

# Hydrostatic Level measurement Deltapilot FMB50

Compact pressure sensor with the Contite measuring cell for hydrostatic level measurement



More information and current pricing:

[www.cz.endress.com/FMB50](http://www.cz.endress.com/FMB50)

## 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 menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- International usage thanks to a wide range of approvals

## Specs at a glance

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

**Field of application:** The compact Deltapilot FMB50 transmitter with the condensate resistant Contite measuring cell is typically used in the process and hygienic applications. It is made for level measurement in liquid and paste-like media in open or closed containers and unaffected by possible foam formation. For use in SIL2 safety systems.

## Features and specifications

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## Pressure

### Measuring principle

Hydrostatic pressure

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### Characteristic

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

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### 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)

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### Reference Accuracy

Standard 0.2 %  
Optional 0.1 %

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### Long term stability

0.05 % of URL/ year

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### Process temperature

-10°C...100°C  
(14°F...212°F)

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### Ambient temperature

-40°C...85°C  
(-40°F...185°F)

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### Measuring cell

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

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### Smallest calibratable span

10 mbar (1.45 psi)

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**Pressure****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 1 1/2"...4",

JIS 10K

**Process connection hygienic**

Tri-Clamp

DIN11851

DIN11864-1

NEUMO

Varivent N

SMS

DRD

**Material process membrane**

316L, AlloyC

Gold-Rhodium

**Material gasket**

None, measuring cell welded

**Fill fluid**

Inert oil,

Synthetic oil

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

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**Communication**4...20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus  
IO-Link

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**Certificates / Approvals**ATEX, FM, CSA, CSA C/US, IEC Ex, INMETRO, NEPSI

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**Safety approvals**Overfill protection WHG  
SIL

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**Design approvals**EN10204-3.1  
NACE MR0103

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**Hygienic approvals**3A, EHEDG  
CoC ASME-BPE

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**Marine approvals**GL/ ABS/ LR/ BV/ DNV

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**Drinking water approvals**KTW/ NSF/ ACS

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**Specialities**Modularity to differential pressure and process pressure devices  
(replacable display, universal electronics)  
Diagnostic functions

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**Continuous / Liquids****Measuring principle**Hydrostatic

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## Continuous / Liquids

### Characteristic / Application

Compact pressure transmitter for hydrostatic level measurement with flush mounted metallic Contite measuring cell:  
Hermetically sealed, condensate-resistant and climatic-proofed

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### 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)

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### Supply / Communication

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

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### Accuracy

Standard 0.2%  
Optional 0.1%

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### Long term stability

0.05% of URL/year

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### Ambient temperature

-40°C...85°C  
(-40°F...185°F)

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### Process temperature

-10°C...100°C  
(14°F...212°F)

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### Process pressure absolute / max. overpressure limit

40 bar (600 psi)

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

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

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**Main wetted parts**

Alloy C  
316L  
optional coating AuPt

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**Process connection**

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

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**Process connection hygienic**

Tri-Clamp  
DIN11851  
DIN11864-1  
NEUMO  
Varivent N  
SMS  
DRD

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**Max. measurement distance**

100m (328ft) H2O

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**Communication**

4...20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus  
IO-Link

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**Certificates / Approvals**

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

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## Continuous / Liquids

### Safety approvals

Overfill protection WHG  
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### Design approvals

EN10204-3.1  
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### Hygienic approvals

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### Marine approval

GL/ ABS/ LR/ BV/ DNV

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### Drinking water approvals

KTW/ NSF/ ACS

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### Options

Separate housing  
Initial device settings  
Overvoltage protection

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### Application limits

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

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More information [www.cz.endress.com/FMB50](http://www.cz.endress.com/FMB50)