

# 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 absolute / max. overpressure limit** 600 bar (9000 psi)
- **Main wetted parts** 316L AlloyC Montel Tantal Rhodium

More information and current pricing:

[www.de.endress.com/PMP55](http://www.de.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

### 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

#### Ambient temperature

-40°C...85°C  
(-40°F...185°F)

#### Process temperature

-70°C...400°C  
(-94°F...752°F)

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**Continuous / Liquids****Process pressure absolute / max. overpressure limit**600 bar (9000 psi)

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**Pressure measuring range**1 bar...400 bar  
(15 psi...6000 psi)

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**Main wetted parts**316L  
AlloyC  
Montel  
Tantal  
Rhodium

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

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**Max. measurement distance**4000m (13.123ft) H2O

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

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

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**Safety approvals**SIL

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**Design approvals**EN 10204-3.1  
NACE MR0175, MR0103  
AD2000

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## Continuous / Liquids

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### Hygienic approvals

3A, EHEDG  
CoC ASME-BPE

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### Marine approval

GL/ ABS/ LR/ BV/ DNV

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### Options

local display

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### Successor

PMP51B

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### 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

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## Pressure

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### Measuring principle

Absolute and gauge pressure

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### Characteristic

Smart and reliable pressure transmitter, with piezoresistive measuring cell  
and metal welded process isolating diaphragm and diaphragm seal.

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### 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)

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**Pressure****Reference Accuracy**

Standard 0.15%  
Platinum 0.075%

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**Long term stability**

0.1% of URL/ year  
0.2% of URL/ 5 years  
0.25% of URL/ 10 years

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**Process temperature**

-70°C...+400°C  
(-94°F...+752°F)

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**Ambient temperature**

-40°C...+85°C  
(-40°F...+185°F)

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**Measuring cell**

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

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**Smallest calibratable span**

20 mbar (0.3 psi)

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**Vacuum resistance**

50 mbar (0.73 psi)

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**Max. Turn down**

20:1

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**Max. overpressure limit**

600 bar (9000 psi)

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**Pressure****Process connection**

Thread:

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

Flange:

DN25...DN100,

ASME 1"...4",

JIS 10k

Diaphragm seal

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**Process connection hygienic**

Tri-Clamp

DIN11851

DIN11864-1

NEUMO

Varivent

SMS

DRD

Universal adapter

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**Material process membrane**

316L, AlloyC,

Tantal, PTFE,

Rhodium&gt;Gold

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**Material gasket**

None, diaphragm welded

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**Fill fluid**

Silicone oil,

Inert oil,

Vegetable oil,

High temperature oil,

Low temperature oil,

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**Material housing**

Die-cast aluminum,

AISI 316L

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**Pressure****Communication**

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

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**Certificates / Approvals**

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

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**Safety approvals**

SIL

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**Design approvals**

EN10204-3.1  
NACE MR0103

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**Hygienic approvals**

CoC ASME-BPE  
3A, EHEDG

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**Marine approvals**

GL/ ABS/ LR/ BV/ DNV

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**Specialities**

TempC Membrane

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**Successor**

PMP51B

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More information [www.de.endress.com/PMP55](http://www.de.endress.com/PMP55)