

# Deltabar PMD75B - differential pressure transmitter

Smart pressure transmitter which detects process anomalies like plugged impulse lines



More information and current pricing:

[www.endress.com/PMD75B](http://www.endress.com/PMD75B)

## Benefits:

- With Heartbeat Technology you are able to verify the health of the device while the process is running. This increases plant availability.
- Simple indication of device status - display changes from green to red when diagnostic messages occur
- Reduce systematic failures - error free SIL commissioning and instrument guided proof testing
- Control the device wireless in hard to reach process areas with the SmartBlue App

## Specs at a glance

- **Accuracy** Standard: up to 0.05 % Platinum: up to 0.035 %
- **Process temperature** -40°C...+110°C (-40°F...+230°F)
- **Pressure measuring range** 10 mbar...250 bar (0.15 psi...3750 psi)
- **Main wetted parts** 316L, AlloyC, Tantal, Monel, Gold
- **Material process membrane** 316L, AlloyC, Tantal, Monel, Gold

**Field of application:** This transmitter belongs to the new Deltabar generation. The device is robust and can be remotely controlled via SmartBlue App using a secure Bluetooth connection. It allows condition based maintenance to increase plant availability. The software is designed to simplify the handling. Intuitive wizards guide the user through setup, proof tests and verification of the device. Heartbeat Technology offers verification and monitoring functions to detect unwanted anomalies e.g. plugged impulse lines.

## Features and specifications

## Gas

**Measuring principle**

Differential pressure

**Product headline**

Differential pressure transmitter which detects process anomalies like plugged impulse lines,  
Intuitive and clear wizards for commissioning, proof tests and verification

**Sensor features**

Fill fluid:

Silicone oil,

Inert oil

**Transmitter features**

LED Module,

RFID TAG for easy identification,

Plug and play functionalities,

HistoROM

**Wetted materials**

316L,

AlloyC,

Tantal,

Monel,

Gold

**Measured variables**

Differential pressure

**Max. measurement error**

Standard:

up to 0.05 %

Platinum:

up to 0.035 %

**Measuring range**

10 mbar...250 bar

(0.15 psi...3750 psi)

## Gas

**Max. process pressure**

420 bar (6300 psi)

**Ambient temperature range**

-40°C...+85°C

(-40°F...+185°F)

**Transmitter housing material**

Aluminium, 316L

**Display/Operation**

4-line backlit display with touch control (operation from outside)

Bluetooth® Operation and maintenance SmartBlue App,

Configuration via local display and operating tools possible

**Outputs**

4...20 mA HART

**Digital communication**

HART

**Hazardous area approvals**

ATEX, CSA, IECEx, JPN Ex, INMETRO, NEPSI, UK Ex

**Functional safety**

SIL

**Metrological approvals and certificates**

Heartbeat Technology

**Pressure approvals and certificates**

CRN

**Material certificates**

EN10204-3.1,

NACE MR0175,

NACE MR0103

## Pressure

### Measuring principle

Differential pressure

### Characteristic

Differential pressure transmitter which detects process anomalies like plugged impulse lines.

Intuitive and clear wizards for commissioning, proof tests and verification.

### Supply voltage

Ex d, Ex e, non-Ex:

10.5...35V DC

Ex i: 10.5...30V DC

### Reference Accuracy

Standard:

up to 0.05 %

Platinum:

up to 0.035 %

### Long term stability

0.025 % of URL/ year

0.05 % of URL/ 5 years

0.10 % of URL/ 10 years

### Process temperature

-40°C...+110°C

(-40°F...+230°F)

### Ambient temperature

-40°C...+85°C

(-40°F...+185°F)

### Measuring cell

10 mbar...250 bar

(0.15 psi...3750 psi)

### Smallest calibratable span

0.25 mbar (0.00375 psi)

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## Pressure

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### Vacuum resistance

50 mbar (0.73 psi)

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### Max. Turn down

100:1

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### Max. overpressure limit

1600 bar (23,200 psi)

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### Process connection

NPT1/4-18

RC1/4"

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### Material process membrane

316L, AlloyC,

Tantal,

Monel,

Gold

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### Material gasket

PTFE, FKM, EPDM, FFKM

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### Fill fluid

Silicone oil,

Inert oil

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### Material housing

Aluminium, 316L

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### Communication

4...20 mA HART

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### Certificates / Approvals

ATEX, CSA, IECEx, JPN Ex, INMETRO, NEPSI, UK Ex

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### Safety approvals

SIL

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## Pressure

### **Design approvals**

EN10204-3.1,  
NACE MR0103,  
NACE MR0175

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### **Drinking water approvals**

NSF, KTW

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### **Specialities**

Heartbeat Technology,  
Bluetooth® Operation and maintenance SmartBlue App,  
LED Module,  
RFID TAG for easy identification,  
Plug and play functionalities,  
HistoROM

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## Steam

### **Measuring principle**

Differential pressure

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### **Product headline**

Differential pressure transmitter which detects process anomalies like  
plugged impulse lines,  
Intuitive and clear wizards for commissioning, proof tests and verification

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### **Sensor features**

Fill fluid:  
Silicone oil,  
Inert oil

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### **Transmitter features**

LED Module,  
RFID TAG for easy identification,  
Plug and play functionalities,  
HistoROM

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## Steam

**Wetted materials**

316L,  
AlloyC,  
Tantal,  
Monel,  
Gold

**Measured variables**

Differential pressure

**Max. measurement error**

Standard:  
up to 0.05 %  
Platinum:  
up to 0.035 %

**Measuring range**

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

**Max. process pressure**

420 bar (6300 psi)

**Ambient temperature range**

-40°C...+85°C  
(-40°F...+185°F)

**Transmitter housing material**

Aluminium, 316L

**Display/Operation**

4-line backlit display with touch control (operation from outside)  
Bluetooth® Operation and maintenance SmartBlue App,  
Configuration via local display and operating tools possible

**Outputs**

4...20 mA HART

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## Steam

### Digital communication

HART

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### Hazardous area approvals

ATEX, CSA, IECEx, JPN Ex, INMETRO, NEPSI, UK Ex

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### Functional safety

SIL

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### Metrological approvals and certificates

Heartbeat Technology

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### Pressure approvals and certificates

CRN

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### Material certificates

EN10204-3.1,  
NACE MR0175,  
NACE MR0103

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## Liquids

### Measuring principle

Differential pressure

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### Product headline

Differential pressure transmitter which detects process anomalies like plugged impulse lines,  
Intuitive and clear wizards for commissioning, proof tests and verification

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### Sensor features

Fill fluid:  
Silicone oil,  
Inert oil

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## Liquids

### Transmitter features

LED Module,  
RFID TAG for easy identification,  
Plug and play functionalities,  
HistoROM

### Wetted materials

316L,  
AlloyC,  
Tantal,  
Monel,  
Gold

### Measured variables

Differential pressure

### Max. measurement error

Standard:  
up to 0.05 %  
Platinum:  
up to 0.035 %

### Measuring range

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

### Max. process pressure

420 bar (6300 psi)

### Ambient temperature range

-40°C...+85°C  
(-40°F...+185°F)

### Transmitter housing material

Aluminium, 316L

## Liquids

### Display/Operation

4-line backlit display with touch control (operation from outside)  
Bluetooth® Operation and maintenance SmartBlue App,  
Configuration via local display and operating tools possible

### Outputs

4...20 mA HART

### Digital communication

HART

### Hazardous area approvals

ATEX, CSA, IECEx, JPN Ex, INMETRO, NEPSI, UK Ex

### Functional safety

SIL

### Metrological approvals and certificates

Heartbeat Technology

### Pressure approvals and certificates

CRN

### Material certificates

EN10204-3.1,  
NACE MR0175,  
NACE MR0103

## Continuous / Liquids

### Measuring principle

Differential pressure

### Characteristic / Application

Differential pressure transmitter which detects process anomalies like plugged impulse lines.  
Intuitive and clear wizards for commissioning, proof tests and verification.

## Continuous / Liquids

### Specialities

Heartbeat Technology,  
Bluetooth® Operation and maintenance with SmartBlue App,  
LED Module,  
RFID TAG for easy identification,  
Plug and play functionalities  
HistoROM

### Supply / Communication

Ex d, Ex e, non-Ex:  
10.5...35V DC  
Ex i:  
10.5...30V DC

### Accuracy

Standard:  
up to 0.05 %  
Platinum:  
up to 0.035 %

### Long term stability

0.025 % of URL/ year  
0.05 % of URL/ 5 years  
0.10 % of URL/ 10 years

### Ambient temperature

-54°C...+85°C  
(-65°F...+185°F)

### Process temperature

-40°C...+110°C  
(-40°F...+230°F)

### Process pressure absolute / max. overpressure limit

420 bar (6300 psi)

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**Continuous / Liquids****Pressure measuring range**

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

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**Main wetted parts**

316L, AlloyC,  
Tantal, Monel,  
Gold

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**Process connection**

NPT1/4-18,  
RC1/4"

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**Max. measurement distance**

400 m (1,312 ft) H<sub>2</sub>O

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**Communication**

4...20 mA HART

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**Certificates / Approvals**

ATEX, CSA, IECEx, JPN Ex, INMETRO, NEPSI, UK Ex

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**Safety approvals**

SIL

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**Design approvals**

EN 10204-3.1,  
NACE MR0175,  
NACE MR0103

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**Drinking water approvals**

NSF, KTW

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**Options**

Touch control display

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**Application limits**

None

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