



# PTX661-8547

# PTX661-8593

## Druck hammer union pressure transmitter

### Introduction

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.

### Features

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

## 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)

### Pressure media

Fluids compatible with stainless steel 316L, Inconel X750 and Inconel 625 (All NACE MR0175 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

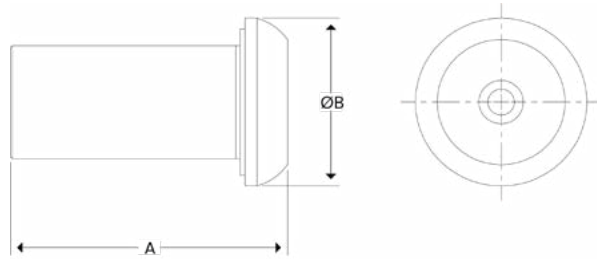
±0.1% FS best straight line (BSL)

### Temperature effects

Temperature Error Band (TEB): ±1% FS 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



PTX661 installation drawing

### Weight

6 lb (2.72 kg) nominal

### 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

- UKCA and 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 GYJ23.1326X  
 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)

### Options

Carrying handle P/N: XA2448-1-01

### Accessories

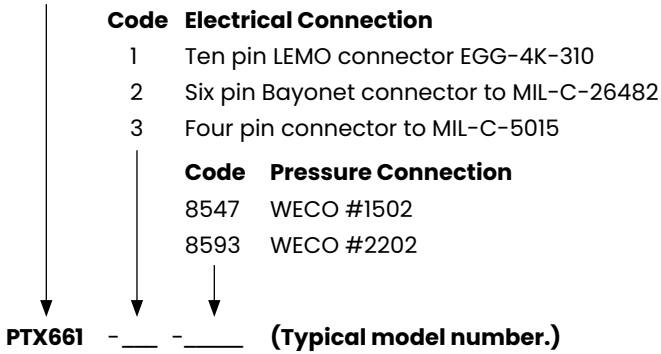
- Insertion/extraction tool P/N: F2186-1
- Replaceable pressure transmitter insert  
 P/N: PTX 721-8518 (state range)

## Ordering Information

### Please state the following:

1. Type PTX 661-\* -85\*\* (see below)
2. Operating pressure range (sealed gauge)
3. Options (if required)

#### PTX 661



PTX661-*	Backend Description	Generic P/N or Description	Electrical Connections		Mating Connector (See note 1)
			PIN		
1	10 Pin LEMO Connector	LEMO P/N EGG-4K310CLL	5	+ve	LEMO FGG-4K310CLA (Straight Plug)
			6	-ve	
			2		Connector generally to MIL-C-26482
			B	-ve	MIL SPEC - MS3116E106SN
3	4 Pin Bayonet Connector	Connector generally to MIL-C-5015			AMPHENOL
			B	+ve	Straight - MS3106E-14S2S
			C	-ve	90 degree - MS3108E-14S2S

Note 1 - Mating connector: Not supplied. Part numbers given for guidance only. It is advised that the customer ascertains the suitability of mating connectors for the intended application and purchases accordingly.