

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)

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

Communication

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

NACE MR0103

EN10204-3.1

Marine approvals

GL/ ABS

Specialities

Diagnostic functions

Successor

PMD75B

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 distance400 m (1.312 ft) H₂O

Communication

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

Certificates / ApprovalsATEX, 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

Outputs
4...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



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