

Absolute and gauge pressure Cerabar PMP71

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



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)

More information and current pricing:

www.apsc.endress.com/PMP71

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

Continuous / Liquids

Measuring principle

Absolute and gauge pressure

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

Specialities

diagnostic functionalities

different languages in software

Supply / Communication

4...20mA HART:

10,5...45V DC

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

PROFIBUS PA /

FOUNDATION Fieldbus:

9...32V DC

Accuracy

Standard: 0.05%

Platinum: up to 0.025%

Long term stability

0,05% of URL/year

Ambient temperature

-50°C...85°C

(-58°F...185°F)

Continuous / Liquids**Process temperature**

-40°C...125°C
(-40°F...257°F)

Process pressure absolute / max. overpressure limit

1050bar (15,750psi)

Pressure measuring range

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

Main wetted parts

Alloy C276
316L
Rhodium

Process connection

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

Max. measurement distance

7000m (22.966ft) H2O

Communication

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

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

EN 10204-3.1
NACE MR0175, MR0103

Continuous / Liquids

Marine approvalGL/ ABS

Drinking water approvalsNSF

Options

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

SuccessorPMP71B

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

Pressure

Measuring principleAbsolute 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

Pressure**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)

Ambient temperature

-50°C...85°C
(-58°F...185°F)

Measuring cell

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

Smallest calibratable span

5 mbar (0.075 psi)

Vacuum resistance

10 mbar (0.15 psi)

Max. Turn down

100:1

Pressure

Max. overpressure limit

1050 bar (15.750 psi)

Process connection

Thread:

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

Flange:

DN25...DN80,

ASME 1"...4",

JIS 10K...20K

Material process membrane

316L, AlloyC,

Rhodium > Gold

Material gasket

None, measuring cell welded

Fill fluid

Silicone oil,

Inert oil

Material housing

Die-cast aluminum,

AISI 316L

Communication

4...20 mA HART

1- 5V DC Low Power

PROFIBUS PA

FOUNDATION Fieldbus

Certificates / Approvals

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Safety approvals

SIL

Pressure

Design approvals

EN10204-3.1
NACE MR0175

Marine approvals

GL/ABS

Drinking water approvals

NSF

Specialities

Diagnostic functions

Successor

PMP71B

More information www.apsc.endress.com/PMP71