

# Differential pressure Deltabar PMD55

Differential pressure transmitter with metal sensor for measurement of pressure differences



F L E X

## Benefits:

- Easy menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- Easy process adaptation to impulse line high-pressure/low-pressure change via electric switch on the main electronics
- Compact design and modular concept for easy replacement of display or electronics
- Process pressure up to SIL2, certified to IEC 61508 and IEC 61511
- Global usage thanks to the widest range of approvals for industries and applications

## Specs at a glance

- **Accuracy** 0,1% "PLATINUM" 0,075%
- **Max. measurement error** 0,1% "PLATINUM" 0,075%
- **Process temperature** -40 °C...85 °C (-40 °F...185 °F)
- **Medium temperature range** Temperature gradient from pressure piping
- **Pressure measuring range** 10mbar...40bar (0.15...580psi)

More information and current pricing:

[www.th.endress.com/PMD55](http://www.th.endress.com/PMD55)

**Field of application:** The Deltabar PMD55 differential pressure transmitter with piezoresistive sensor and welded metallic membrane is typically used in process or environmental applications for continuous measurement of pressure differences in liquids, vapors and gases. Quick Setup with adjustable measuring range allows simple commissioning, reduces costs and saves time. SIL2 according to IEC 61508 / IEC 61511.

## Features and specifications

## Liquids

**Measuring principle**

Differential pressure

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**Product headline**

Digital transmitter with metallic measuring diaphragms

Compact size

Modular transmitter

Long-term stability

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**Max. measurement error**

0,1%

"PLATINUM" 0,075%

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**Max. process pressure**

10 mbar...40 bar

(0.15...580 psi)

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**Medium temperature range**

Temperature gradient from pressure piping

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**Display/Operation**

Option

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**Outputs**

4...20mA HART

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**Digital communication**

HART

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**Hazardous area approvals**

ATEX, FM, CSA, IECEx, INMETRO, NEPSI, TIIS

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**Functional safety**

SIL

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**Liquids****Material certificates**

NACE MR0103  
NACE MR0175  
EN10204-3.1

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**Steam****Measuring principle**

Differential pressure

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**Product headline**

Digital transmitter with metallic measuring  
diaphragms  
Compact size  
Modular transmitter  
Long-term stability

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**Max. measurement error**

0,1%  
"PLATINUM" 0,075%

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**Max. process pressure**

10mbar...40bar  
(0.15...580psi)

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**Medium temperature range**

Temperature gradient from pressure piping

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**Display/Operation**

Option

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**Outputs**

4...20mA HART

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**Digital communication**

HART

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**Hazardous area approvals**

ATEX, FM, CSA, IECEx, INMETRO, NEPSI, TIIS

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## Steam

**Functional safety**

SIL

**Material certificates**

NACE MR0103

NACE MR0175

EN10204-3.1

## Pressure

**Measuring principle**

Differential pressure

**Characteristic**

Digital transmitter with metallic measuring diaphragms

Compact size

Modular transmitter

Long-term stability

**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 0.1%

Platinum 0.075%

**Long term stability**

0.05% of URL/ year

0.13% of URL/ 5 years

0.23% of URL/ 10 years

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**Pressure****Process temperature**

-40°C...+85°C  
(-40°F...+185°F)

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**Ambient temperature**

-40°C...+85°C  
(-40°F...+185°F)

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**Measuring cell**

10 mbar...40 bar  
(0.15...580 psi)

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**Smallest calibratable span**

10 mbar (0.15 psi)

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**Max. Turn down**

20:1

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**Max. overpressure limit**

on one side:  
160 bar  
(2300 psi)

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**Process connection**

1/4-18 NPT

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**Material process membrane**

316L, AlloyC,

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**Material gasket**

Viton, PTFE, EPDM, NBR

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**Fill fluid**

Silicone oil  
Inert oil

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**Material housing**

Die-cast aluminum

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**Pressure****Communication**

4...20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

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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**

NACE MR0175  
EN10204-3.1

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**Successor**

PMD55B

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**Gas****Measuring principle**

Differential pressure

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**Product headline**

Digital transmitter with metallic measuring diaphragms  
Compact size  
Modular transmitter  
Long-term stability

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**Max. measurement error**

0,1%  
"PLATINUM" 0,075%

---

**Max. process pressure**

10mbar...40bar  
(0.15...580psi)

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## Gas

**Medium temperature range**

Temperature gradient from pressure piping

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**Display/Operation**

Option

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**Outputs**

4...20mA HART

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**Digital communication**

HART

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**Hazardous area approvals**

ATEX, FM, CSA, IECEx, INMETRO, NEPSI, TIIS

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**Functional safety**

SIL

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**Material certificates**

NACE MR0103

NACE MR0175

EN10204-3.1

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## Continuous / Liquids

**Measuring principle**

Differential pressure

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**Characteristic / Application**

Digital transmitter with metallic measuring diaphragms

Compact size

Modular transmitter

Long-term stability

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**Supply / Communication**

4...20mA HART:

11,5...45V DC

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

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**Continuous / Liquids****Accuracy**

0,1%  
"PLATINUM" 0,075%

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**Long term stability**

0,05% of URL/year  
0,125% of URL/5 years

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**Ambient temperature**

-40°C...85°C  
(-40°F...185°F)

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**Process temperature**

-40 °C...85 °C  
(-40 °F...185 °F)

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**Process pressure absolute / max. overpressure limit**

160 bar

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**Pressure measuring range**

10mbar...40bar  
(0.15...580psi)

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**Main wetted parts**

316L

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**Process connection**

1/4-18 NPT

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**Communication**

4...20mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

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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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## Continuous / Liquids

### Design approvals

EN 10204-3.1

NACE MR0175, MR0103

AD2000

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### Options

4-line digital display

Aluminium housing

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### Successor

PMD55B

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### Application limits

Measuring cell:

Metal welded

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More information [www.th.endress.com/PMD55](http://www.th.endress.com/PMD55)