

Differential pressure Deltabar PMD75

Differential pressure transmitter with metal sensor for measurement of pressure differences



Benefits:

- Best accuracy, reproducibility and long-term stability
- Highest safety due to gas tight feedthrough with capabilities up to SIL2/3, certified to IEC 61508
- Easy menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- HistoROM data management concept for fast and easy commissioning, maintenance and diagnostics
- Cost savings with modular concept for easy replacement of sensor, display or electronics
- Overload-resistant up to 420bar / 42MPa / 6300psi, function-monitored
- Seamless and independent system integration (HART/PA/FF)

More information and current pricing:

www.ca.endress.com/PMD75

Specs at a glance

- **Accuracy** Standard: 0.05% Platinum: up to 0.035%
- **Max. measurement error** 0,075% "PLATINUM" 0,05%
- **Process temperature** -40 °C...85 °C (-40 °F...185 °F)
- **Medium temperature range** Temperature gradient from pressure piping
- **Pressure measuring range** 10 mbar...250 bar (0.15 psi...3750 psi)

Field of application: The Deltabar PMD75 differential pressure transmitter with piezoresistive sensor and welded metallic membrane is used in all industries for continuous measurement in liquids, vapors and gases. The 3-key operation enables simple and reliable commissioning and operation. The integrated HistoROM data module allows easy

management of process and device parameters. Designed according to IEC 61508 for use in SIL2/3 safety applications.

Features and specifications

Pressure

Measuring principle

Differential pressure

Characteristic

Digital transmitter with metallic measuring diaphragms

Modular transmitter

Long-term stability

High static pressure/Overload resistance

Secondary process barrier

Supply voltage

4...20 mA HART

10,5...45V DC (Non Ex):

Ex ia: 10,5...30V DC

PROFIBUS PA:

9...32 V DC (Non Ex)

FOUNDATION Fieldbus:

9...32 V DC (Non Ex)

Reference Accuracy

Standard: 0.05%

Platinum: up to 0.035%

Long term stability

0.03 % of URL/ year

0.05 % of URL/ 5 years

0.08 % of URL/ 10 years

Process temperature

-40°C...85°C

(-40°F...185°F)

Pressure**Ambient temperature**

-50°C...85°C
(-58°F...185°F)

Measuring cell

10 mbar...250 bar
(0.15 psi...3750 psi)

Smallest calibratable span

1 mbar (0.015 psi)

Vacuum resistance

50 mbar (0.73 psi)

Max. Turn down

100:1

Max. overpressure limit

On one side:
420 bar
(6300psi)

Process connection

1/4-18NPT
RC1/4"

Material process membrane

316L, AlloyC,
Tantal,
Gold-Rhodium

Material gasket

Viton, PTFE, EPDM, NBR

Fill fluid

Silicone oil
Inert oil

Pressure**Material housing**316L, Die-cast aluminum

Communication4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Certificates / ApprovalsATEX, FM, CSA, CSA C/US, IEC Ex, INMETRO, NEPSI, EAC, UK
Ex

Safety approvalsSIL

Design approvalsNACE MR0103
EN10204-3.1

Marine approvalsGL/ ABS

SpecialitiesDiagnostic functions

SuccessorPMD75B

Continuous / Liquids**Measuring principle**Differential pressure

Continuous / Liquids**Characteristic / Application**

Digital transmitter with metallic measuring diaphragms
Modular transmitter
Long term stability
High static pressure/Overload resistance
Enhanced safety via self diagnostic functions
Secondary process barrier

Supply / Communication

4...20 mA HART:
10,5...45V DC
Ex ia: 10,5...30V DC
PROFIBUS PA /
FOUNDATION Fieldbus:
9...32V DC

Accuracy

Standard: 0.05%
Platinum: up to 0.035%

Long term stability

0,05% of URL/year

Ambient temperature

-50 °C...85 °C
(-58 °F...185 °F)

Process temperature

-40 °C...85 °C
(-40 °F...185 °F)

Process pressure / max. overpressure limit

420 bar (6300 psi)

Pressure measuring range

10 mbar...250 bar
(0.15 psi...3750 psi)

Continuous / Liquids**Main wetted parts**

Alloy C276
316L
Monel
Tantalum

Process connection

1/4-18NPT
RC1/4"

Max. measurement distance

400 m (1.312 ft) H2O

Communication

4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

EN 10204-3.1
NACE MR0175, MR0103

Marine approval

GL/ ABS

Options

HistoROM/M-Dat
4-line digital display
SS- or Aluminiumhousing
Separate housing

Continuous / Liquids**Successor**
PMD75B

Application limitsMeasuring cell:
Metal welded**Liquids****Measuring principle**

Differential pressure

Product headlineDigital transmitter with metallic measuring
diaphragms
Modular transmitter
Long-term stability
High static pressure/Overload resistance
Enhanced safety via self diagnostic functions
Secondary process barrier

Max. measurement error0,075%
"PLATINUM" 0,05%

Max. process pressuremax. 420 bar
(max. 2175 psi)

Medium temperature range

Temperature gradient from pressure piping

Display/Operation

Option

Outputs4...20mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Liquids

Digital communication

HART
PROFIBUS PA
FOUNDATION Fieldbus

Hazardous area approvals

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

Functional safety

SIL

Material certificates

NACE MR0103
NACE MR0175
EN10204-3.1

Steam

Measuring principle

Differential pressure

Product headline

Digital transmitter with metallic measuring diaphragms
Modular transmitter
Long-term stability
High static pressure/Overload resistance
Enhanced safety via self diagnostic functions
Secondary process barrier

Max. measurement error

0,075%
"PLATINUM" 0,05%

Max. process pressure

max. 420 bar
(max. 6091 psi)

Steam

Medium temperature range

Temperature gradient from pressure piping

Display/Operation

Option

Outputs

4...20mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Digital communication

HART
PROFIBUS PA
FOUNDATION Fieldbus

Hazardous area approvals

ATEX, FM, CSA, IECEX, INMETRO, NEPSI, TIIS

Functional safety

SIL

Material certificates

NACE MR0103
NACE MR0175
EN10204-3.1

Gas

Measuring principle

Differential pressure

Gas

Product headline

Digital transmitter with metallic measuring diaphragms
Modular transmitter
Long-term stability
High static pressure/Overload resistance
Enhanced safety via self diagnostic functions
Secondary process barrier

Max. measurement error

0,075%
"PLATINUM" 0,05%

Max. process pressure

max. 420 bar
(max. 6 091 psi)

Medium temperature range

Temperature gradient from pressure piping

Display/Operation

Option

Outputs

4...20mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Digital communication

HART
PROFIBUS PA
FOUNDATION Fieldbus

Hazardous area approvals

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

Functional safety

SIL

Gas

Material certificates

NACE MR0103

NACE MR0175

EN10204-3.1

More information www.ca.endress.com/PMD75