

# 18.600 G

## OEM Pressure Transmitter Pneumatics



### Applications

- ▶ compressed air network
- ▶ general mechanical engineering

### Characteristics

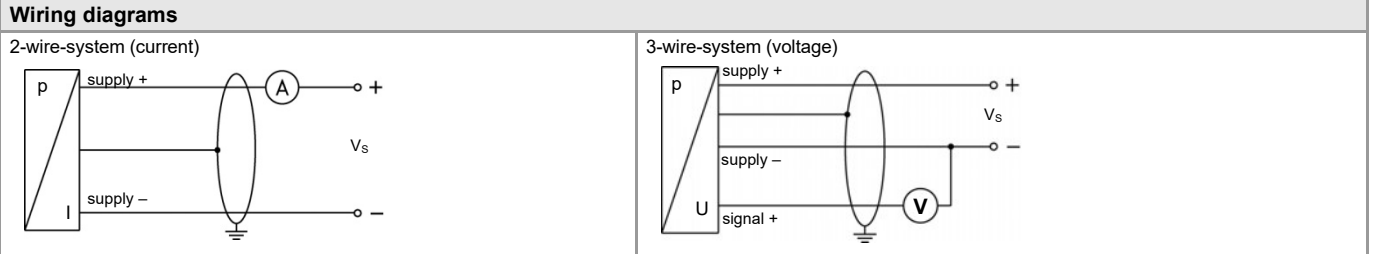
- ▶ silicon sensor without media isolation
- ▶ accuracy 0.5 % FSO according to IEC 60770
- ▶ nominal pressure ranges from 0 ... 100 mbar up to 0 ... 6 bar

### Technical Data



| Input pressure range   |         |  |     |  |     |  |     |         |     |                            |    |  |  |
|--|---------|--|-----|--|-----|--|-----|---------|-----|----------------------------|----|--|--|
| Nominal pressure gauge   | [bar]   | -1 ... 0   | 0,1 | 0,25   | 0,4 | 0,6                                      | 1   | 1,6     | 2,5 | 4                          | 6  |  |  |
| Overpressure   | [bar]   | 3  | 0,5 | 1  | 1   | 3  | 3   | 6       | 10  | 10                         | 20 |  |  |
| Burst pressure   | [bar]   | 5  | 1,5 | 3  | 3   | 3  | 7,5 | 7,5     | 15  | 25                         | 25 |  |  |
| Output signal / Supply   |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Standard   |         | 2-wire:  |     | 4 ... 20 mA                                    |     |  |     | /       |     | $V_S = 8 \dots 32 V_{DC}$  |    |  |  |
| Option   |         | 3-wire:  |     | 0 ... 10 V                                     |     |  |     | /       |     | $V_S = 14 \dots 30 V_{DC}$ |    |  |  |
|  |         | 3-wire ratiometric:                                  |     | 10 ... 90% of $V_S$                            |     |  |     | /       |     | $V_S = 2.7 \dots 5 V_{DC}$ |    |  |  |
| Performance  |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Accuracy <sup>1</sup>  |         | $\leq \pm 0.5 \%$ FSO                                |     |  |     |  |     |         |     |                            |    |  |  |
| Permissible load   |         | 2-wire:  |     | $R_{max} = [(V_S - V_{Smin}) / 0.02 A] \Omega$ |     |  |     |         |     |                            |    |  |  |
|  |         | 3-wire:  |     | $R_{min} = 10 k\Omega$                         |     |  |     |         |     |                            |    |  |  |
| Influence effects  |         | supply:  |     | 0.05 % FSO / 10 V                              |     |  |     | load:   |     | 0.05 % FSO / k $\Omega$    |    |  |  |
| Response time  |         | 2-wire:  |     | $\leq 10$ msec                                 |     |  |     | 3-wire: |     | $\leq 3$ msec              |    |  |  |
| Long term stability  |         | $\leq \pm 0.2 \%$ FSO / year at reference conditions |     |  |     |  |     |         |     |                            |    |  |  |
| Measuring rate   |         | 1 kHz  |     |  |     |  |     |         |     |                            |    |  |  |
| <sup>1</sup> accuracy according to IEC 60770 – limit point adjustment (non-linearity, hysteresis, repeatability) |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Thermal effects (Offset and Span)  |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Nominal pressure $P_N$   | [bar]   | -1 ... 0   |     |  |     | $\leq 0.4$                               |     |         |     | $> 0.4$                    |    |  |  |
| Tolerance band   | [% FSO] | $\leq \pm 1$   |     |  |     | $\leq \pm 1$                             |     |         |     | $\leq \pm 0.75$            |    |  |  |
| in compensated range   | [°C]    | 0 ... 70   |     |  |     |  |     |         |     | -20 ... 85                 |    |  |  |
| Permissible temperatures   |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Permissible temperatures   |         | medium: -25 ... 125 °C                               |     |  |     | electronics / environment: -25 ... 85 °C |     |         |     | storage: -40 ... 85 °C     |    |  |  |
| Electrical protection  |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Short-circuit protection   |         | permanent  |     |  |     |  |     |         |     |                            |    |  |  |
| Reverse polarity protection  |         | no damage, but also no function                      |     |  |     |  |     |         |     |                            |    |  |  |
| Electromagnetic compatibility  |         | emission and immunity according to EN 61326          |     |  |     |  |     |         |     |                            |    |  |  |
| Mechanical stability   |         |  |     |  |     |  |     |         |     |                            |    |  |  |
| Vibration  |         | 10 g, 25 Hz ... 2 kHz                                |     |  |     | according to DIN EN 60068-2-6            |     |         |     |                            |    |  |  |
| Shock  |         | 100 g / 11 msec                                      |     |  |     | according to DIN EN 60068-2-27           |     |         |     |                            |    |  |  |

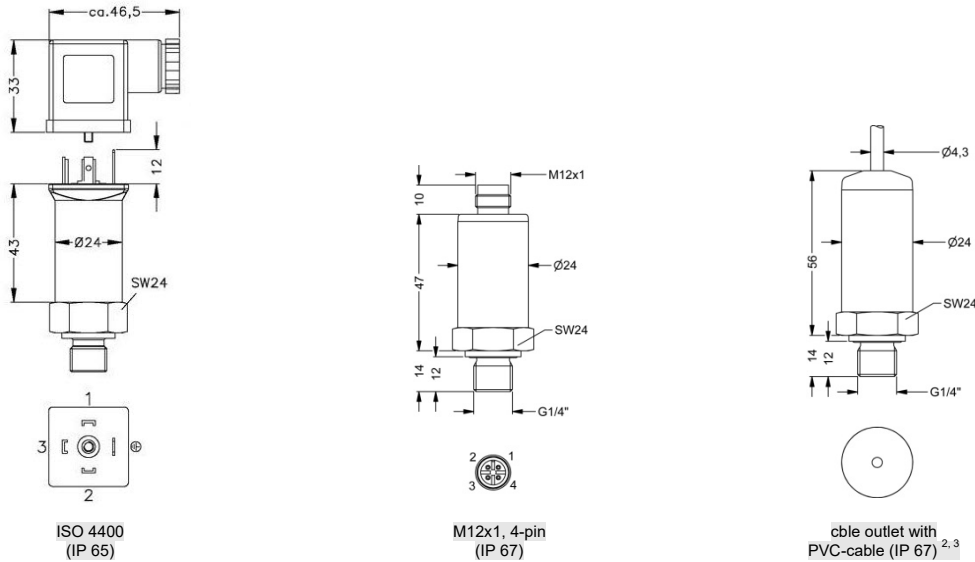
|                         |   |
|-------------------------|---|
| <b>Materials</b>        |   |
| Pressure port / housing | stainless steel 1.4301 (304)  |
| Seals                   | FKM   |
| Sensor                  | stainless steel 1.4404 (316L), silicon, glass, epoxy or RTV                         |
| Media wetted parts      | pressure port, seals, sensor  |
| <b>Miscellaneous</b>    |   |
| Permissible media       | pressurized air, non-aggressive gases   |
| Current consumption     | 2-wire: max. 25 mA<br>3-wire voltage: max. 7 mA (short circuit current: max. 20 mA) |
| CE-conformity           | EMC Directive: 2014/30/EU   |



**Pin configuration**

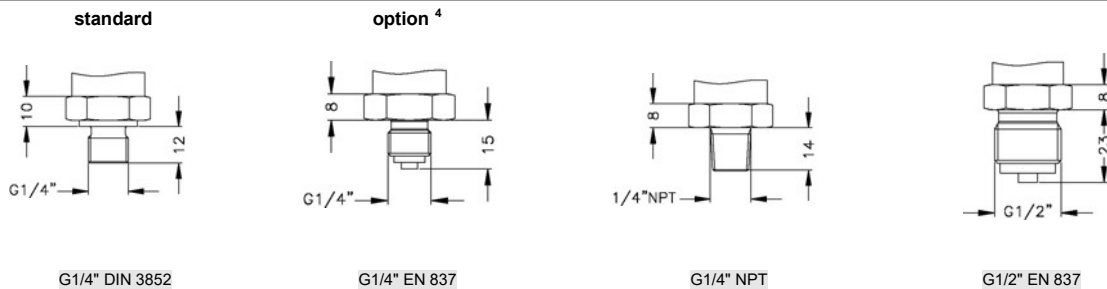
| Electrical connections | ISO 4400   | M12x1 (4-pin) | cable colour (IEC 60757) |
|------------------------|------------|---------------|--------------------------|
| Supply +               | 1          | 1             | wh (white)               |
| Supply -               | 2          | 2             | bn (brown)               |
| Signal + (for 3-wire)  | 3          | 3             | gn (green)               |
| Shield                 | ground pin | 4             | gnye (green-yellow)      |

**Electrical connections (dimensions in mm)**



<sup>2</sup> standard: 2 m PVC cable without ventilation tube (permissible temperatur: -5 ... 70 °C)  
<sup>3</sup> different cable types and lengths available, permissible temperatur depends on kind of cable

**Mechanical connection (dimensions in mm)**



<sup>4</sup> other mechanical connections on request

### Ordering code 18.600 G

18.600 G - [ ] [ ] [ ] [ ] - [ ] - [ ] - [ ] - [ ] [ ] [ ] [ ] - [ ] [ ] [ ] [ ] - [ ] - [ ] [ ] [ ] [ ]

|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|------------------------------|--|---|---|---|---|---|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---------|---------|---------|
| <b>Input</b>                 | [bar]                                    |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 0.10                                     | 1 | 0 | 0 | 0 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 0.25                                     | 2 | 5 | 0 | 0 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 0.40                                     | 4 | 0 | 0 | 0 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 0.60                                     | 6 | 0 | 0 | 0 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 1.0                                      | 1 | 0 | 0 | 1 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 1.6                                      | 1 | 6 | 0 | 1 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 2.5                                      | 2 | 5 | 0 | 1 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 4.0                                      | 4 | 0 | 0 | 1 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 6.0                                      | 6 | 0 | 0 | 1 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | -1 ... 0                                 | X | 1 | 0 | 2 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | customer                                 | 9 | 9 | 9 | 9 |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  | consult |         |         |
| <b>Pressure</b>              | gauge                                    |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              |  |   |   |   |   | R |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
| <b>Output</b>                |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 4 ... 20 mA / 2-wire                     |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | 1       |         |
|                              | 0 ... 10 V / 3-wire                      |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | 3       |         |
|                              | 10 ... 90% of $V_S$ / 3-wire ratiometric |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | R       |         |
|                              | customer                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | 9       |         |
|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | consult |         |
| <b>Accuracy</b>              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | 0.5 % FSO                                |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | 5       |         |
|                              | customer                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | 9       |         |
|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         | consult |         |
| <b>Electrical connection</b> |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | Male and female plug ISO 4400            |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 1 0 0   |
|                              | Male plug M12x1 (4-pin), plastic         |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | M 0 0   |
|                              | Cable outlet with PVC-cable <sup>1</sup> |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | T M 0   |
|                              | customer                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 9 9 9   |
|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | consult |
| <b>Mechanical connection</b> |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | G1/4" DIN 3852                           |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 3 0 0   |
|                              | G1/4" EN 837                             |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 4 0 0   |
|                              | 1/4" NPT                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | N 4 0   |
|                              | customer                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 9 9 9   |
|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | consult |
| <b>Seals</b>                 |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | FKM                                      |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 1       |
|                              | customer                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 9       |
|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | consult |
| <b>Special version</b>       |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         |         |
|                              | standard                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 0 0 0   |
|                              | customer                                 |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | 9 9 9   |
|                              |  |   |   |   |   |   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |         |         | consult |

<sup>1</sup> standard: 2 m PVC cable without ventilation tube (permissible temperature: -5 ... 70 °C)