The pressure transmitter PM32 measures gauge- and absolute pressure in gases, vapours and liquids and can be used in nearly all areas of process engineering.

The transmitter works on the two-wire principle and features a ceramic measuring element. Gauge pressures from 10 mbar up to 40 bar, and absolute pressures from 40 mbar up to 40 bar are converted into a standard pressure proportional 4...20-mA signal.

The BUS version uses digital communication for the signal.

The digital version can be equipped with a local display comprising digital display and bargraph whereas the analogue version allows only a bargraph display.

The applied technology ensures reliable and simple operation.

The transmitter PM32 comprises the measuring cell, the process coupling and the electronics housing. The connecting terminals are accessible in a separate compartment after opening the lid.

The process medium acts direct onto the ceramic measuring diaphragm.

Digital-electronics provides widespread operating and adjustment facilities with the corresponding smart hand-held terminal or via PC engineering. It realises precise signal processing and monitors the transmitter function from sensor to output function. Local operation is performed by means of push buttons and the pluggable display. The required pressure signals must be provided as reference and will be stored via push button operation.

It also is possible to set inverse signal direction with the smart version.

The transmitter monitoring function generates an alarm if any fault is being detected. The alarm acts onto the analogue output signal and can be set in its function.

Based upon the used measuring cell a turn down of 10:1 is possible.

The transmitter PM32 is an intelligent pressure transmitter with flush mounted ceramical cell.

Process couplings: threaded, sanitary, flanges from 10 mbar up to 40 bar

Self monitoring

Local display and adjustment

Multiple overload

Explosion protection to ATEX 100

Analogue, Smart- or BUS- function

<table>
<thead>
<tr>
<th>GAUGE PRESSURE</th>
<th>Type of cell</th>
<th>Measuring limits</th>
<th>min. span</th>
<th>overload</th>
</tr>
</thead>
<tbody>
<tr>
<td>1C</td>
<td>0.1</td>
<td>0...0.1</td>
<td>0.01</td>
<td>4</td>
</tr>
<tr>
<td>1F</td>
<td>0.4</td>
<td>0...0.4</td>
<td>0.4</td>
<td>7</td>
</tr>
<tr>
<td>1H</td>
<td>1</td>
<td>0...1</td>
<td>0.1</td>
<td>10</td>
</tr>
<tr>
<td>1M</td>
<td>4</td>
<td>0...4</td>
<td>0.4</td>
<td>25</td>
</tr>
<tr>
<td>1P</td>
<td>10</td>
<td>0...10</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>1S</td>
<td>40</td>
<td>0...40</td>
<td>4</td>
<td>60</td>
</tr>
<tr>
<td>5C</td>
<td>±0.1</td>
<td>-0.1...+0.1</td>
<td>0.02</td>
<td>4</td>
</tr>
<tr>
<td>5F</td>
<td>±0.4</td>
<td>-0.4...+0.4</td>
<td>0.08</td>
<td>7</td>
</tr>
<tr>
<td>5H</td>
<td>±1</td>
<td>-1...+1</td>
<td>0.2</td>
<td>10</td>
</tr>
<tr>
<td>5M</td>
<td>-1...4</td>
<td>-1...+4</td>
<td>0.5</td>
<td>25</td>
</tr>
<tr>
<td>5P</td>
<td>-1...10</td>
<td>-1...+10</td>
<td>1</td>
<td>40</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ABSOLUTE PRESSURE</th>
<th>Type of cell</th>
<th>Measuring limits</th>
<th>min. span</th>
<th>overload</th>
</tr>
</thead>
<tbody>
<tr>
<td>2F</td>
<td>0.4</td>
<td>0...0.4</td>
<td>0.04</td>
<td>7</td>
</tr>
<tr>
<td>2H</td>
<td>1</td>
<td>0...1</td>
<td>0.1</td>
<td>10</td>
</tr>
<tr>
<td>2M</td>
<td>4</td>
<td>0...4</td>
<td>0.4</td>
<td>25</td>
</tr>
<tr>
<td>2P</td>
<td>10</td>
<td>0...10</td>
<td>1</td>
<td>40</td>
</tr>
<tr>
<td>2S</td>
<td>40</td>
<td>0...40</td>
<td>4</td>
<td>60</td>
</tr>
</tbody>
</table>

**Minimum pressure**

For cell 0.1 bar: up to 0.7 bar abs

For all other cells: resistant to 0 bar abs

**PROCESS MEDIA**

Gases, vapours, liquids, abrasive, aggressive or corrosive with suitable materials
WETTED MATERIALS

Diaphragm
- Al₂O₃

Gasket
- VITON; VITON degreased
- EPDM
- KALREZ; Chemraz
- HNBR

Process coupling
- Stainless Steel SS 316 L (1.4435)

Process conditions

Process temperature: -40...+125 °C

Limit process temperature
For flush mounted ceramics: cleaning temp. +150 °C (302°F) up to 60 minutes.

OUTPUT

 Аналоговый/Smart

Signal
- 4...20 mA
- 4...20 mA, with superimposed communication protocol

Signal on alarm
- > 20.5 mA or < 3.6 mA
- Settable to > 20.5 mA or < 3.6 mA or HOLD

Ripple
- HART, measured on 500 Ω
- 47...125 Hz
- Noise: 500 Hz up to 10 kHz

Characteristic
- Pressure proportional

Conformity error incl. hysteresis and reproducibility
- ± 0.2 %

Integration time (settable)
- 0 s, 2 s
- 0 s, 2 s, via HART 0...40 s

Rise time
- 60 ms
- 220 ms

Response time
- 180 ms
- 500 ms

Warm-up time
- 200 ms
- 1 s

Long term drift
- 0.1 % (FS) / year

Output BUS: Profibus PA

MAX. LOAD

\[
R_{load} = \frac{U_{supply} - 1.15[V]}{0.023[A]} - R_{load}[Ω]
\]

DISPLAY

Analog signal via 28 segment LCD bargraph 0...100 %; for smart additional 4 digit 7 segment display.

Fig. 3 Display module smart

OPERATION

Analogue
- Adjustment of zero and span via DIP switches and two potentiometer direct. Selection of damping.

Smart

Bus

EXPLOSION PROTECTION

Mode: ATEX 100, II 1 / 2 G, EEx ia IIC T6

Certificate of conformity
- No. applied for

Mounting
- Transmitter in hazarded area zone 1

ENVIRONMENTAL CONDITIONS

PERMISSIBLE TEMPERATURES

For operation: -40...+85 °C

For storage: -40...+100 °C (with display +85 °C)

Fig. 4 Threaded couplings, flush mounted
Temperature effect \( T_K \)*) for span start and span (Referred to nominal value of cell)

*) But not exceeding error due to thermal effects.

Thermal effect
Referred to set span

\[
\pm \left( \frac{X\%}{TD} + 0.3\% \right)
\]

(TD = nominal value/set span)

Climatic class
4K4H to DIN EN 60721-3

Vibrations
No effects with 4 mm stroke at 5...15 Hz, or 2g at 15...150 Hz, or 1 g at 150...2000 Hz

ELECTROMAGNETIC COMPATIBILITY
Complies with EN 50 081-1 and EN 50 082-2 as also NAMUR recommendation NE21: effect < 0.5 %

INSTALLATION CONDITIONS
Orientation as required, orientation-dependent zero shifts up to 3 mbar can be adjusted.

WEIGHT
approximately 1.3 up to 1.5 kg plus flanges. Flange versions see list.

ACCESSORY
Instructions
Analogue electronics 9499-040-64511
Smart-electronics 9499-040-64311
ORDERING STRUCTURE

Housing / el. conn. 1) / EEx
- Standard; M20 x 1,5
- EEx; M20 x 1,5
- Standard; ½-inch NPT
- EEx; ½-inch NPT
- Standard; connector HAN 7
- EEx; connector HAN 7
- Standard; IP68, fixed cable
- EEx; IP 68, fixed cable

1) Connection for Profibus via M12 x 1 plug

Process- couplings
- 0 G 2 A EN 837; SS316L (1.4435)
- 1 2”; NPT; SS316L
- 2 DIN 11851; DN 50; SS316L
- 3 Triclamp 2”; SS316L
- 4 SMS 2”; SS316L
- 5 DN50,PN40 DIN flange SS316L
- 6 DN50,PN40 DIN flange HALAR
- 7 ANSI 2”-flange ,150 lbs, SS316L
- 8 ANSI 2”-flange ,150 lbs, HALAR
- 9 Other

Measuring span...
- Span within the sensor limits
- in...
- mbar / bar
- kPa / MPa
- mm / m H2O
- inch H2O
- kgf / cm²
- psi
- from...to...to spec.

Pressure
- 0 gauge
- 1 absolute
- 2 gauge with start at minus

Electronic / Display
- analogue
- analogue, Bargraph
- smart
- smart, display
- Profibus PA
- Profibus, display

Gasket
- FPM / VITON
- FPM / VITON degreased
- EPDM
- KALREZ
- Chemraz
- HNBR (FDA/hygienic)

Measuring cell
- 0 0,1 bar
- 1 0,4 bar
- 2 1bar
- 3 4 bar
- 4 10 bar
- 5 40 bar

Manual
- 0 without
- E english
- F french
- D german

Deutschland
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