

GE
Measurement & Control

PTX661-8547 PTX661-8593

Druck Hammer Union Pressure Transmitter

Features

- $\pm 0.1\%$ full scale (FS) accuracy
- NACE compatible
- Intrinsically safe certified — ATEX, IECEx, NEPSI and FM Approved (United States and Canada)
- CE marked
- Fast response time (2 kHz)
- Repairable



GE imagination at work

The PTX 661 hammer union pressure transmitter has been designed for use in extremely harsh environments in both on-shore and off-shore Oil Drilling operations where high shock and vibration is likely to be encountered. The transmitter is available in both the 1502 and 2202 WECO® wing union configurations, both of which are NACE sour gas compatible.

The PTX 661 differs from other hammer union pressure transmitters in that it has a replaceable pressure transmitter insert PTX 721-8518 which substantially reduces the cost of total transmitter replacement. With a 2 kHz response time, the device is suitable for measuring static and dynamic mud pressure.

The PTX 661 incorporates Druck's proprietary high-accuracy silicon sensor with up to 2.5 times better accuracy than many competitive devices. The low-volume oil-fill technology allows response times of faster than 2 kHz. The field-proven 4 to 20 mA electronics, packaged in a rugged enclosure, provide power supply regulation, reverse polarity, overvoltage and EMC protection. The fully encapsulated design provides exceptional reliability in high shock and vibration environments.

The PTX 661 is ATEX, IECEx, NEPSI and FM Approved (United States and Canada) intrinsically safe certified.

PTX 661 Specifications

Operating Pressure Ranges (FS)

0 to 5000, 6000, 10,000 and 15,000 psi sg
0 to 200 and 500 bar sg (PTX 661 - * - 8547 only)
Other ranges and absolute versions available on request.

Overpressure

1.5x FS to a maximum of 20,000 psi (1380 bar)

Pressure Containment

2x FS to a maximum of 20,000 psi (1380 bar) maximum

Pressure Media

Fluids compatible with stainless steel 316L, Inconel X750 and Inconel 625 (All NACE MR - 0175 compatible)

Supply Voltage

10 to 28 VDC

The minimum supply voltage (V_{min}) that must appear across the transmitter terminals is 10 VDC. Therefore the minimum voltage (V_s) required due to loop resistance (R_L) is calculated as:

$$V_s = V_{min} + (0.02 \times R_L)$$

Output Current

4 to 20 mA (Two-wire configuration)

Zero Setting

±1% FS @ 75°F (23°C)

Span Setting

±0.5% FS @ 75°F (23°C)

Combined Non-linearity, Hysteresis and Repeatability

±0.1% FS best straight line (BSL)

Temperature Effects

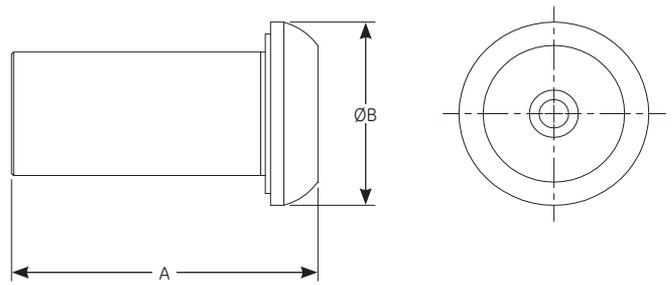
Temperature Error Band (TEB): ±1% over the compensated range

Temperature Limits

- Process: -40°F to +250°F (-40°C to +120°C)
- Operating: -40°F to +250°F (-40°C to +120°C)
- Storage: -65°F to +300°F (-54°C to +150°C)
- Compensated: -4°F to +176°F (-20°C to +80°C)
- Hazardous Area: see Safety Classifications

Weight

6 lb (2.72 kg) nominal



PTX 661 installation drawing

Response Time

Faster than 0.5 msec. (2 kHz)

Pressure Connection

| Pressure Connection | Dimension A | Dimension B |
|-----------------------|------------------|-------------------|
| WECO Wing Union #1502 | 5.94 in (151 mm) | 3.69 in (93.7 mm) |
| WECO Wing Union #2202 | 6.18 in (157 mm) | 3 in (76.2 mm) |

Ingress Protection

Type 4X, IP66

Safety Classifications

- CE marked
- Baseefa ATEX, IECEx and NEPSI intrinsically safe for 'Ga Ex ia IIC T4 (-40°C ≤ Ta ≤ +80°C)' hazardous locations. Certificates Baseefa02ATEX0235X and IECEx BAS 08.0040X and GYJ13.1091X
PTX 661-85** is type 'PTX Ex-0129/D A1'
PTX 721-8518 is type 'PTX Ex-0129/D'
- FM Approved (United States and Canada) intrinsically safe for 'Class I, Division 1, Groups A, B, C, D Exia' and 'Class I, Zone 0 AEx/Ex ia IIC Ga' hazardous locations rated 'T4 (-40°C ≤ Ta ≤ +80°C)'. Certificates 3044243 and 3044243C.

Electrical Connection

- 10-pin LEMO connector (EGG-4K-310)
- 6-pin bayonet connector (MIL-C-26482 size 10)
- 4-pin bayonet connector (MIL-C-5015 size 14S-2S)
- 5-pin bayonet connector (MIL-C-26482 size 14)
- 6-pin TURCK connector (RSFVL-66)
- 4-pin TURCK connector (RSFVL-46)

Options

- Carrying handle P/N: XA2448-1-01

Accessories

- Insertion/extraction tool P/N: F2186-1
- Replaceable pressure transmitter insert
P/N: PTX 721-8518 (state range)

