

PTX 661 Series



Hammer Union Pressure Transmitters

- Ranges from 350 bar to 1035 bar
- 200% overpressure
- $\pm 0.1\%$ accuracy
- 0.1% FS/annum stability
- Rugged, modular and field repairable design
- Low cost of ownership



PTX 661 Series

Hammer Union Pressure Transmitters

For 30 years, Druck has continually developed and manufactured a range of advanced micromachined silicon pressure sensors. These are used worldwide for a wide range of demanding and critical applications including oil and gas, petrochemical, aerospace, automotive, industrial and research environments.

The PTX 661 series of Hammer Union Transmitters further extends the range of high level output pressure sensors offering new levels of measurement accuracy, stability and flexibility from a standard, rugged product.

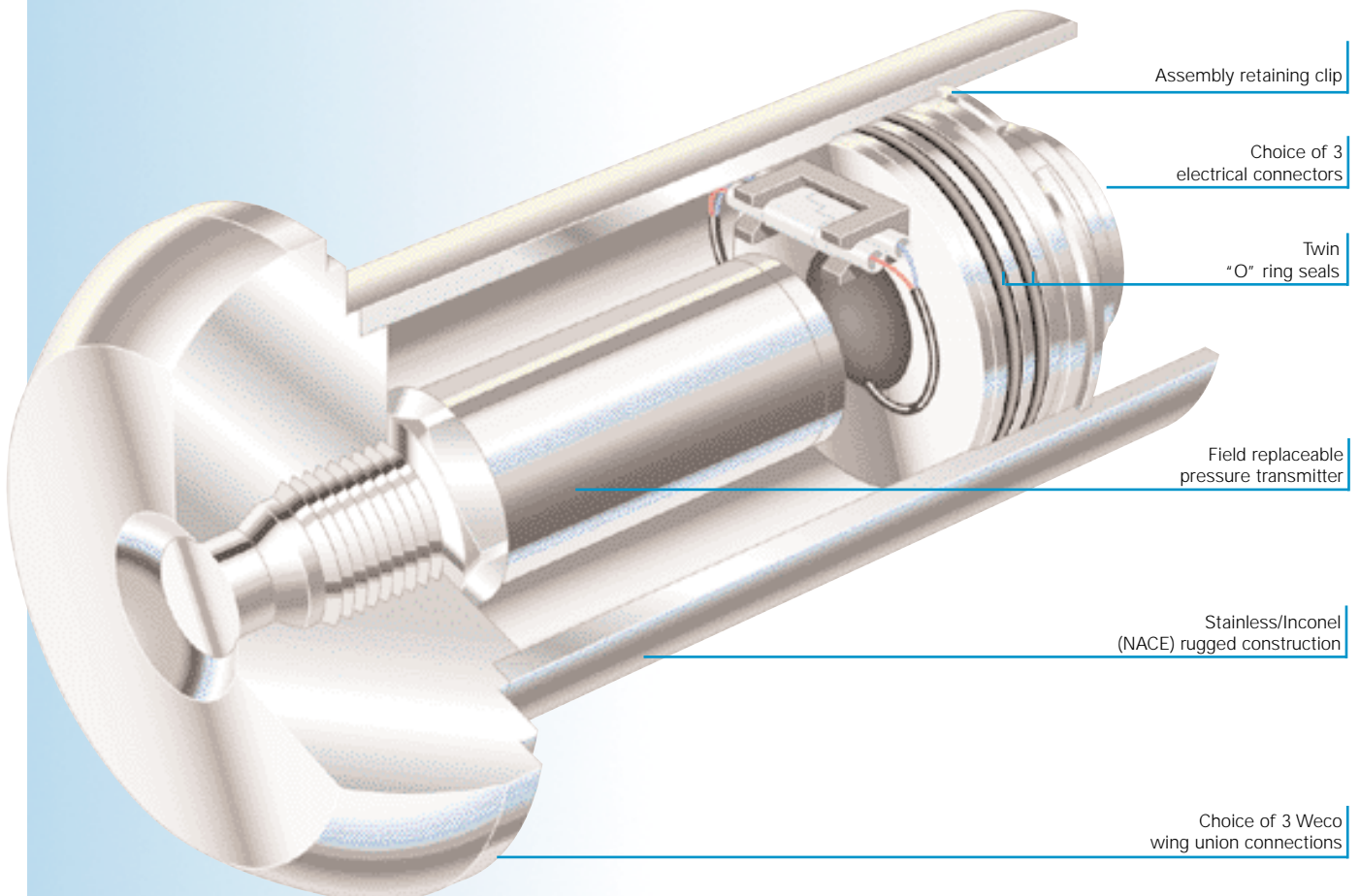
Advanced technology

At the heart of the PTX 661 series is an advanced, high stability measuring element micromachined from single crystal silicon within Druck's own Class 100 processing facility. The silicon element is mounted within a high-integrity glass-to-metal seal assembly and is fully isolated from the pressure media by an electron beam welded Inconel isolation diaphragm.

Surface mounted electronics condition the output from the silicon sensor, correcting for thermally induced errors before providing the standard 2-wire compatible 4 - 20mA loop signal, and with a fast 2kHz response time, the device is also suitable for measuring both static and dynamic mud pressures.

Rugged design

The PTX 661 series has been specifically designed to withstand the extremely harsh environments of both onshore and offshore drilling operations, for example, where high shock and vibration levels are encountered. In addition, the transmitter is available with 1002, 1502 or 2202 Weco Wing Union pressure connections, and uses NACE specified materials which are compatible for sour gas service.



STANDARD SPECIFICATIONS

Pressure Measurement

Operating Pressure Range

0 to 350, 700, 1035 bar sealed gauge or absolute.

0 to 5000, 10000, 15000 psi sealed gauge or absolute.

Overpressure

The operating pressure range can be exceeded by the following without degrading performance:

2 x F.S. or 1400 bar, whichever is less.

Pressure Containment

The transmitter will safely contain up to 2000 bar maximum without leakage of pressure media.

Pressure Media

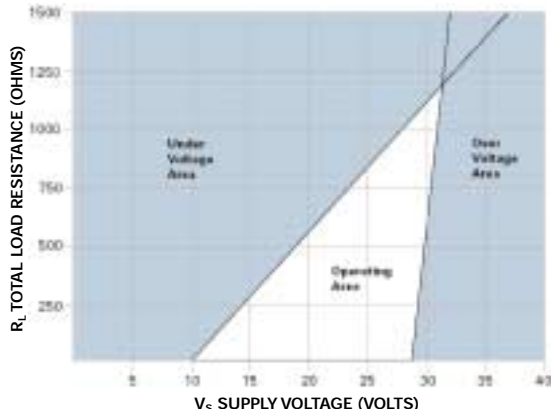
Fluids compatible with 316L Stainless Steel (NACE compatible), Inconel X750 and Inconel 625.

Supply Voltage

10 - 28Vd.c.

The minimum supply voltage that must appear across the transmitter terminals is 10 Vd.c. and is calculated by:

$$V_{MIN} = V_S - (0.02 \times R_L)$$



Output Current

4 - 20mA (2-wire). Proportional for zero to full scale pressure.

Performance Specification

Accuracy

Combined Non-linearity, Hysteresis and Repeatability: $\pm 0.1\%$ F.S. BSL.

Zero Offset and Span Setting

$\pm 1\%$ F.S. (zero) and $\pm 0.5\%$ F.S. (span) @ 23°C.

Long Term Stability

At standard reference conditions the calibration will not change by more than 0.1%F.S./year.

Temperature Range

Process: -40° to 120°C

Ambient: -40° to 120°C

Compensated: -20° to 80°C

Storage: -54° to 150°C

Temperature Effects

The output will not deviate by more than $\pm 1\%$ over the full compensated range of -20° to 80°C.

Response Time

The electronic response time will be better than 0.5msec. (2 kHz).

Physical Specification

Pressure Connection

A choice of 3 WECC pressure connections is provided:

-8547 WECC Wing Union #1502

-8593 WECC Wing Union #2202

-8687 WECC Wing Union #1002

Ingress Protection

IP66 (Nema 4x).

Conformity

CE Marked.

Certified Intrinsically Safe by:

Baseefa EEx ia IIC T4 (Ta = 80°C). Certificate Ex97D2058.

Factory Mutual, Class 1, Div 1 Groups A, B,C and D.

Canadian Standards Association, Class 1, Div 1, Groups A, B, C and D.

Electrical Connection

A choice of 3 popular electrical connections are provided:

10 pin LEMO Connector: Part Number EGG - 4K - 310.

6 pin bayonet Connector: Part Number MIL - 24682.

4 pin Glenair Connector: Part Number MIL - 5015.

Weight

3 kg nominal.

Mechanical Shock

1000g for 1msec in each of three mutually perpendicular axes will not affect calibration.

Vibration

Response less than 0.05% F.S./g at 30g peak 10Hz - 2kHz, limited by 12mm double amplitude. (MIL - STD 810C Proc 514.2-2 Curve L).

OPTIONS

Please specify option and part number as shown when ordering (refer to information overleaf).

(A) Carrying Handle: Part Number: XA2448-1-01.

(B) Mating Electrical Connectors:

6 pin Bayonet Connector: Part Number 163-009

4 pin Glenair Connector: Part Number 160-119

Note: Mating connector for 10 pin LEMO option is not available.

(C) Replaceable Pressure Transmitter Insert: Part Number: PTX 721-8518 (State pressure range).

(D) Pressure Transmitter Insertion/extraction Tool: Part Number: F2186-1

(E) Electrical Connection Extraction Tools:

10 pin Lemo Connector: Part Number F2299/1

6 pin bayonet Connector: Part Number F2299/2

4 pin Glenair Connector: Part Number F2299/3.

Hammer Union Pressure Transmitters

ORDERING INFORMATION

Please state the following:

(1) Type number

Code

PTX 661 Base Model

Code	Electrical Connection
1	10 pin LEMO Connector
2	6 pin Bayonet Connector
3	4 pin Glenair Connector

Code	Pressure Connection
8547	WECO #1502
8593	WECO #2202
8687	WECO #1002

PTX 661 - 1 - 8547

(2) State pressure range.

(3) State options required.

CALIBRATION STANDARDS

Transducers manufactured by Druck are calibrated against precision pressure calibration equipment which is traceable to International Standards.

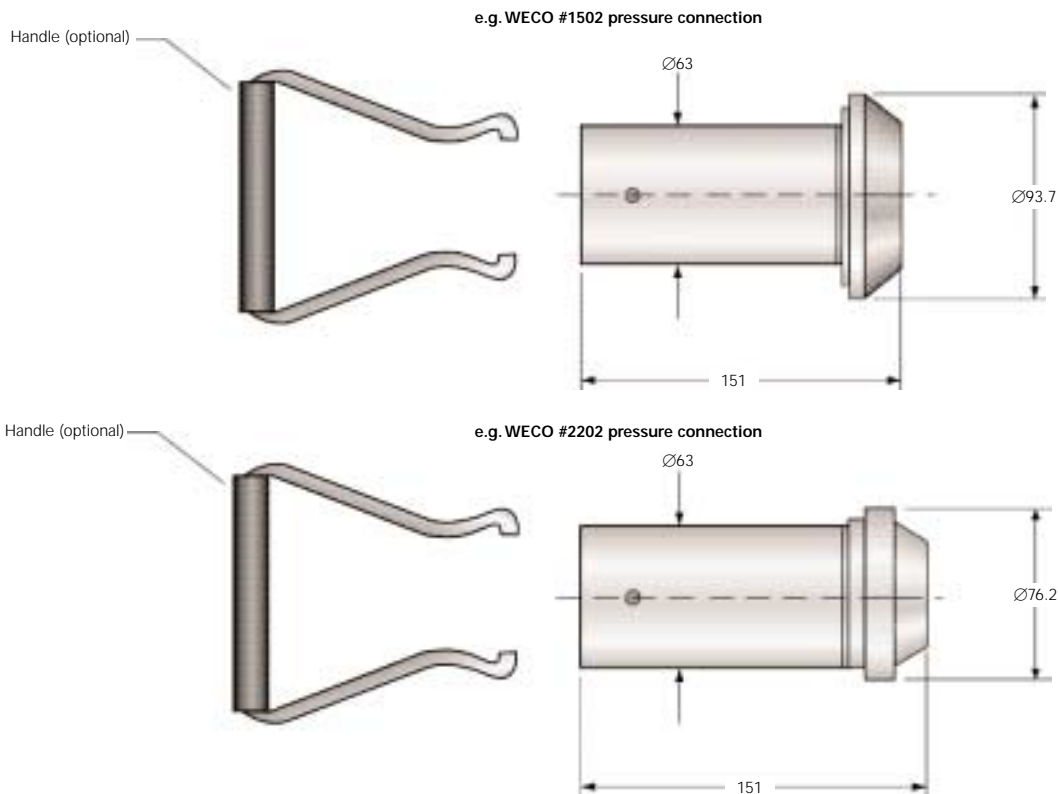
RELATED PRODUCTS

Druck manufacture a wide range of pressure sensors, portable field calibrators, deadweight testers, pressure controllers/calibrators and indicators. A selection of these products is shown below. Please contact Druck for further information and datasheets.



Continuing development sometimes necessitates specification changes without notice.

INSTALLATION DRAWINGS - Dimensions in mm



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