

Absolute and gauge pressure Cerabar PMP55

Digital pressure transmitter with fully welded diaphragm seal for measurement in gases or liquids



Benefits:

- Large variety of different process connections and membrane materials
- New TempC Membrane minimizes influences of ambient and process temperature fluctuations
- Easy menu-guided commissioning via on-site display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- For process pressure monitoring up to SIL2, certified to IEC 61508 and IEC 61511
- Modular concept for easy replacement of display or electronics
- Seamless and independent system integration (HART/PA/FF)

Specs at a glance

- **Accuracy** Standard 0.15% Platinum 0.075%
- **Process temperature** -70°C...400°C (-94°F...752°F)
- **Pressure measuring range** 1 bar...400 bar (15 psi...6000 psi)
- **Process pressure / max. overpressure limit** 600 bar (9000 psi)
- **Main wetted parts** 316L AlloyC Montel Tantal Rhodium

More information and current pricing:

www.ch.endress.com/PMP55

Field of application: The Cerabar PMP55 digital pressure transmitter with metal diaphragm seal is typically used in process and hygiene applications for pressure, level, volume or mass measurement in liquids. Suitable for high pressure as well as extreme process temperature applications from -70 up to +400°C (-94 to 750°F). Quick Setup with adjustable measuring range allows simple commissioning, reduces costs and saves time. SIL2 according to IEC 61508 and IEC 61511.

Features and specifications

Pressure

Measuring principle

Absolute and gauge pressure

Characteristic

Smart and reliable pressure transmitter, with piezoresistive measuring cell

and metal welded process isolating diaphragm and diaphragm seal.

Supply voltage

4...20 mA HART

11,5...45V DC (Non Ex):

Ex ia: 11,5...30V DC

PROFIBUS PA:

9...32 V DC (Non Ex)

FOUNDATION Fieldbus:

9...32 V DC (Non Ex)

Reference Accuracy

Standard 0.15%

Platinum 0.075%

Long term stability

0.1% of URL/ year

0.2% of URL/ 5 years

0.25% of URL/ 10 years

Process temperature

-70°C...+400°C

(-94°F...+752°F)

Ambient temperature

-40°C...+85°C

(-40°F...+185°F)

Pressure**Measuring cell**

400 mbar...400 bar
(15 psi...6000 psi)
relative/ absolute

Smallest calibratable span

20 mbar (0.3 psi)

Vacuum resistance

50 mbar (0.73 psi)

Max. Turn down

20:1

Max. overpressure limit

600 bar (9000 psi)

Process connection

Thread:

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

Flange:

DN25...DN100,

ASME 1"...4",

JIS 10k

Diaphragm seal

Process connection hygienic

Tri-Clamp

DIN11851

DIN11864-1

NEUMO

Varivent

SMS

DRD

Universal adapter

Pressure**Material process membrane**

316L, AlloyC,
Tantal, PTFE,
Rhodium>Gold

Material gasket

None, diaphragm welded

Fill fluid

Silicone oil,
Inert oil,
Vegetable oil,
High temperature oil,
Low temperature oil,

Material housing

Die-cast aluminum,
AISI 316L

Communication

4...20 mA
4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus
IO-Link

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

EN10204-3.1
NACE MR0103

Hygienic approvals

CoC ASME-BPE
3A, EHEDG

Pressure**Marine approvals**

GL/ ABS/ LR/ BV/ DNV

Specialities

TempC Membrane

SuccessorPMP51B

Continuous / Liquids**Measuring principle**

Absolute and gauge pressure

Characteristic / Application

Smart and reliable pressure transmitter, with piezoresistive measuring cell

and metal welded process isolating diaphragm and diaphragm seal.

Supply / Communication

4 ..20 mA HART:

11,5...45 V DC

Ex ia: 11,5...30 V DC

PROFIBUS PA

FOUNDATION Fieldbus

Accuracy

Standard 0.15%

Platinum 0.075%

Long term stability

< 0,1% von URL/ year

0,2% of URL/ 5 years

0,25% of URL/ 10 years

Continuous / Liquids

Ambient temperature

-40°C...85°C
(-40°F...185°F)

Process temperature

-70°C...400°C
(-94°F...752°F)

Process pressure / max. overpressure limit

600 bar (9000 psi)

Pressure measuring range

1 bar...400 bar
(15 psi...6000 psi)

Main wetted parts

316L
AlloyC
Montel
Tantal
Rhodium

Process connection

Diaphragm seal
Flanges (DIN, ASME, JIS)
Tri-Clamp ISO2852
Hygienic connections

Max. measurement distance

4000m (13.123ft) H2O

Communication

4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus
IO-Link

Certificates / Approvals

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

Continuous / Liquids

Safety approvals

SIL

Design approvals

EN 10204-3.1
NACE MR0175, MR0103
AD2000

Hygienic approvals

3A, EHEDG
CoC ASME-BPE

Marine approval

GL/ ABS/ LR/ BV/ DNV

Options

local display

Successor

PMP51B

Application limits

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

More information www.ch.endress.com/PMP55