

## Features

- Ranges from 3.5 to 600 mH<sub>2</sub>O
- Accuracy  $\pm 0.25\%$  full scale (FS) best straight line (BSL)
- Fully welded 17.5 mm 316 stainless steel construction
- Pulse power operation
- Polyurethane and hydrocarbon resistant cables
- Full range of installation accessories

The PDCR 1730/1740 transducer (mV output) and PTX 1730/1740 transmitter (4 to 20 mA output) are the latest generation of fully submersible, 316 stainless steel, high performance sensors for measurement of hydrostatic liquid levels.

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

# 1730/1740 Series Druck Stainless Steel Level Pressure Sensors

1730/1740 is a Druck product.  
Druck has joined other GE  
high-technology sensing  
businesses under a new  
name— GE Sensing.



# 1730/1740 Specifications

## Pressure Measurement

### Operating Pressure Ranges

#### PDCR 1730/1740 (mV)

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 FS from 4 mH<sub>2</sub>O to 600 mH<sub>2</sub>O gauge.

*Other units may be specified e.g. ftH<sub>2</sub>O, inH<sub>2</sub>O, bar, mbar, kpa, kg/cm<sup>2</sup>*

### Overpressure

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

- 4 x for 3.5 mH<sub>2</sub>O range
- 2 x for ranges above 3.5 mH<sub>2</sub>O

### Pressure Containment

- 10 x for 3.5 mH<sub>2</sub>O range
- 4 x for ranges up to 600 mH<sub>2</sub>O (1400 mH<sub>2</sub>O maximum)

### Media Compatibility

Fluids compatible with 316 stainless steel (body), polyurethane or Hytrel® 6108 (cable) and EPDM (nose cone).

### Excitation Voltage

#### PDCR 1730/1740 (mV)

10 V at 1 mA nominal

Output is fully ratiometric to supply within 2.5 V to 12 V limits.

#### PTX1730/1740 (mA)

9 to 30 VDC across terminals

*For pulse power operation refer to technical note.*

The minimum supply voltage ( $V_{MIN}$ ) which must appear across the pressure transmitter terminals is 9 V and is given by the following equation:

$$V_{MIN} = V_{SUP} - (0.02 \times R_{LOOP})$$

Where  $V_{SUP}$  is supply voltage in Volts,  $R_{LOOP}$  is total loop resistance in Ohms

### Output Signal

#### PDCR 1730/1740

- 50 mV for 3.5 mH<sub>2</sub>O range
- 100 mV for ranges 7 mH<sub>2</sub>O and above

#### PTX 1730/1740

4 to 20 mA proportional, for zero to FS pressure

### Common Mode Voltage - PDCR 1730/1740

Nominally 50% of excitation voltage

### Output Impedance - PDCR 1730/1740

5 k $\Omega$  nominal

## Performance Specification

### Accuracy

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

### Zero Offset & Span Setting

#### PDCR 1730/1740

Typical:  $\pm 1.5$  mV

Maximum:  $\pm 3$  mV

#### PTX 1730/1740

Maximum:  $\pm 0.1$  mA

### Long-Term Stability

$\pm 0.2\%$  FS typical per annum

### Operating Temperature Range

-20 to 60°C

### Compensated Temperature Range

-2 to 30 °C

### Temperature Effects

$\pm 0.5\%$  FS Temperature Error Band (TEB).

### Shock and Vibration

MIL-STD-810E, method 514.4. Category 10 min. integrity. Figure 514.4-16

Product will withstand 20 g peak shock half sine wave 9 ms duration in all axes, also 2000 g peak shock 0.5 ms duration in all axes.

### Insulation

Greater than 100 M $\Omega$  at 500 VDC

# 1730/1740 Specifications

## 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 mH<sub>2</sub>O.

**1740:** Vented Hytrel® 6108 cable (hydrocarbon resistant) with integral Kevlar® strain relief cord rated to 54 kg load. Water ingress protection IP68 to 700 mH<sub>2</sub>O.

### Fixed Cable Lengths

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

### CE marking

CE marked for electromagnetic compatibility and pressure equipment directive.

### Documentation

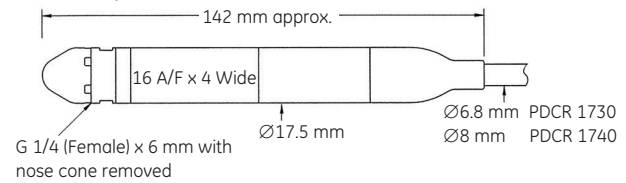
Statement of conformity and installation notes supplied as standard.

## Accessories

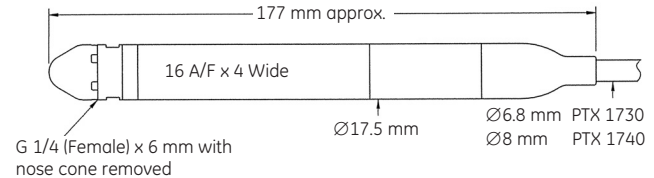
A full range of accessories is available to enhance installation, operation and maintenance of the 1730/1740 Series as listed below:

- STE moistureproof sensor termination enclosure (202-034-01)
- Slimline sink weight Ø17.5 mm (222-116-01)
- Short sink weight Ø25 mm (222-117-01)
- Cable clamp system (192-373-01)
- 360° rotatable calibration adaptor to:
  - G1/8 (DA4112-3-01)
  - 1/8 NPT (DA4112-4-01)
- Economical direct calibration adaptor to:
  - G1/8 (DA2536-1-01)
  - 1/8 NPT (DA2536-2-01)

### PDCR 1730/1740



### PTX 1730/1740



### Electrical Connections

PDCR 1730 - Polyurethane cable  
PDCR 1740 - Hytrel® 6108 cable

PTX 1730 - Polyurethane cable  
PTX 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

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

## Ordering Information

Please state the following:

- (1) Model PDCR 1730 (mV) or PTX 1730 (mA)
  - Polyurethane cable
  - Model PDCR 1740 (mV) or PTX 1740 (mA)
  - Hytrel® 6108 cable
- (2) Pressure range and scale units
- (3) Cable length required
- (4) Accessories (order as separate items).
- (5) Supporting Services (order as separate items)

## Supporting Services

Our highly trained staff can support you, no matter where you are in the world. We can provide training, nationally accredited calibration - both initially and at periodic intervals - extended warranty terms and even rental of portable or laboratory calibrators. Further details can be found in [www.gesensing.com/productservices/service.htm](http://www.gesensing.com/productservices/service.htm)



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