

# Hydrostatic Level measurement Deltapilot FMB70

Highest performance pressure sensor with the Contite cell for hydrostatic level measurement



More information and current pricing:

[www.cz.endress.com/FMB70](http://www.cz.endress.com/FMB70)

## Benefits:

- Hermetically sealed Contite measuring cell with condensate-resistance, high reference accuracy:  $\pm 0.1\%$ , optionally  $\pm 0.075\%$  and minimum temperature effects thanks to active temperature compensation
- Best batch-to-batch repeatability and long-term stability
- Modular concept for easy replacement of display or electronics
- HistoROM/M-DAT data backup for instrument settings and measured values
- Function-monitored from the measuring cell to the electronics
- Seamless and independent system integration (HART/PA/FF)
- International usage thanks to a wide range of approvals

## Specs at a glance

- **Accuracy** Standard 0.1% Optional 0.075%
- **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

**Field of application:** The Deltapilot FMB70 with the condensate resistant Contite measuring cell and two-chamber housing 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. The integrated HistoROM/M-DAT data module makes management of process and device

parameters easy. Designed according to IEC 61508 for use in SIL3 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  
Compact 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 0.1%  
Optional 0.075%

#### Long term stability

0.05 % of URL/year

#### Process temperature

-10°C...100°C  
(14°F...212°F)

#### Ambient temperature

-40°C...85°C  
(-40°F...185°F)

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**Pressure****Measuring cell**

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

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**Smallest calibratable span**

25 mbar (3.63 psi)

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**Vacuum resistance**

0 mbar abs.

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**Max. overpressure limit**

40 bar (600 psi)

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**Process connection**

Thread:  
G1 1/2, MNPT1/2  
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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**Material process membrane**

316L, AlloyC,  
Gold-Rhodium

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**Material gasket**

None, measuring cell welded

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**Pressure****Fill fluid**

Inert oil,  
Synthetic oil

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**Material housing**

316L, Die-cast aluminum

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**Communication**

4 ... 20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

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**Certificates / Approvals**

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

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**Safety approvals**

SIL

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**Design approvals**

EN10204-3.1  
NACE MR0175  
MR0103

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**Hygienic approvals**

3A, EHEDG  
CoC ASME-BPE

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**Marine approvals**

GL, DNV

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**Drinking water approvals**

NSF

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**Specialities**

Gold-rhodium coated membrane

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

Hydrostatic

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**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**

Diagnostic functions

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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 0.1%  
Optional 0.075%

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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

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**Process connection**

Thread:  
G1 1/2, MNPT1/2  
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**

100 m (328 ft) H<sub>2</sub>O

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**Communication**

4...20 mA HART  
PROFIBUS PA  
FOUNDATION Fieldbus

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**Certificates / Approvals**

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

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**Safety approvals**

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**Continuous / Liquids****Design approvals**

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**Marine approval**

GL/ DNV

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**Drinking water approvals**

NSF

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**Options**

HistoROM/M-Dat

4-line digital display

SS- or Aluminiumhousing

Separate housing

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**Application limits**

Measuring cell: Contite,  
condensate-proof, watertight,  
metal welded

If pressurized, possibly use  
differential pressure measurement  
with two pressure  
transmitters. Observe ratio  
head pressure : hydrostatic  
pressure

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More information [www.cz.endress.com/FMB70](http://www.cz.endress.com/FMB70)