

Differential pressure Deltabar PMD55

Differential pressure transmitter with metal sensor for measurement of pressure differences



More information and current pricing:

www.endress.com/PMD55

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%
- **Process temperature** -40 °C...85 °C (-40 °F...185 °F)
- **Pressure measuring range** 10mbar...40bar (0.15...580psi)
- **Main wetted parts** 316L
- **Material process membrane** 316L, AlloyC,

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

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

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)

Pressure**Smallest calibratable span**10 mbar (0.15 psi)

Max. Turn down20:1

Max. overpressure limit

on one side:

160 bar

(2300 psi)

Process connection1/4-18 NPT

Material process membrane316L, AlloyC,

Material gasketViton, PTFE, EPDM, NBR

Fill fluid

Silicone oil

Inert oil

Material housingDie-cast aluminum

Communication

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

Certificates / Approvals

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

Ex

Safety approvalsSIL

Pressure**Design approvals**

NACE MR0175

EN10204-3.1

SuccessorPMD55B

Continuous / Liquids**Measuring principle**Differential pressure

Characteristic / ApplicationDigital 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

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)

Continuous / Liquids

Process pressure / 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

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

Continuous / Liquids

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 headlineDigital 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 rangeTemperature gradient from pressure piping

Display/OperationOption

Outputs4...20mA HART

Digital communicationHART

Hazardous area approvalsATEX, FM, CSA, IECEx, INMETRO, NEPSI, TIIS

Steam

Functional safety

SIL

Material certificates

NACE MR0103

NACE MR0175

EN10204-3.1

Gas

Measuring principle

Differential pressure

Product headlineDigital 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

Gas

Hazardous area approvals

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

Functional safety

SIL

Material certificates

NACE MR0103

NACE MR0175

EN10204-3.1

More information www.endress.com/PMD55