

Absolute and gauge pressure Cerabar PMC71

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



F L E X

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% Al₂O₃)
- 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

More information and current pricing:

www.casc.endress.com/PMC71

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 / 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, UK
Ex

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 / max. overpressure limit**60bar (900psi)

Pressure measuring range100mbar...40bar
(1.5psi...600psi)

Main wetted partsCeraphire ceramic
Alloy C
316L
Monel
PVDF

Process connectionThreads
Flanges
Tri-Clamp ISO2852
Hygienic connections

Max. measurement distance400m (1312ft) H2O

Communication4 ... 20 mA HART
PROFIBUS PA
FOUNDATION Fieldbus

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

Design approvalsEN 10204-3.1

Marine approvalGL/ ABS

Drinking water approvalsNSF

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.casc.endress.com/PMC71