

Pressure transmitter

Relative -1 ... 600 bar

Absolute 2.5 ... 16 bar

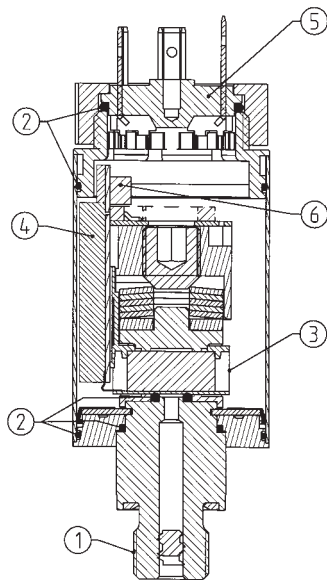




Technical overview

The pressure transmitter of type series 507 with its proven ceramic technology, features calibrated and amplified sensor signals which are available as standardised voltage or current outputs.

Various application specific pressure and electrical connections can be provided.



Legend to cross-section drawing

- 1 Connection fitting
- 2 Seals
- 3 Ceramic element
- 4 Electronics
- 5 Connector DIN EN 175301-803
- 6 Potentiometer for zero point and full scale

The distinct advantages

- Compact, rugged construction for a wide range of industrial applications
- Ideal from single pieces to small and larger quantities
- High resistance to extreme temperatures
- No mechanical ageing
- No mechanical creepage

Pressure ranges

Relative pressure (Gauge) (differential 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 and repeatability
< +/- 0.3% fs

Adjustment accuracy zero point and full scale (repeatable)
< +/- 0.3% fs

Case material

Cover stainless steel

Materials in contact with the medium

Ceramic/Stainless steel 1.4305
Sealing material:
options FPM, EPDM, NBR, MVQ
acc. to order code selection table

Temperature influences

Medium and ambient temperature
- 15 ...+ 80 °C

Medium and ambient temperature
- 15 ...- 40 °C on request

TC zero point < +/- 0.04% fs (< 60 bar)

< +/- 0.05% fs (> 60 bar)

TC sensitivity < +/- 0.015% fs/K typ.

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 DIN 3852/E sealed at back

Weight

Version inside thread	140 g
Version outside thread	160 g

Installation arrangement

Unrestricted

Signal

0 – 5 V

1 – 6 V

0 – 10 V

4 – 20 mA

Power supply

11 – 33 VDC

3-wire cable

11 – 33 VDC

3-wire cable

18 – 33 VDC

3-wire cable

11 – 33 VDC

2-wire cable

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

Load

0 – 5 V

1 – 6 V

0 – 10 V

4 – 20 mA

> 10 k Ohm/<100 nF

> 10 k Ohm/<100 nF

> 10 k Ohm/<100 nF

$\leq \frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}}$ [Ohm]

Current consumption

With max. signal output:

0 – 5 V

1 – 6 V

0 – 10 V

4 – 20 mA

< 2 mA

< 2 mA

< 3 mA

< 20 mA

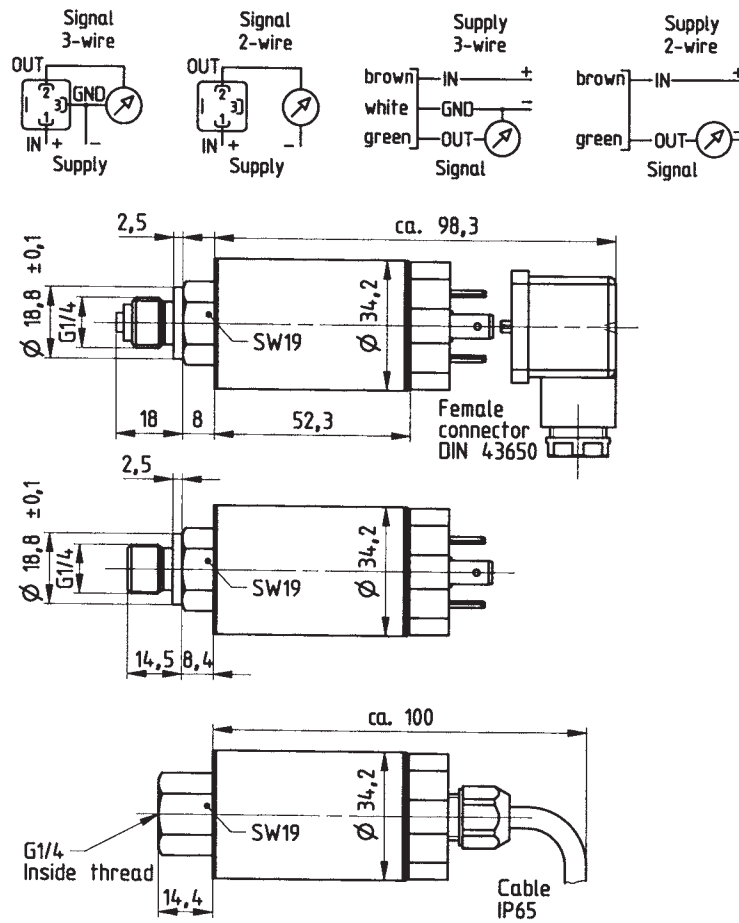
Electrical connection / Protection standard

Cable 1.5 meters, IP 65

Connector DIN EN 175301-803-A, IP 65

Calibration by customer

Zero point and slope
+/- 2% fs



Electromagnetic compatibility: CE conformity (EMC) by application of harmonized standards: Interference stability EN 61000-6-2 and EN 61326-1, interference emit EN 61000-6-3 and EN 61326-1

Interference stability	Test standard	Effect
Electrostatic discharge (ESD)	EN 61000-4-2 15 kV air, 8 kV contact	no effect
High-frequency electromagnetic radiation (HF)	EN 61000-4-3 10 V/m, 80 ... 1000 Mz	no effect
Conducted HF interference	EN 61000-4-6 10 V, 0.15 ... 80 MHz	no effect
Fast transients (burst)	EN 61000-4-4 4 kV	no effect
Surge	EN 61000-4-5 Line-Case 1 kV, 42 Ohm, 0.5 µF Line-Case, Line-Line 500 V, 12 Ohm, 9 µF	no failure
Magnetic fields	EN 61000-4-8 30 A/m, 50 Hz	no effect
Insulation voltage	500 VDC 350 VAC	no effect
Interference emit	Test standard	Effect
Conducted interference	EN 55022 (CISPR 22) 0.15... 30 MHz	no emission
Radiation from housing	30...1000 MHz, 10 m	no emission