

Hydrostatic Level measurement Deltapilot FMB52

Pressure sensor with Contite measuring cell for hydrostatic level measurement



More information and current pricing:

www.be.endress.com/FMB52

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** 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 Cable (PE/FEP) optional coating AuPt optional coating AuRh

Field of application: The Deltapilot FMB52 is a cable version including a fixed process connection. This device with the Contite measuring cell is typically used in the process and environmental industries. 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

Cable 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

Continuous / Liquids**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 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
Cable (PE/FEP)
optional coating AuPt
optional coating AuRh

Process connection

Thread:

G1 1/2, MNPT1 1/2

Flange:

DN40...DN100,

ASME 2"...4",

JIS 10K

Max. measurement distance

100 m (328 ft) H₂O

Continuous / Liquids**Communication**

4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

Certificates / Approvals

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

Safety approvals

Overfill protection WHG

SIL

Design approvals

EN10204-3.1

NACE MR0175

Marine approval

GL/ ABS/ LR/ BV/ DNV

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

In case of an open tank or shaft use FMB53 with mounting clamp.

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

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

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 2" ...4",

JIS 10K

Pressure

Material process membrane

316L, AlloyC,

Gold-Rhodium

PE, FEP

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

Certificates / Approvals

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

Safety approvals

Overfill protection WHG

SIL

Design approvals

EN10204-3.1

NACE MR0175

Pressure

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

More information www.be.endress.com/FMB52