

Hydrostatic Level measurement Deltapilot FMB50

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



More information and current pricing:

www.fr.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 / 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)

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 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

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

Communication4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus
IO-Link

Certificates / ApprovalsATEX, FM, CSA, CSA C/US, IEC Ex, INMETRO, NEPSI, UK Ex

Safety approvalsOverfill protection WHG
SIL

Design approvalsEN10204-3.1
NACE MR0103

Hygienic approvals3A, EHEDG
CoC ASME-BPE

Marine approvalsGL/ ABS/ LR/ BV/ DNV

Drinking water approvalsKTW/ 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**

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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)

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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Standard 0.2%
Optional 0.1%

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0.05% of URL/year

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(-40°F...185°F)

Process temperature

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Process pressure / max. overpressure limit

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Continuous / Liquids**Pressure measuring range**

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ASME 1 1/2"...4",
JIS 10K

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
IO-Link

Certificates / Approvals

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

Continuous / Liquids

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Overfill protection WHG
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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.fr.endress.com/FMB50