

Hydrostatic Level measurement Deltapilot FMB53

Pressure sensor with Contite measuring cell
for hydrostatic level measurement



More information and current pricing:

www.be.endress.com/FMB53

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** PE cable: $-10^{\circ}\text{C} \dots 70^{\circ}\text{C}$ / $14^{\circ}\text{F} \dots 158^{\circ}\text{F}$ FEP cable: $-10^{\circ}\text{C} \dots 80^{\circ}\text{C}$ / $14^{\circ}\text{F} \dots 176^{\circ}\text{F}$
- **Pressure measuring range** 100mbar...10bar (1.5psi...150psi)
- **Process pressure / max. overpressure limit** 40 bar (600 psi)
- **Main wetted parts** Alloy C 316L Cable (PE/FEP) optional coating AuPt optional coating AuRh

Field of application: The Deltapilot FMB53 is a cable version with mounting clamp. This device with the Contite measuring cell is typically used in the environmental industries. 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

Pressure transmitter for hydrostatic level measurement with flush mounted metallic Contite measuring cell:
Hermetically sealed, condensate-resistant, climatic-proofed and with lowest temperature influences
Cable version with suspension clamp

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

PE cable: -10°C...70°C / 14°F...158°F
FEP cable: -10°C...80°C / 14°F...176°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 resistance0 mbar abs.

Max. Turn down100:1

Max. overpressure limit40 bar (600 psi)

Process connectionMounting clamp

Material process membrane316L, AlloyC,
Gold-Rhodium
PE, FEP

Material gasketViton, EPDM, Kalrez, none

Fill fluidInert oil,
Synthetic oil

Material housing316L, Die-cast aluminum

Communication4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

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

Pressure

Safety approvals

SIL

Design approvals

EN10204-3.1

NACE MR0175

Marine approvals

GL/ ABS/ LR/ BV/ DNV

Drinking water approvals

KTW/ NSF/ ACS

Specialities

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

Diagnostic functions

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

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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)

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

PE cable: -10°C...70°C / 14°F...158°F
FEP cable: -10°C...80°C / 14°F...176°F

Process pressure / max. overpressure limit

40 bar (600 psi)

Pressure measuring range

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

Main wetted parts

Alloy C
316L
Cable (PE/FEP)
optional coating AuPt
optional coating AuRh

Process connection

Mounting clamp

Continuous / Liquids

Max. measurement distance

100 m (328 ft) H₂O

Communication

4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

Certificates / Approvals

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

Safety approvals

SIL

Design approvals

EN10204-3.1
NACE MRO175

Marine approval

GL/ ABS/ LR/ BV/ DNV

Drinking water approvals

KTW/ NSF/ ACS

Options

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.be.endress.com/FMB53