range
-20°C to 60°C

Temperature Effects
±0.5% FS TEB over -2°C to 30°C
For 1.5 mH_2O range multiply x 2

Insulation Resistance
Greater than 100 MW at 500 Vdc

Common Mode Voltage (mV only)
Nominally 50% of excitation voltage

Output Impedance (mV only)
5kW nominal.

RFI/EMC CE Certification
EMC emmisions - EN 50081-2
EMC immunity - EN 50082-2

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

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

Physical Specification

Pressure Connection
G $^1/_4$ (female) with recessed open face diaphragm, fitted with protective EPDM nose cone.

Electrical Connection
6-core vented polyurethane cable supplied with Kevlar strain relieving cord in fixed lengths.
Maximum cable assembly load 50 kg.
Water ingress protection IP68 to 700 mH_2O.

Fixed Cable Lengths
2, 5, 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)17.5mm Slimline Sink Weight (222-116-01)
(C)Cable Clamp System (192-373-01)
(D)G1/8 Calibrator Adaptor (DA2536-1-01)

for accessory details refer to product note

DOCUMENTATION

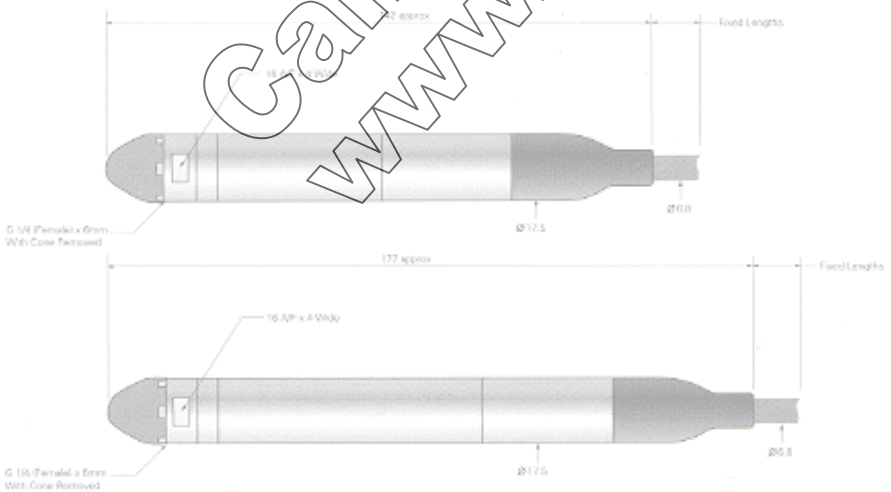
Statement of conformity and installation notes supplied as standard.

ORDERING INFORMATION

Please state the following:
(1) Model PDCR 1730 or PTX 1730
(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

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

PTX 1730

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

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