



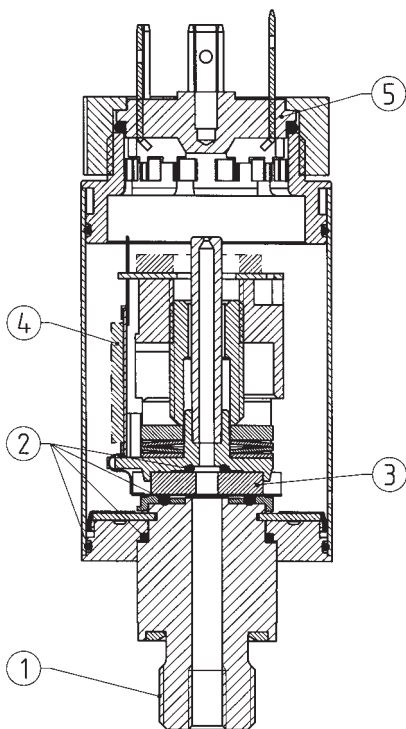


EDITION 12/2003

### Technical overview

The pressure transmitter of type series 500 with proved ceramic technology, features calibrated and amplified sensor signals which are available as standardized voltage or current outputs.

Various application-specific pressure an electrical connections can be provided.



### Legend to cross-section drawing

- 1 Connection fitting
- 2 Seals
- 3 Ceramic element
- 4 Hybrid electronics
- 5 Connector DIN 43650

### Pressure ranges

Relative pressure (Gage)  
(measurement of pressure relative to ambient pressure).  
Absolute pressure.

### Overload

2x measuring range (fs)  
max. 1000 bar

### Rupture pressure

3x measuring range (fs)  
At 600 bar, 1200 bar

### Accuracy

Total of linearity, hysteresis, repeatability <math>\pm 0.4\% \text{ fs}</math>  
Adjustment accuracy zero point and full scale (repeatably)

0 – 5 V	$\pm 30 \text{ mV}$
1 – 6 V	$\pm 30 \text{ mV}$
0 – 10 V	$\pm 60 \text{ mV}$
4 – 20 mA	$\pm 0.1 \text{ mA}$
10 – 90 %	$\pm 30 \text{ mV}$

### Housing materials in contact with the medium

Ceramic/Stainless steel 1.4305  
(AISI 303)

Sealing material:  
optionally FPM, EPDM, NBR, MVQ according to order code selection table.

### Case material

Cover stainless steel

### Temperature influences

Medium and ambient temperature  
–15 °C to + 80 °C

Medium and ambient temperature  
– 15 °C to – 40 °C on request

TC zero point  
<math>\pm 0.04\% \text{ fs/K}</math> (< 60 bar)  
<math>\pm 0.05\% \text{ fs/K}</math> (> 60 bar)

TC sensitivity  
typically <math>\pm 0.015\% \text{ fs/K}</math>

### Load cycle

< 50 Hz

### Dynamic response

Suitable for static and dynamic measurements.  
Response time < 5 ms

### Pressure connections

Inside thread G 1/4

Outside thread G 1/4  
sealed at back and manometer (combi)

Outside thread G 1/4  
sealed at back DIN 3852/E

### Weight

G 1/4 outside 160 grams  
G 1/4 inside 140 grams

### Installation arrangement

Unrestricted

### Signal

### Power supply

- 0 – 5 V 11 – 33 VDC  
3-wire cable
- 1 – 6 V 11 – 33 VDC  
3-wire cable
- 0 – 10 V 18 – 33 VDC  
3-wire cable
- 4 – 20 mA 11 – 33 VDC  
2-wire cable
- 10 – 90 % 4.5 – 6.0 VDC  
3-wire cable  
ratiometric

• Short circuit-proof and protected against polarity reversal. Each connection against other with max. +/- supply voltage.

### Load

0 – 5 V	>10 kOhm/<100 nF
1 – 6 V	>10 kOhm/<100 nF
0 – 10 V	>10 kOhm/<100 nF
4 – 20 mA	$\leq \frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$ [Ohm]
10 – 90 %	>10 kOhm/<100 nF

### Current consumption

With max. signal output:	
0 – 5.0 V	< 2 mA
1 – 6.0 V	< 2 mA
0 – 10.0 V	< 3 mA
4 – 20 mA	< 20 mA
10 – 90 %	< 2 mA

### Electrical connections / Protection standard

Cable 1.5 meters, IP 65  
Cable 1.5 meters, IP 67  
Connector DIN 43650-A, IP 65  
Connector M 12x1, IP 67

### Calibration

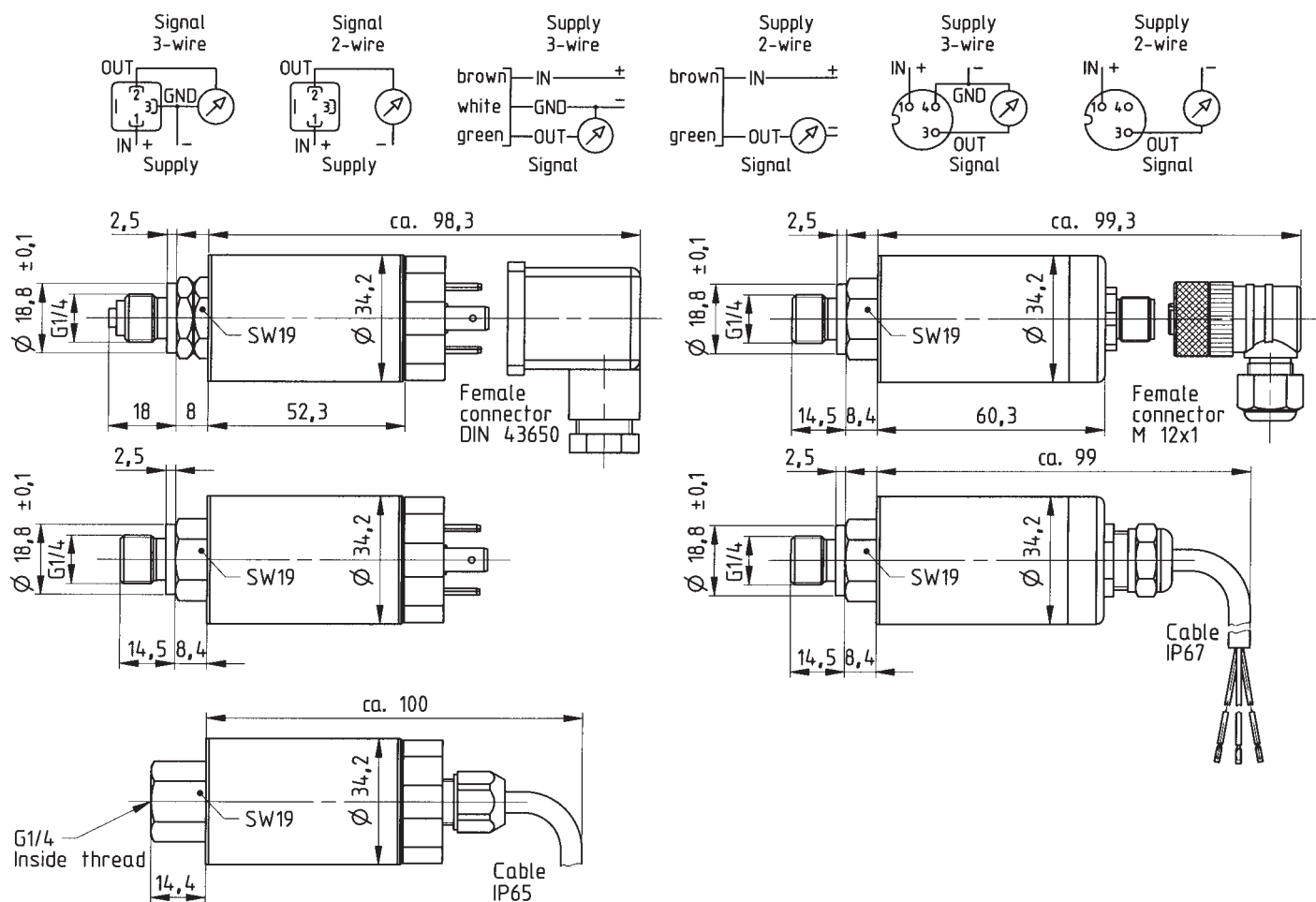
Calibrated in the factory.

### The distinct advantages

- Compact, rugged construction for a wide range of industrial applications
- Ideal for OEM batch quantities from 50 pieces on
- High resistance to extreme temperatures
- No mechanical aging
- No mechanical creepage







**Electromagnetic compatibility:**  
 CE conformity (EMC) by application of harmonized standards: Interference stability EN 50082-2, IEC 61000-6-2 and EN 61326-1, interference emit EN 50081-1, EN 55022, CISPR 22, EN 61326-1

Interference stability	Test standard	Effects
Electrostatic discharge ESD	EN 61000-4-2 15 kV air discharge, 8 kV contact discharge	No effect
High-frequency electromagnetic radiation (HF)	EN 61000-4-3 10 V/m, 80...1000 MHz	No effect
Conducted HF interference	EN 61000-4-6 10 V, 0.15 ... 80 MHz	No effect
Fast transients (burst)	EN 61000-4-4 2 kV	No effect
Surge	EN 61000-4-5 1 kV (42 Ohm, 0.5 µF) 500 V (12 Ohm, 9/18 µF)	No failure
Magnetic fields	EN 61000-4-8 30 A/m, 50 Hz	No effect
Insulation voltage	500 VDC 350 VAC	No effect No failure
Interference emit	Test standard	Effects
Conducted interference	EN 55022 0.15...30 MHz	No effect
Radiation from housing	30...1000 MHz, 10 meters	No effect

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