

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.de.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

Product headline

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

Max. measurement error

0,1%
"PLATINUM" 0,075%

Max. process pressure

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

Medium temperature range

Temperature gradient from pressure piping

Display/Operation

Option

Outputs

4...20mA HART

Digital communication

HART

Hazardous area approvals

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

Functional safety

SIL

Liquids**Material certificates**

NACE MR0103
NACE MR0175
EN10204-3.1

Steam**Measuring principle**

Differential pressure

Product headline

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

Max. measurement error

0,1%
"PLATINUM" 0,075%

Max. process pressure

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

Medium temperature range

Temperature gradient from pressure piping

Display/Operation

Option

Outputs

4...20mA HART

Digital communication

HART

Hazardous area approvals

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

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

Pressure**Process temperature**

-40°C...+85°C
(-40°F...+185°F)

Ambient temperature

-40°C...+85°C
(-40°F...+185°F)

Measuring cell

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

Smallest calibratable span

10 mbar (0.15 psi)

Max. Turn down

20:1

Max. overpressure limit

on one side:
160 bar
(2300 psi)

Process connection

1/4-18 NPT

Material process membrane

316L, AlloyC,

Material gasket

Viton, PTFE, EPDM, NBR

Fill fluid

Silicone oil
Inert oil

Material housing

Die-cast aluminum

Pressure**Communication**

4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

NACE MR0175
EN10204-3.1

Successor

PMD55B

Gas**Measuring principle**

Differential pressure

Product headline

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

Max. measurement error

0,1%
"PLATINUM" 0,075%

Max. process pressure

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

Gas

Medium temperature range

Temperature gradient from pressure piping

Display/Operation

Option

Outputs

4...20mA HART

Digital communication

HART

Hazardous area approvals

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

Functional safety

SIL

Material certificates

NACE MR0103

NACE MR0175

EN10204-3.1

Continuous / Liquids

Measuring principle

Differential pressure

Characteristic / Application

Digital transmitter with metallic measuring diaphragms

Compact size

Modular transmitter

Long-term stability

Supply / Communication

4...20mA HART:

11,5...45V DC

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

Continuous / Liquids**Accuracy**

0,1%
"PLATINUM" 0,075%

Long term stability

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

Ambient temperature

-40°C...85°C
(-40°F...185°F)

Process temperature

-40 °C...85 °C
(-40 °F...185 °F)

Process pressure absolute / max. overpressure limit

160 bar

Pressure measuring range

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

Main wetted parts

316L

Process connection

1/4-18 NPT

Communication

4...20mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Certificates / Approvals

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

Safety approvals

SIL

Continuous / Liquids

Design approvals

EN 10204-3.1
NACE MR0175, MR0103
AD2000

Options

4-line digital display
Aluminium housing

Successor

PMD55B

Application limits

Measuring cell:
Metal welded

More information www.de.endress.com/PMD55