

## Cerabar PMC51B - pressure transmitter

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



More information and current pricing:

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

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## Continuous / Liquids

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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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### 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 absolute / max. overpressure limit

40 bar (600 psi)

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## Continuous / Liquids

### 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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### 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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### Drinking water approvals

NSF, KTW

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## 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

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## Pressure

### Measuring principle

Absolute and gauge 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 %

---

### 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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## Pressure

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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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### 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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## Pressure

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