

Hydrostatic Level measurement Deltapilot FMB50

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



More information and current pricing:

www.ch.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

Pressure

Measuring principle

Hydrostatic pressure

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

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...100°C

(14°F...212°F)

Pressure

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)

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

Pressure**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

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

Safety approvals

Overfill protection WHG

SIL

Design approvals

EN10204-3.1

NACE MR0103

Hygienic approvals

3A, EHEDG

CoC ASME-BPE

Marine approvals

GL/ ABS/ LR/ BV/ DNV

Drinking water approvals

KTW/ NSF/ ACS

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

Diagnostic functions

Continuous / Liquids**Measuring principle**

Hydrostatic

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

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)

Process temperature

-10°C...100°C

(14°F...212°F)

Continuous / Liquids**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 1 1/2"...4",

JIS 10K

Continuous / Liquids**Process connection hygienic**

Tri-Clamp

DIN11851

DIN11864-1

NEUMO

Varivent N

SMS

DRD

Max. measurement distance

100m (328ft) H2O

Communication

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

Certificates / Approvals

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Safety approvals

Overfill protection WHG

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Continuous / Liquids

Hygienic approvals

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Marine approval

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Drinking water approvals

KTW/ NSF/ ACS

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

More information www.ch.endress.com/FMB50