

# Absolute and gauge pressure Cerabar PMC71

Digital pressure transmitter with oil-free ceramic sensor for measurement in gases or liquids



F L E X

## Benefits:

- Best fit for vacuum applications and applications with corrosive and abrasive media
- Process safety through membrane breakage detection
- Overload-resistant high purity ceramic sensor (99.9% Al<sub>2</sub>O<sub>3</sub>)
- HistoROM data management concept for fast and easy commissioning, maintenance and diagnostics
- Easy menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- Highest safety due to gastight feedthrough with capabilities up to SIL2/3, certified to IEC 61508
- Available with mounted manifolds: always fit, always tested for leaks

More information and current pricing:

[www.be.endress.com/PMC71](http://www.be.endress.com/PMC71)

## Specs at a glance

- **Accuracy** Standard: 0.05% Platinum: up to 0.025%
- **Process temperature** -40°C...150°C (-40°F...302°F)
- **Pressure measuring range** 100mbar...40bar (1.5psi...600psi)
- **Process pressure / max. overpressure limit** 60bar (900psi)
- **Main wetted parts** Ceraphire ceramic Alloy C 316L Monel PVDF

**Field of application:** The Cerabar PMC71 digital pressure transmitter with capacitive, oil-free ceramic measuring cell is typically used in the process and hygienic applications for pressure, level, volume or mass measurement in liquids and gases. It guarantees high degree of system safety thanks to vacuum-proof ceramic membrane with integrated breakage detection. Quick Setup with adjustable measuring range allows

simple commissioning, reduces costs and saves time. SIL2/3 according to IEC 61508.

## Features and specifications

### Pressure

#### Measuring principle

Absolute and gauge pressure

#### Characteristic

Digital transmitter with capacitive sensor and ceramic membrane

Modular transmitter

Long term stability

Enhanced safety via self diagnostic functions

Secondary process barrier

#### Supply voltage

4...20 mA HART

10,5...45V DC (Non Ex):

Ex ia: 10,5...30V DC

PROFIBUS PA:

9...32 V DC (Non Ex)

FOUNDATION Fieldbus:

9...32 V DC (Non Ex)

#### Reference Accuracy

Standard: 0.05%

Platinum: up to 0.025%

#### Long term stability

0.05 % of URL/ year

0.08 % of URL/ 5 years

0.1 % of URL/ 10 years

#### Process temperature

-20°C...150°C

(-4°F...257°F)

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**Pressure****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)  
relative/ absolute

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**Smallest calibratable span**

5 mbar (0.075 psi)

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**Vacuum resistance**

0 mbar abs.

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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  
Flange:  
DN25...DN80,  
ASME 1"...4",  
JIS 10K

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**Process connection hygienic**

Tri-Clamp  
DIN11851  
Varivent N  
SMS  
DRD

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**Material process membrane**

Ceramic

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**Pressure****Material gasket**

Viton, EPDM, Chemraz, Kalrez, NBR

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**Fill fluid**

none, dry measuring cell

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**Material housing**

Die-cast aluminum,  
AISI 316L

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**Communication**

4...20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

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**Certificates / Approvals**

ATEX, FM, CSA, CSA C/US, IEC Ex, JPN Ex, INMETRO, NEPSI, EAC, UK  
Ex

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**Design approvals**

EN10204-3.1

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**Hygienic approvals**

3A, EHEDG

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**Marine approvals**

GL/ ABS

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**Drinking water approvals**

NSF

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**Specialities**

Diagnostic functions

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**Successor**

PMC71B

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## Continuous / Liquids

### Measuring principle

Absolute and gauge pressure

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### Characteristic / Application

Digital transmitter with capacitive sensor and ceramic membrane

Modular transmitter

Long term stability

Enhanced safety via self diagnostic functions

Secondary process barrier

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### Specialities

diagnostic functionalities

different languages in software

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### Supply / Communication

4...20mA HART:

10,5...45V DC

Ex ia: 10,5...30V DC

PROFIBUS PA /

FOUNDATION Fieldbus:

9...32V DC

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### Accuracy

Standard: 0.05%

Platinum: up to 0.025%

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### Long term stability

0,05% of URL/year

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### Ambient temperature

-40°C...85°C

(-40°F...185°F)

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### Process temperature

-40°C...150°C

(-40°F...302°F)

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**Continuous / Liquids****Process pressure / max. overpressure limit**60bar (900psi)

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**Pressure measuring range**

100mbar...40bar

(1.5psi...600psi)

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**Main wetted parts**

Ceraphire ceramic

Alloy C

316L

Monel

PVDF

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**Process connection**

Threads

Flanges

Tri-Clamp ISO2852

Hygienic connections

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**Max. measurement distance**400m (1312ft) H2O

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**Communication**

4 ... 20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

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**Certificates / Approvals**ATEX, FM, CSA C/US, IEC Ex, JPN Ex, INMETRO, NEPSI, EAC

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**Design approvals**EN 10204-3.1

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**Marine approval**GL/ ABS

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**Drinking water approvals**NSF

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## Continuous / Liquids

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### Options

HistoROM/M-Dat  
4-line digital display  
SS- or Aluminiumhousing  
Separate housing

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### Successor

PMC71B

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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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More information [www.be.endress.com/PMC71](http://www.be.endress.com/PMC71)