

Cerabar PMP71B - pressure transmitter

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



More information and current pricing:

www.us.endress.com/PMP71B

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

Pressure

Measuring principle

Absolute and gauge pressure

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.

Supply voltage

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

Reference Accuracy

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

Long term stability

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

Process temperature

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

Ambient temperature

-60°C...+80°C
(-76°F...+185°F)

Pressure

Measuring cell

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

Smallest calibratable span

5 mbar (0.075 psi)

Vacuum resistance

Standard: 10 mbar (0.145 psi)
Diaphragm seal: 50 mbar (0.725 psi)

Max. Turn down

100:1

Max. overpressure limit

1,050 bar (15,750 psi)

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

Material process membrane

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

Material gasket

PTFE

Fill fluid

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

Pressure

Material housing

Aluminium,
316L

Communication

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

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

EN10204-3.1,
NACE MR0103,
NACE MR0175

Marine approvals

Marine approvals

Drinking water approvals

NSF

Specialities

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

Continuous / Liquids

Measuring principle

Absolute and gauge pressure

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.

Specialities

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

Supply / Communication

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

Accuracy

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

Long term stability

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

Ambient temperature

-60°C...+80°C
(-76°F...+185°F)

Continuous / Liquids**Process temperature**

Standard:

-40°C...+125°C

(-40°F...+257°F)

Diaphragm seal:

-40°C...+400°C

(-40°F...+752°F)

Process pressure / max. overpressure limit

700 bar

(10,500 psi)

Pressure measuring range

400 mbar...700 bar

(1.5 psi...10,500 psi)

Main wetted parts

316L, AlloyC,

Tantal, Monel,

PTFE, Gold

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

Max. measurement distance7000 m (22,966 ft) H₂O

Continuous / Liquids

Communication

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

Certificates / Approvals

ATEX, IEC Ex, CSA C/US, NEPSI

Safety approvals

SIL

Design approvals

EN 10204-3.1
NACE MR0175,
NACE MR0103

Marine approval

Marine approval

Drinking water approvals

NSF

Metrological approvals and certificates

MID

Options

Touch control display
Diaphragm seal

Continuous / Liquids

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

More information www.us.endress.com/PMP71B