

Hydrostatic Level measurement Deltapilot FMB51

Pressure sensor with the Contite measuring cell for hydrostatic level measurement



More information and current pricing:

www.de.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

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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

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Drinking water approvals

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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.de.endress.com/FMB51