

# Hydrostatic Level measurement Deltapilot FMB51

Pressure sensor with the Contite measuring cell for hydrostatic level measurement



More information and current pricing:

[www.my.endress.com/FMB51](http://www.my.endress.com/FMB51)

## Benefits:

- Hermetically sealed Contite measuring cell with condensate-resistance, high reference accuracy:  $\pm 0.2\%$ , optionally  $\pm 0.1\%$  and minimum temperature effects
- Modular concept for easy replacement of display or electronics
- Seamless and independent system integration (HART/PA/FF)
- Easy and safe menu-guided operation: On-site via display module, via 4 to 20mA with HART, via PROFIBUS PA, via FOUNDATION Fieldbus
- International usage thanks to a wide range of approvals

## Specs at a glance

- **Accuracy** Standard 0.2% Optional 0.1%
- **Process temperature**  $-10^{\circ}\text{C} \dots 85^{\circ}\text{C}$  ( $14^{\circ}\text{F} \dots 212^{\circ}\text{F}$ )
- **Pressure measuring range** 100 mbar...10 bar (1.5 psi...150 psi)
- **Process pressure / max. overpressure limit** 40 bar (600 psi)
- **Main wetted parts** Alloy C 316L optional coating AuPt

**Field of application:** The Deltapilot FMB51 is a rod version with a fixed process connection. This device with the Contite measuring cell and is typically used in the environmental industry. It is made for level measurement in liquid and paste-like media in open or closed containers and is unaffected by possible foam formation. For use in SIL2 safety systems.

## Features and specifications

---

## Pressure

### Measuring principle

Hydrostatic pressure

---

### Characteristic

Pressure transmitter for hydrostatic level measurement with flush mounted metallic Contite measuring cell:  
Hermetically sealed, condensate-resistant, climatic-proofed and with lowest temperature influences  
Rod version

---

### Supply voltage

4...20 mA HART  
10,5...45 VDC (Non Ex):  
Ex ia: 10,5...30 VDC  
PROFIBUS PA:  
9...32 VDC (Non Ex)  
FOUNDATION Fieldbus:  
9...32 VDC (Non Ex)

---

### Reference Accuracy

Standard 0.2 %  
Optional 0.1 %

---

### Long term stability

0.05 % of URL/year

---

### Process temperature

-10°C...85°C  
(14°F...212°F)

---

### Ambient temperature

-40°C...85°C  
(-40°F...185°F)

---

### Measuring cell

100 mbar...10 bar  
(1.5 psi...150 psi)

---

---

**Pressure****Smallest calibratable span**10 mbar (1.45 psi)

---

**Vacuum resistance**0 mbar abs.

---

**Max. Turn down**100:1

---

**Max. overpressure limit**40 bar (600 psi)

---

**Process connection**

Thread:

G1 1/2, MNPT1 1/2

Flange:

DN40...DN100,

ASME 2"...4",

JIS 10K

---

**Material process membrane**

316L, AlloyC

Gold-Rhodium

---

**Material gasket**Viton, EPDM, Kalrez, none

---

**Fill fluid**

Inert oil,

Synthetic oil

---

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

---

**Communication**

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

---

---

## Pressure

### Certificates / Approvals

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

---

### Safety approvals

Overfill protection WHG

SIL

---

### Design approvals

EN10204-3.1

NACE MR0175

---

### Drinking water approvals

KTW/ NSF

---

### Specialities

Modularity to differential pressure and process pressure devices  
(replacable display, universal electronics)

Diagnostic functions

---

## Continuous / Liquids

### Measuring principle

Hydrostatic

---

### Characteristic / Application

Pressure transmitter for hydrostatic level measurement with flush mounted metallic Contite measuring cell:

Hermetically sealed, condensate-resistant and climatic-proofed

Rod version

---

### Specialities

Modularity to differential pressure and process pressure devices  
(replacable display, universal electronics)

diagnostic functions

Hermetically sealed Contite measuring cell (condensate-resistant and climatic-proofed)

---

---

**Continuous / Liquids****Supply / Communication**

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

---

**Accuracy**

Standard 0.2%  
Optional 0.1%

---

**Long term stability**

0.05 % of URL/ year

---

**Ambient temperature**

-40°C...85°C  
(-40°F...185°F)

---

**Process temperature**

-10°C...85°C  
(14°F...212°F)

---

**Process pressure / max. overpressure limit**

40 bar (600 psi)

---

**Pressure measuring range**

100 mbar...10 bar  
(1.5 psi...150 psi)

---

**Main wetted parts**

Alloy C  
316L  
optional coating AuPt

---

---

**Continuous / Liquids****Process connection**

Thread:  
G1 1/2, MNPT1 1/2  
Flange:  
DN40...DN100,  
ASME 2"...4",  
JIS 10K

---

**Max. measurement distance**

100m (328ft) H2O

---

**Communication**

4...20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

---

**Certificates / Approvals**

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

---

**Safety approvals**

Overfill protection WHG  
SIL

---

**Design approvals**

EN 10204-3.1  
NACE MR0175

---

**Drinking water approvals**

KTW/ NSF

---

**Options**

Separate housing  
Initial device settings  
Overvoltage protection

---

**Application limits**

If pressurized, usage of two pressure transmitters to measure the differential pressure (electronic dP)  
Observe ratio head pressure : hydrostatic pressure

Continuous / Liquids

---

More information [www.my.endress.com/FMB51](http://www.my.endress.com/FMB51)