Electronic differential pressure Deltabar FMD71

Electronic differential pressure system utilizing two ceramic sensor modules and one transmitter

More information and current pricing:
www.endress.com/FMD71

Benefits:

- Eliminates traditional mechanical issues resulting in greater process availability and reliability
- Overload-resistant high purity ceramic sensor (99.9% Al_2O_3)
- Safety risks are minimized with the new electronic differential pressure system architecture and design
- Lowest total cost of ownership due to reduced installation time, maintenance, downtime and spare requirements
- Multivariable level measurement: HART-based differential pressure, head pressure and sensor temperatures from one system
- Continuous health indication of the entire system via HART-based diagnostic
- High reproducibility and long-term stability

Specs at a glance

- **Accuracy** 0.075% of individual sensor, "PLATINUM" 0.05% of individual sensor
- **Process temperature** −25…+150°C (−13…+302°F)
- **Pressure measuring range** 100mbar…40bar (1.5psi…600psi)
- **Process pressure / max. overpressure limit** 60 bar (900 psi)
- **Material process membrane** Ceramic 316L, AlloyC

Field of application: The electronic dp Deltabar FMD71 is a differential pressure system, used to measure the pressure or level, volume or mass of liquids in pressurized tanks or distillation columns/evaporators. The high pressure sensor (HP) measures the hydrostatic pressure. The low pressure sensor (LP) measures the head pressure. The level is calculated

in the transmitter using these two digital values. The electronic dp system eliminates issues of traditional differential pressure measurements.

Features and specifications

Pressure

Measuring principle
Differential pressure

Characteristic
Electronic differential pressure transmitter with ceramic sensor (Ceraphire) for level, volume or mass measurement in liquids.

Supply voltage
4...20 mA HART:
12...45V DC (Non Ex)
Ex ia: 12...30V DC

Reference Accuracy
0.075% of individual sensor,
"PLATINUM" 0.05% of individual sensor

Long term stability
0.05% of URL/year of individual sensor

Process temperature
–25...+150°C
(–13...+302°F)

Ambient temperature
–40...+80°C
(–40...+176°F)

Measuring cell
100 mbar...40 bar
(1.5 psi...600 psi)

Vacuum resistance
0 mbar

Pressure

Max. Turn down
100 : 1

Max. overpressure limit
60 bar (900 psi)

Process connection
Threads
Flansch (DIN, ASME, JIS)

Process connection hygienic
DIN11851
DIN11864-1
Tri-Clamp
DRD
Varivent

Material process membrane
Ceramic
316L, AlloyC

Material gasket
Viton, Kalrez, EPDM, NBR, Silicone

Fill fluid
Silicone Oil

Material housing
Die-cast aluminum
Stainless steel

Communication
4...20 mA HART

Certificates / Approvals
ATEX, FM, CSA, IECEx, NEPSI, INMETRO, UK Ex

Pressure

Design approvals
NACE MR0175,
EN10204-3.1,

Hygienic approvals
EHEDG,
3A

Continuous / Liquids

Measuring principle
Differential pressure

Characteristic / Application
Electronic differential pressure transmitter with ceramic sensor (Ceraphire) for level, volume or mass measurement in liquids.

Supply / Communication
4...20 mA HART:
12...45V DC
Exia: 12...30V DC

Accuracy
0.075% of individual sensor,
"PLATINUM" 0.05% of individual sensor

Long term stability
0.05% of URL/year of individual sensor

Ambient temperature
–40...+80°C
(–40...+176°F)

Process temperature
–25...+150°C
(–13...+302°F)

Process pressure / max. overpressure limit
60 bar (900 psi)

Continuous / Liquids

Pressure measuring range
100mbar...40bar
(1.5psi...600psi)

Process connection
Threads
Flanges (DIN, ASME, JIS)

Process connection hygienic
DIN11851
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Communication
4...20 mA HART

Certificates / Approvals
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Design approvals
NACE MR0175
EN10204-3.1

Hygienic approvals
FDA
3A

Options
4-line digital display
SS- or Aluminium housing

Application limits
Use Software Applicator Sizing Electronic DP

More information **www.endress.com/FMD71**

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