

## Cerabar PMC51B - pressure transmitter

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



More information and current pricing:

[www.my.endress.com/PMC51B](http://www.my.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

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## Pressure

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### Characteristic

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

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### Supply voltage

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 0.075 %  
Platinum:  
up to 0.055 %

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### Long term stability

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

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### Process temperature

-40°C...+100°C  
(-40°F...+212°F)

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### Ambient temperature

-40°C...+85°C  
(-40°F...+185°F)

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### Measuring cell

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

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### Smallest calibratable span

5 mbar (0.075 psi)

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### Vacuum resistance

up to 100°C (212°F)

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

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**Max. overpressure limit**60 bar (900 psi)

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**Process connection**

Thread:

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

FNPT1/2

Flange:

DN25...DN80,

NPS 1"...4"

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**Material process membrane**Ceramic

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**Material gasket**FKM, EPDM, HNBR, FFKM

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**Fill fluid**none, dry measuring cell

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**Material housing**Aluminium

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**Communication**

4...20 mA,

4...20 mA HART

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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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**Pressure****Design approvals**

EN10204-3.1  
NACE MR0175,  
NACE MR0103

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**Drinking water approvals**

NSF, KTW

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**Specialities**

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

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

Absolute and gauge pressure

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**Characteristic / Application**

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

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**Specialities**

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

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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 0.075 %  
Platinum:  
up to 0.055 %

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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

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**Ambient temperature**

-40°C...+85°C  
(-40°F...+185°F)

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**Process temperature**

-40°C...+100°C  
(-40°F...+212°F)

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**Process pressure / max. overpressure limit**

40 bar (600 psi)

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**Pressure measuring range**

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

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**Main wetted parts**

Ceraphire ceramic  
FKM, EPDM, HNBR,  
Perlast, Kalrez

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**Process connection**

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

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**Max. measurement distance**

400 m (1312 ft) H<sub>2</sub>O

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**Communication**

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

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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,  
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**Drinking water approvals**

NSF, KTW

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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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