

Hydrostatic Level measurement Deltapilot FMB53

Pressure sensor with Contite measuring cell for hydrostatic level measurement



More information and current pricing:

www.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 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 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

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 with suspension clamp

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

PE cable: -10°C...70°C / 14°F...158°F

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

Continuous / Liquids**Process pressure absolute / max. overpressure limit**40 bar (600 psi)

Pressure measuring range100mbar...10bar
(1.5psi...150psi)

Main wetted partsAlloy C
316L
Cable (PE/FEP)
optional coating AuPt
optional coating AuRh

Process connectionMounting clamp

Max. measurement distance100 m (328 ft) H₂O

Communication4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

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

Safety approvalsSIL

Design approvalsEN10204-3.1
NACE MRO175

Marine approvalGL/ ABS/ LR/ BV/ DNV

Continuous / Liquids

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

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

Pressure**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)

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

Mounting clamp

Material process membrane

316L, AlloyC,

Gold-Rhodium

PE, FEP

Material gasket

Viton, EPDM, Kalrez, none

Fill fluid

Inert oil,

Synthetic oil

Pressure

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

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

More information www.endress.com/FMB53