Hydrostatic Level measurement Deltapilot FMB52

Pressure sensor with Contite measuring cell for hydrostatic level measurement

Benefits:
- Hermetically sealed Contite measuring cell with condensate-resistance, high reference accuracy: ±0.2%, optionally ±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°C...70°C / 14°F...158°F FEP cable: -10°C...80°C / 14°F...176°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 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

More information and current pricing: www.us.endress.com/FMB52
### 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

#### Ambient temperature
- -40°C...85°C
  (-40°F...185°F)

#### Measuring cell
- 100 mbar...10 bar
  (1.5 psi...150 psi)
<table>
<thead>
<tr>
<th><strong>Pressure</strong></th>
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<tbody>
<tr>
<td>Smallest calibratable span</td>
<td>10 mbar (1.45 psi)</td>
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<tr>
<td>Vacuum resistance</td>
<td>0 mbar abs.</td>
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<tr>
<td>Max. Turn down</td>
<td>100:1</td>
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<tr>
<td>Max. overpressure limit</td>
<td>40 bar (600 psi)</td>
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<tr>
<td>Process connection</td>
<td></td>
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<tr>
<td>Thread:</td>
<td>G1 1/2, MNPT1 1/2</td>
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<tr>
<td>Flange:</td>
<td>DN40...DN100, ASME 2&quot;...4&quot;, JIS 10K</td>
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<tr>
<td>Material process membrane</td>
<td>316L, AlloyC, Gold-Rhodium, PE, FEP</td>
</tr>
<tr>
<td>Material gasket</td>
<td>Viton, EPDM, Kalrez, none</td>
</tr>
<tr>
<td>Fill fluid</td>
<td>Inert oil, Synthetic oil</td>
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<tr>
<td>Material housing</td>
<td>316L, Die-cast aluminum</td>
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<tr>
<td>Communication</td>
<td>4...20 mA HART, PROFIBUS PA, FOUNDATION Fieldbus</td>
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## Pressure

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<th>Certificates / Approvals</th>
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<td>ATEX, FM, CSA, CSA C/US, IEC Ex, INMETRO, NEPSI, UK Ex</td>
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<td>Overfill protection WHG</td>
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<td>EN10204-3.1</td>
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<td>NACE MR0175</td>
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<td>Modularity to differential pressure and process pressure devices (replacable display, universal electronics)</td>
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<td>Diagnostic functions</td>
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## Continuous / Liquids

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<td>Hydrostatic</td>
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<th>Characteristic / Application</th>
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<tr>
<td>Pressure transmitter for hydrostatic level measurement with flush mounted metallic Contite measuring cell: Hermetically sealed, condensate-resistant and climatic-proofed</td>
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<tr>
<td>Cable version</td>
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Deltapilot M FMB52

**Continuous / Liquids**

**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

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

**Pressure measuring range**
100 mbar...10 bar
(1.5 psi...150 psi)
Continuous / Liquids

**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

**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
Continuous / Liquids

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.

More information www.us.endress.com/FMB52