Differential pressure Deltabar PMD75

Differential pressure transmitter with metal sensor for measurement of pressure differences

More information and current pricing:
www.endress.com/PMD75

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)

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

Gas

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. 6 091 psi)

Medium temperature range
Temperature gradient from pressure piping

Display/Operation
Option

Outputs
4...20mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Gas

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

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 absolute / 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 limits
Measuring cell:

Metal welded

Liquids

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. 2175 psi)

Medium temperature range
Temperature gradient from pressure piping

Display/Operation
Option

Liquids

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

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

Pressure

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)

Ambient temperature

-50°C...85°C
(-58°F...185°F)

Measuring cell

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

Pressure

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

Material housing
316L, 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, EAC

Safety approvals
SIL

Design approvals
NACE MR0103
EN10204-3.1

Marine approvals
GL/ ABS

Specialities
Diagnostic functions

Successor
PMD75B

More information **www.endress.com/PMD75**