

# Cerabar PMP71B - pressure transmitter

Smart pressure transmitter - its health can be verified without process interruption



## Benefits:

- With Heartbeat Technology you are able to verify the health of the device while the process is running.
- Simple indication of device status - display changes from green to red when diagnostic messages occur
- Reduce systematic failures - error free SIL commissioning and instrument guided proof testing
- Wireless control of the device in the process area with the SmartBlue App

## Specs at a glance

- **Accuracy** Standard: up to 0.05 % Platinum: up to 0.025 %
- **Process temperature** Standard: -40°C...+125°C (-40°F...+257°F)  
Diaphragm seal: -40°C...+400°C (-40°F...+752°F)
- **Pressure measuring range** 400 mbar...700 bar (1.5 psi...10,500 psi)
- **Main wetted parts** 316L, AlloyC, Tantal, Monel, PTFE, Gold
- **Material process membrane** 316L, AlloyC, Tantal, Monel, PTFE, Gold

**Field of application:** This transmitter belongs to the new Cerabar generation. The transmitter is robust and can be remotely controlled via app on a mobile device using a secure Bluetooth connection. The software is designed to simplify the handling. Intuitive wizards guide the user through setup, proof tests and verification of the device. Heartbeat Technology offers verification and monitoring functions to detect unwanted anomalies e.g. changes in loop characteristics.

## Features and specifications

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## Pressure

### Measuring principle

Absolute and gauge pressure

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### Characteristic

Pressure transmitter with metallic process diaphragm.  
Available with diaphragm seals.  
Device health verification without process interruptions.  
Intuitive and clear wizards for commissioning, proof tests and verification.

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### Supply voltage

4...20 mA HART  
Ex d, Ex e, non-Ex:  
10.5...35V DC :  
Ex i: 10.5...30V DC

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### Reference Accuracy

Standard:  
up to 0.05 %  
Platinum:  
up to 0.025 %

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### Long term stability

0.05 % of URL/ year  
0.07 % of URL/ 5 years  
0.10 % of URL/ 10 years

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### Process temperature

Standard:  
-40°C...+125°C  
(-40°F...+257°F)  
Diaphragm seal:  
-70°C...+400°C  
(-94°F...+752°F)

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### Ambient temperature

-60°C...+80°C  
(-76°F...+185°F)

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**Pressure****Measuring cell**

400 mbar...700 bar  
(6 psi...10,500 psi)

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**Smallest calibratable span**

5 mbar (0.075 psi)

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**Vacuum resistance**

5 mbar (0.725 psi)

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**Max. Turn down**

100:1

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**Max. overpressure limit**

2,800 bar (40,600 psi)

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**Process connection**

Thread:

G1/2...G2, R1/2, MNPT3/4...MNPT2,  
FNPT1/2, R1/2

Flange:

DN25...DN100,  
NPS 1"...4"

Pancake: 2"...4", DN50...DN100

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**Material process membrane**

316L, AlloyC,  
Tantal, Monel,  
PTFE,  
Gold

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**Material gasket**

PTFE

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**Fill fluid**

Silicone oil, Inert oil,  
Vegetable oil,  
High/ low temperature oil

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**Pressure****Material housing**

Aluminium,  
316L

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**Communication**

4...20 mA HART  
PROFINET with Ethernet-APL  
Bluetooth® wireless  
technology and app (optional)

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**Certificates / Approvals**

ATEX, CSA, IECEx, JPN Ex, INMETRO, NEPSI, UK Ex

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**Safety approvals**

SIL

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**Design approvals**

EN10204-3.1,  
NACE MR0103,  
NACE MR0175

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**Marine approvals**

Marine approvals

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**Drinking water approvals**

NSF

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**Specialities**

Heartbeat Technology,  
Bluetooth® Operation and maintenance SmartBlue App,  
LED Module,  
RFID TAG for easy identification,  
Plug and play functionalities,  
HistoROM

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**Continuous / Liquids****Measuring principle**

Absolute and gauge pressure

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## Continuous / Liquids

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### Characteristic / Application

Pressure transmitter with metallic process diaphragm.  
Available with diaphragm seals.  
Device health verification without process interruptions.  
Intuitive and clear wizards for commissioning, proof tests and verification.

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### Specialities

Heartbeat Technology,  
Bluetooth® Operation and maintenance SmartBlue App,  
LED Module,  
RFID TAG for easy identification,  
Plug and play functionalities,  
HistoROM

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### Supply / Communication

Ex d, Ex e, non-Ex:  
10.5...35V DC  
Ex i: 10.5...30V DC

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### Accuracy

Standard:  
up to 0.05 %  
Platinum:  
up to 0.025 %

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### Long term stability

0.05 % of URL/ year  
0.07 % of URL/ 5 years  
0.10 % of URL/ 10 years

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### Ambient temperature

-60°C...+80°C  
(-76°F...+185°F)

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**Continuous / Liquids****Process temperature**

Standard:

-40°C...+125°C

(-40°F...+257°F)

Diaphragm seal:

-40°C...+400°C

(-40°F...+752°F)

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**Process pressure / max. overpressure limit**

700 bar

(10,500 psi)

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**Pressure measuring range**

400 mbar...700 bar

(1.5 psi...10,500 psi)

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**Main wetted parts**

316L, AlloyC,

Tantal, Monel,

PTFE, Gold

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**Process connection**

Thread:

G1/2...G2, R1/2, MNPT3/4...MNPT2,

FNPT1/2, R1/2

Flange:

DN25...DN100,

NPS 1"...4"

Pancake: 2"...4", DN50...DN100

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**Max. measurement distance**7000 m (22,966 ft) H<sub>2</sub>O

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**Communication**

4...20 mA HART

PROFINET with Ethernet-APL

Bluetooth® wireless

technology and app (optional)

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## Continuous / Liquids

### Certificates / Approvals

ATEX, IEC Ex, CSA C/US, NEPSI

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### Safety approvals

SIL

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### Design approvals

EN 10204-3.1  
NACE MR0175,  
NACE MR0103

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### Marine approval

Marine approval

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### Drinking water approvals

NSF

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### Metrological approvals and certificates

MID

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### Options

Touch control display  
Diaphragm seal

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### Application limits

Measuring cell: Metal  
welded  
If pressurized, possibly  
use differential pressure  
measurement with two  
pressure transmitters  
(electronic dp). Observe  
ratio head pressure:  
hydrostatic pressure

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