Absolute and gauge pressure Cerabar PMC51

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

More information and current pricing:
www.endress.com/PMC51

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)
- Condensation resistant also for hygienic applications
- Easy menu-guided commissioning via local display, 4 to 20mA with HART, PROFIBUS PA, FOUNDATION Fieldbus
- Process pressure up to SIL2, certified to IEC 61508 and IEC 61511
- Available with mounted manifolds: always fit, always tested for leaks

Specs at a glance

- **Accuracy** Standard 0.1% Platinum 0.075%
- **Process temperature** -20°C...125°C (-4°F...275°F)
- **Pressure measuring range** 100 mbar...40 bar (1.5psi...600psi)
- **Process pressure absolute / max. overpressure limit** 60 bar (900 psi)
- **Main wetted parts** Ceraphire Sealing Alloy C276 316L

Field of application: The Cerabar PMC51 digital pressure transmitter with capacitive, oil-free ceramic measuring cell is typically used in 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 according to IEC 61508 / IEC 61511.

Features and specifications

Pressure

Measuring principle

Absolute and gauge pressure

Characteristic

Smart and reliable pressure transmitter with capacitive measuring cell and ceramic process isolating diaphragm Ceraphire)

Supply voltage

4...20 mA HART

11,5...45V DC (Non Ex):

Ex ia: 11,5...30V DC

PROFIBUS PA:

9...32 V DC (Non Ex)

FOUNDATION Fieldbus:

9...32 V DC (Non Ex)

Reference Accuracy

Standard 0.1%

Platinum 0.075%

Long term stability

0.2% of URL/ year

0.4% of URL/ 5 years

0.5% of URL/ 10 years

Pressure

Process temperature

-40°C...+130°C

(-40°F...+266°F

+150°C for 1h

(+302°F for 1h)

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

10 mbar (0.15 psi)

Vacuum resistance

0 mbar abs.

Max. Turn down

20:1

Max. overpressure limit

60 bar (900 psi)

Pressure

Process connection

Thread:

G1/2...G2, R1/2, MNPT1/2

Flange:

DN25...DN80,

ASME 1"...4",

JIS 10K

Process connection hygienic

Tri-Clamp

DIN11851

DIN11864-1

NEUMO

Varivent N

SMS

DRD

Material process membrane

Ceramic

Material gasket

Viton, EPDM, NBR, Kalrez

Fill fluid

None, dry measuring cell

Pressure

Material housing
Die-cast aluminum,

AISI 316L

Communication
4...20 mA

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

Hygienic approvals
CoC ASME-BPE

3A, EHEDG

Marine approvals
GL/ ABS/ LR/ BV/ DNV

Drinking water approvals
NSF

Successor
PMC51B

Continuous / Liquids

Measuring principle
Absolute and gauge pressure

Characteristic / Application
Smart and reliable pressure transmitter, with capacitive measuring cell and
ceramic process isolating diaphragm
(Ceraphire)

Supply / Communication
4 ..20 mA HART:
11,5...45V DC
Ex ia: 11,5...30V DC

PROFIBUS PA

FOUNDATION Fieldbus

Accuracy
Standard 0.1%

Platinum 0.075%

Long term stability
< 0,1% of URL/ year

< 0,25% of URL/ 5 years

< 0,4% of URL/ 10 years

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

Process temperature
-20°C...125°C
(-4°F...275°F)

Continuous / Liquids

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

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

Main wetted parts
Ceraphire
Sealing
Alloy C276
316L

Process connection
Threads
Flanges (DIN, ASME, JIS)

Max. measurement distance
400 m (1312 ft) H_2O

Communication
4...20 mA HART

PROFIBUS PA

FOUNDATION Fieldbus

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

Safety approvals
SIL

Design approvals
EN 10204-3.1

NACE MR0175, MR0103

Continuous / Liquids

Hygienic approvals
3A, EHEDG

CoC ASME-BPE

Marine approval
GL/ ABS/ LR/ BV/ DNV

Drinking water approvals
NSF

Options
Local display

Successor
PMC51B

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.endress.com/PMC51**