

Cerabar PMC51B - pressure transmitter

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



More information and current pricing:

www.ca.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

Pressure

Measuring principle

Absolute and gauge pressure

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)

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)

Pressure**Max. Turn down**100:1

Max. overpressure limit60 bar (900 psi)

Process connection

Thread:

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

FNPT1/2

Flange:

DN25...DN80,

NPS 1"...4"

Material process membraneCeramic

Material gasketFKM, EPDM, HNBR, FFKM

Fill fluidnone, dry measuring cell

Material housingAluminium

Communication

4...20 mA,

4...20 mA HART

Certificates / ApprovalsATEX, IEC Ex, CSA C/US, NEPSI

Safety approvalsSIL

Pressure**Design approvals**

EN10204-3.1
NACE MR0175,
NACE MR0103

Drinking water approvals

NSF, KTW

Specialities

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

Continuous / Liquids**Measuring principle**

Absolute and gauge pressure

Characteristic / Application

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Specialities

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Supply / Communication

Ex d, Ex e, non-Ex::
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Accuracy

Standard:
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Continuous / Liquids**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)

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 distance400 m (1312 ft) H₂O

Communication

4...20 mA,

4...20 mA HART

Continuous / Liquids

Certificates / Approvals

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Safety approvals

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Application limits

Measuring cell: ceramics

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

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