Absolute and gauge pressure Cerabar PMC71

Digital pressure transmitter with oil-free ceramic sensor for measurement in gases or liquids

More information and current pricing:
www.fi.endress.com/PMC71

Benefits:

- Best fit for vacuum applications and applications with corrosive and abrasive media
- Process safety through membrane breakage detection
- Overload-resistant high purity ceramic sensor (99.9% Al_2O_3)
- HistoROM data management concept for fast and easy commissioning, maintenance and diagnostics
- Easy menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- Highest safety due to gastight feedthrough with capabilities up to SIL2/3, certified to IEC 61508
- Available with mounted manifolds: always fit, always tested for leaks

Specs at a glance

- **Accuracy** Standard: 0.05% Platinum: up to 0.025%
- **Process temperature** -40°C...150°C (-40°F...302°F)
- **Pressure measuring range** 100mbar...40bar (1.5psi...600psi)
- **Process pressure absolute / max. overpressure limit** 60bar (900psi)
- **Main wetted parts** Ceraphire ceramic Alloy C 316L Monel PVDF

Field of application: The Cerabar PMC71 digital pressure transmitter with capacitive, oil-free ceramic measuring cell is typically used in the process and hygienic applications for pressure, level, volume or mass measurement in liquids and gases. It guarantees high degree of system safety thanks to vacuum-proof ceramic membrane with integrated breakage detection. Quick Setup with adjustable measuring range allows

simple commissioning, reduces costs and saves time. SIL2/3 according to IEC 61508.

Features and specifications

Pressure

Measuring principle
Absolute and gauge pressure

Characteristic
Digital transmitter with capacitive sensor and ceramic membrane
Modular transmitter
Long term stability
Enhanced safety via self diagnostic functions
Secondary process barrier

Supply voltage
4...20 mA HART
10,5...45V DC (Non Ex):
Ex ia: 10,5...30V DC
PROFIBUS PA:
9...32 V DC (Non Ex)
FOUNDATION Fieldbus:
9...32 V DC (Non Ex)

Reference Accuracy
Standard: 0.05%
Platinum: up to 0.025%

Long term stability
0.05 % of URL/ year
0.08 % of URL/ 5 years
0.1 % of URL/ 10 years

Process temperature
-20°C...150°C
(-4°F...257°F)

Pressure

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

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

Smallest calibratable span
5 mbar (0.075 psi)

Vacuum resistance
0 mbar abs.

Max. Turn down
100:1

Max. overpressure limit
60 bar (900 psi)

Process connection
Thread:
G1/2...G2, R1/2, MNPT1/2...MNPT2
Flange:
DN25...DN80,
ASME 1"...4",
JIS 10K

Process connection hygienic
Tri-Clamp
DIN11851
Varivent N
SMS
DRD

Material process membrane
Ceramic

Pressure

Material gasket
Viton, EPDM, Chemraz, Kalrez, NBR

Fill fluid
none, dry measuring cell

Material housing
Die-cast aluminum,
AISI 316L

Communication
4...20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

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

Design approvals
EN10204-3.1

Hygienic approvals
3A, EHEDG

Marine approvals
GL/ ABS

Drinking water approvals
NSF

Specialities
Diagnostic functions

Successor
PMC71B

Continuous / Liquids

Measuring principle
Absolute and gauge pressure

Characteristic / Application
Digital transmitter with capacitive sensor and ceramic membrane
Modular transmitter
Long term stability
Enhanced safety via self diagnostic functions
Secondary process barrier

Specialities
diagnostic functionalities
different languages in software

Supply / Communication
4...20mA HART:
10,5...45V DC
Ex ia: 10,5...30V DC
PROFIBUS PA /
FOUNDATION Fieldbus:
9...32V DC

Accuracy
Standard: 0.05%
Platinum: up to 0.025%

Long term stability
0,05% of URL/year

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

Process temperature
-40°C...150°C
(-40°F...302°F)

Continuous / Liquids

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

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

Main wetted parts
Ceraphire ceramic
Alloy C
316L
Monel
PVDF

Process connection
Threads
Flanges
Tri-Clamp ISO2852
Hygienic connections

Max. measurement distance
400m (1312ft) H2O

Communication
4 ... 20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

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

Design approvals
EN 10204-3.1

Marine approval
GL/ ABS

Drinking water approvals
NSF

Continuous / Liquids

Options

HistoROM/M-Dat
4-line digital display
SS- or Aluminiumhousing
Separate housing

Successor

PMC71B

Application limits

Measuring cell: ceramics
If pressurized, possibly use differential pressure measurement with two pressure transmitters (electronic dp). Observe ratio head pressure : hydrostatic pressure

More information **www.fi.endress.com/PMC71**

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