

Cerabar PMC51B - pressure transmitter

Smart transmitter with ceramic membrane for highly accurate measurement of liquids and gases



F L E X

More information and current pricing:

www.ch.endress.com/PMC51B

Benefits:

- Wireless control of the device in the process area with the SmartBlue App. Process interruption is not necessary.
- Reduce systematic failures - error free SIL commissioning and instrument guided proof testing
- Reduce on site accidents and protect equipment when instruments are in difficult to reach areas

Specs at a glance

- **Accuracy** Standard: up to 0.075 % Platinum: up to 0.055 %
- **Process temperature** -40°C...+100°C (-40°F...+212°F)
- **Pressure measuring range** 100 mbar...40 bar (1.5 psi...600 psi)
- **Main wetted parts** Ceraphire ceramic FKM, EPDM, HNBR, Perlast, Kalrez
- **Material process membrane** Ceramic

Field of application: This transmitter belongs to the new Cerabar generation. It combines robustness with numerous benefits: e.g. easiest local or remote operation and condition-based maintenance. The software is designed to simplify the handling. Intuitive wizards guide you through the commissioning and proof testing of the device which minimizes operating errors. The transmitter can be remotely controlled via app on a mobile device and a secure Bluetooth connection.

Features and specifications

Continuous / Liquids

Measuring principle

Absolute and gauge pressure

Continuous / Liquids

Characteristic / Application

Pressure transmitter with ceramic process membran for accurate measurement in liquid or gases.
Intuitive and clear wizard for commissioning

Specialities

Bluetooth® Operation and maintenance SmartBlue App,
RFID TAG for easy identification,
Plug and play functionalities

Supply / Communication

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

Accuracy

Standard:
up to 0.075 %
Platinum:
up to 0.055 %

Long term stability

0.10 % of URL/ year
0.25 % of URL/ 5 years
0.40 % of URL/ 10 years

Ambient temperature

-40°C...+85°C
(-40°F...+185°F)

Process temperature

-40°C...+100°C
(-40°F...+212°F)

Process pressure absolute / max. overpressure limit

40 bar (600 psi)

Continuous / Liquids**Pressure measuring range**

100 mbar...40 bar
(1.5 psi...600 psi)

Main wetted parts

Ceraphire ceramic
FKM, EPDM, HNBR,
Perlast, Kalrez

Process connection

Thread:
G1/2...G2, R1/2, MNPT1/2...MNPT2, FNPT1/2
Flange:
DN25...DN80,
NPS 1"...4"

Max. measurement distance

400 m (1312 ft) H₂O

Communication

4...20 mA,
4...20 mA HART

Certificates / Approvals

ATEX, IEC Ex, CSA C/US, NEPSI

Safety approvals

SIL

Design approvals

EN 10204-3.1
NACE MR0175,
NACE MR0103

Drinking water approvals

NSF, KTW

Continuous / Liquids

Application limits

Measuring cell: ceramics

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

Pressure

Measuring principle

Absolute and gauge pressure

Characteristic

Pressure transmitter with ceramic process membran for accurate measurement in liquid or gases.

Intuitive and clear wizard for commissioning

Supply voltage

Ex d, Ex e, non-Ex:

10.5...35V DC

Ex i: 10.5...30V DC

Reference Accuracy

Standard:

up to 0.075 %

Platinum:

up to 0.055 %

Long term stability

0.10% of URL/ year

0.25% of URL/ 5 years

0.40% of URL/ 10 years

Process temperature

-40°C...+100°C

(-40°F...+212°F)

Ambient temperature

-40°C...+85°C

(-40°F...+185°F)

Pressure**Measuring cell**

100 mbar...40 bar
(1.5 psi...600 psi)

Smallest calibratable span

5 mbar (0.075 psi)

Vacuum resistance

up to 100°C (212°F)

Max. Turn down

100:1

Max. overpressure limit

60 bar (900 psi)

Process connection

Thread:

G1/2...G2, R1/2, MNPT1/2...MNPT2,
FNPT1/2

Flange:

DN25...DN80,
NPS 1"...4"

Material process membrane

Ceramic

Material gasket

FKM, EPDM, HNBR, FFKM

Fill fluid

none, dry measuring cell

Material housing

Aluminium

Communication

4...20 mA,
4...20 mA HART

Pressure

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