

Hydrostatic Level measurement Deltapilot FMB51

Pressure sensor with the Contite measuring cell for hydrostatic level measurement



More information and current pricing:

www.ca.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 absolute / 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

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)

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)

Continuous / Liquids**Process temperature**

-10°C...85°C
(14°F...212°F)

Process pressure absolute / 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

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

Continuous / Liquids

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

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

Pressure**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)

Smallest calibratable span

10 mbar (1.45 psi)

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 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

Pressure

Communication

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

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