



## Main features

- 0 ... 25 bar up to 0 ... 1000 bar
- Robust stainless steel housing
- Compact design
- Media temperature up to 150 °C

## Applications

- Mobile hydraulic applications
- Heavy vehicles

## Technical specifications

|   |                                   |
|---|-----------------------------------|
| Measuring principle   | Resistive thin film               |
| Measuring ranges  | 0 ... 25 bar up to 0 ... 1000 bar |
| Type of pressure  | Relative                          |
| Accuracy (20 °C)<br><small>(Includes linearity, hysteresis, repeatability, error of span and zero point according limit point adjustment)</small> | ≤ ± 0.5% FS                       |
| Total error   |                                   |
| 0 ... + 80 °C   | ≤ ± 1.0% FS                       |
| -25 ... +100 °C   | ≤ ± 1.5% FS                       |
| -40 ... +125 °C   | ≤ ± 2.5% FS                       |
| Long term stability   | ≤ ± 0.2% FS / Year                |
| Response time<br>(10 ... 90%)   | ≤ 1 ms                            |

## Environment

|                           |                  |
|---------------------------|------------------|
| Temperature               |                  |
| Storage                   | -40 ... + 125 °C |
| Compensated range         | 0 ... + 80 °C    |
| Medium                    | -40 ... + 150 °C |
| Ambient                   | -40 ... + 125 °C |
| Protection rating         | IP67 (EN 60529)  |
| Vibration<br>IEC60068-2-6 | 20 g             |
| Shock<br>IEC60068-2-27    | 500 g            |

## Electrical specification

|                 |  |
|-----------------|--|
| Output signal / | 4 ... 20 mA / 9 ... 36 VDC                         |
| Power supply    | 1 ... 6 V / 9 ... 36 VDC                           |
|                 | 0 ... 5 V / 9 ... 36 VDC                           |
|                 | 0 ... 10 V / 14 ... 36 VDC                         |
|                 | 0.5 ... 4.5 V (10 ... 90% VDC) / 5 VDC ratiometric |

## Material

|                    |                    |
|--------------------|--------------------|
| Process connection | SS 1.4548 AISI 630 |
| Housing            | SS 1.4301 AISI 304 |
| Diaphragm          | SS 1.4548 AISI 630 |
| Sealing            | FKM                |

## Approvals

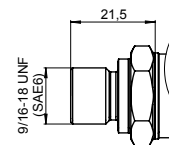
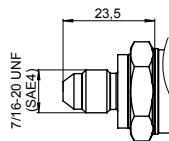
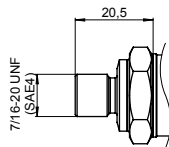
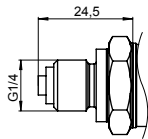
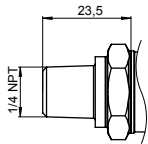
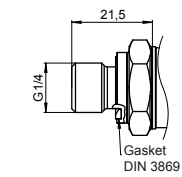
|                  |   |
|------------------|---|
| CE conformity    | EMC directive 2004/108/CE in accordance with EN 61000-6-2, EN 61000-6-3 |
| E1 accreditation |   |

## Measuring ranges and overpressure safety

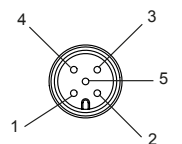
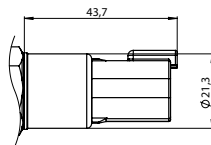
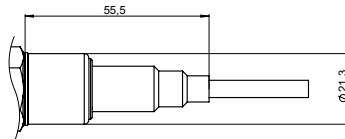
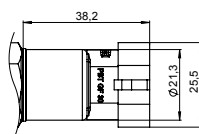
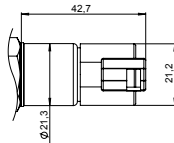
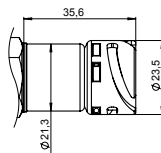
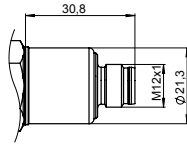
|                       | Pressure in bar |          |           |                        |                        |            |
|-----------------------|-----------------|----------|-----------|------------------------|------------------------|------------|
| <b>Pressure range</b> | 0 ... 25        | 0 ... 60 | 0 ... 100 | 0 ... 160<br>0 ... 250 | 0 ... 400<br>0 ... 600 | 0 ... 1000 |
| <b>Over pressure</b>  | 40              | 100      | 200       | 500                    | 800                    | 1200       |
| <b>Burst pressure</b> | 60              | 500      | 1000      | 2500                   | 4000                   | > 4000     |

## Dimensions and electrical connections

### Process connections



### Electrical connections



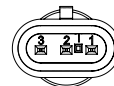
Connector M12, 5 pin, IP67



Bayonet connector DIN 72585, IP67



DT04-3P, IP67



AMP superseal 1,5, IP67

### Cable output



DT04-4P

Pin assignment :  
VDC = 1, Signal = 3 (2 wire-technique)  
VDC = 1, GND = 3, Signal = 4  
(3 wire-technique)  
Do not connect other PIN's

Pin assignment :  
VDC = 1, Signal = 2 (2 wire-technique)  
VDC = 1, GND = 2, Signal = 3  
(3 wire-technique)  
Do not connect other PIN's

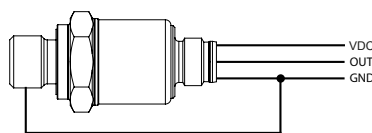
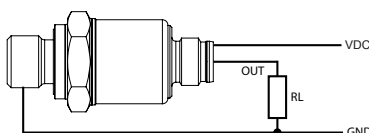
Pin assignment :  
VDC = A, Signal = C (2 wire-technique)  
VDC = A, Signal = B, GND = C  
(3 wire-technique)

Pin assignment :  
VDC = 3, Signal = 1 (2 wire-technique)  
VDC = 3, GND = 1, Signal = 2  
(3 wire-technique)

Pin assignment :  
VDC = BN, Signal = BU (2 wire-technique)  
VDC = BN, GND = BU, Signal = BK  
(3 wire-technique)

Pin assignment :  
VDC = 1, Signal = 2 (2 wire-technique)  
VDC = 1, GND = 2, Signal = 3  
(3 wire-technique)  
Do not connect other PIN's

## Recommended terminal layout



## Ordering details PBM4

|                                    | PBM4  | - | 1 | . | 3 | . | x | . | xx | . | R | . | xx | . | xx | . | xx | . | 6 | x |
|------------------------------------|---|---|---|---|---|---|---|---|----|---|---|---|----|---|----|---|----|---|---|---|
| <b>Model</b>                       | Compact industrial pressure transmitter for hydraulic application |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | PBM4  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Housing material</b>            | Stainless steel 1.4301 AISI 304                                   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 1   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Accuracy</b>                    | 0.5% FS   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 3   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Pressure unit</b>               | Bar   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | Psi   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | B   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | H   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Pressure range and unit</b>     | 0 ... 25 bar  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 26  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 60 bar  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 29  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 100 bar   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 31  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 160 bar   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 33  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 250 bar   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 35  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 400 bar   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 38  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 600 bar   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 39  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 1000 bar  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 41  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 400 psi   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 26  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 1000 psi  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 30  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 1500 psi  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 31  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 3000 psi  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 34  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 6000 psi  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 38  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 9000 psi  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 39  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 15000 psi   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 41  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Kind of pressure</b>            | Relative  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | R   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Output signal</b>               | 4 ... 20 mA   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | A1  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 10 V  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | A2  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 1 ... 6 V   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | A8  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0 ... 5 V   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | A4  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0.5 ... 4.5 V ratiometric   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | A6  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Output connection</b>           | M12, 5 pins   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 15  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | Cable (2 m)   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 52  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | Bayonet DIN 72585   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 85  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | AMP Superseal 1.5   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 86  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | DT04, 4 pins  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 87  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | DT04, 3 pins  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 88  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Process connection</b>          | G1/4 EN 837   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 02  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 1/4 NPT   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 04  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | G1/4 DIN 3852   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 06  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | G1/4 DIN 3852 with Ø 0.6 mm pressure channel                      |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 26  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 9/16-18 UNF with o-ring (SAE 6)                                   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 36  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 7/16-20 UNF with cone (SAE 4)                                     |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 34  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 7/16-20 UNF with o-ring (SAE 4)                                   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 35  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Process connection material</b> | Stainless steel 1.4548 / AISI 630                                 |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 6   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
| <b>Sealing</b>                     | Without   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 0   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | FKM (Viton®)  |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |
|                                    | 3   |   |   |   |   |   |   |   |    |   |   |   |    |   |    |   |    |   |   |   |