

# Absolute and gauge pressure Cerabar PMP71

Digital pressure transmitter with welded metal sensor for measurement in gases, steam or liquids



More information and current pricing:

[www.be.endress.com/PMP71](http://www.be.endress.com/PMP71)

## Benefits:

- Best accuracy, reproducibility and long-term stability
- Highest safety due to gas tight feedthrough with capabilities up to SIL2/3, certified to IEC 61508
- Easy menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- HistoROM data management concept for fast and easy commissioning, maintenance and diagnostics
- Overload-resistant and function-monitored from the measuring cell to the electronics
- Available with mounted manifolds: always fit, always tested for leaks
- Seamless and independent system integration (HART/PA/FF)

## Specs at a glance

- **Accuracy** Standard: 0.05% Platinum: up to 0.025%
- **Process temperature** -40°C...125°C (-40°F...257°F)
- **Pressure measuring range** 100mbar...700bar (1.5psi...10.500psi)
- **Main wetted parts** Alloy C276 316L Rhodium
- **Material process membrane** 316L, AlloyC, Rhodium > Gold

**Field of application:** The Cerabar PMP71 digital pressure transmitter with metallic membrane is typically used in process applications for pressure, level, volume or mass measurement in liquids or gases. PMP71 is designed for high pressure applications up to 700bar. Quick Setup with freely adjustable measuring range without pressure specification. Designed according to IEC 61508 for use in SIL2/3 safety systems and

available with MID Parts Certificate suitable for custody transfer applications.

## Features and specifications

### Pressure

#### Measuring principle

Absolute and gauge pressure

#### Characteristic

Digital transmitter with piezoresistive sensor and welded metallic 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

0.07 % of URL/ 5 years

0.1 % of URL/ 10 years

#### Process temperature

-40°C...125°C

(-40°F...257°F)

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**Pressure****Ambient temperature**

-50°C...85°C  
(-58°F...185°F)

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**Measuring cell**

100 mbar...700 bar  
(1.5 psi...10.500 psi)  
relative/ absolute

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**Smallest calibratable span**

5 mbar (0.075 psi)

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**Vacuum resistance**

10 mbar (0.15 psi)

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**Max. Turn down**

100:1

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**Max. overpressure limit**

1050 bar (15.750 psi)

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**Process connection**

Thread:

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

Flange:

DN25...DN80,

ASME 1"...4",

JIS 10K...20K

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**Material process membrane**

316L, AlloyC,  
Rhodium > Gold

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**Material gasket**

None, measuring cell welded

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**Fill fluid**

Silicone oil,  
Inert oil

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## Pressure

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### Material housing

Die-cast aluminum,  
AISI 316L

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### Communication

4...20 mA HART  
1- 5V DC Low Power  
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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### Safety approvals

SIL

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### Design approvals

EN10204-3.1  
NACE MR0175

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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

PMP71B

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## Continuous / Liquids

### Measuring principle

Absolute and gauge pressure

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**Continuous / Liquids****Characteristic / Application**

Digital transmitter with piezoresistive sensor and welded metallic 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**

-50°C...85°C

(-58°F...185°F)

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**Process temperature**

-40°C...125°C

(-40°F...257°F)

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**Process pressure / max. overpressure limit**

1050bar (15,750psi)

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**Continuous / Liquids****Pressure measuring range**

100mbar...700bar  
(1.5psi...10.500psi)

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**Main wetted parts**

Alloy C276  
316L  
Rhodium

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**Process connection**

Threads  
Flanges (DIN, ASME, ...) with flush membrane

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**Max. measurement distance**

7000m (22.966ft) H2O

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**Communication**

4...20 mA HART  
1- 5V DC Low Power  
PROFIBUS PA  
FOUNDATION Fieldbus

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**Certificates / Approvals**

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

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**Safety approvals**

SIL

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**Design approvals**

EN 10204-3.1  
NACE MR0175, MR0103

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**Marine approval**

GL/ ABS

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**Drinking water approvals**

NSF

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## Continuous / Liquids

### Options

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

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### Successor

PMP71B

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### Application limits

Measuring cell: Metal  
welded  
If pressurized, possibly  
use differential pressure  
meas-urement with two  
pressure transmitters  
(electronic dp). Observe  
ratio head pressure :  
hydrostatic pressure

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More information [www.be.endress.com/PMP71](http://www.be.endress.com/PMP71)