

Hydrostatic Level measurement Deltapilot FMB70

Highest performance pressure sensor with the Contite cell for hydrostatic level measurement



More information and current pricing:

www.at.endress.com/FMB70

Benefits:

- Hermetically sealed Contite measuring cell with condensate-resistance, high reference accuracy: $\pm 0.1\%$, optionally $\pm 0.075\%$ and minimum temperature effects thanks to active temperature compensation
- Best batch-to-batch repeatability and long-term stability
- Modular concept for easy replacement of display or electronics
- HistoROM/M-DAT data backup for instrument settings and measured values
- Function-monitored from the measuring cell to the electronics
- Seamless and independent system integration (HART/PA/FF)
- International usage thanks to a wide range of approvals

Specs at a glance

- **Accuracy** Standard 0.1% Optional 0.075%
- **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

Field of application: The Deltapilot FMB70 with the condensate resistant Contite measuring cell and two-chamber housing 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. The integrated HistoROM/M-DAT data module makes management of process and device

parameters easy. Designed according to IEC 61508 for use in SIL3 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

Compact 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 0.1%

Optional 0.075%

Long term stability

0.05 % of URL/year

Pressure

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

25 mbar (3.63 psi)

Vacuum resistance

0 mbar abs.

Max. overpressure limit

40 bar (600 psi)

Process connection

Thread:

G1 1/2, MNPT1/2

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

Certificates / Approvals

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

Pressure**Safety approvals**

SIL

Design approvals

EN10204-3.1

NACE MR0175

MR0103

Hygienic approvals

3A, EHEDG

CoC ASME-BPE

Marine approvals

GL, DNV

Drinking water approvals

NSF

Specialities

Gold-rhodium coated membrane

Continuous / Liquids**Measuring principle**

Hydrostatic

Characteristic / Application

Compact pressure transmitter for hydrostatic level measurement with flush mounted metallic Contite measuring cell:

Hermetically sealed, condensate-resistant and climatic-proofed

Specialities

Diagnostic functions

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 0.1%
Optional 0.075%

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)

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

Continuous / Liquids**Process connection**

Thread:

G1 1/2, MNPT1/2

Flange:

DN40...DN100,

ASME 1 1/2"...4",

JIS 10K

Process connection hygienic

Tri-Clamp

DIN11851

DIN11864-1

NEUMO

Varivent N

SMS

DRD

Max. measurement distance100 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, EAC

Continuous / Liquids

Safety approvals

SIL

Design approvals

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Marine approval

GL/ DNV

Drinking water approvals

NSF

Options

HistoROM/M-Dat

4-line digital display

SS- or Aluminiumhousing

Separate housing

Application limits

Measuring cell: Contite,
condensate-proof, watertight,
metal welded

If pressurized, possibly use
differential pressure measurement
with two pressure
transmitters. Observe ratio
head pressure : hydrostatic
pressure

More information www.at.endress.com/FMB70