

Relative and absolute pressure transmitter

0 ... 2.5 – 40 bar



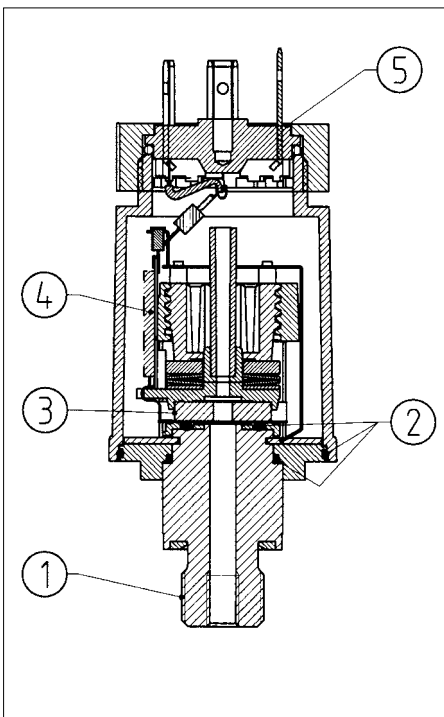
 **Huba Control**

FEINE MESSIDEEN FÜR DRUCK UND STRÖMUNG
FOR FINE PRESSURE AND FLOW MEASUREMENT
LA FINESSE DES MESURES DE PRESSION ET DE DÉBIT

Technical overview

The pressure transmitter of type series 501 with proven ceramic technology, features adjusted and amplified sensor signals which are available as standardised current outputs.

Various application specific pressure and electrical connections can be provided.



Legend to cross-section drawing

- 1 Pressure connection
- 2 Seals
- 3 Ceramic element
- 4 Hybrid electronics
- 5 Connector DIN EN 175301-803-A

The distinct advantages

- Compact construction
- Automated manufacture in large quantities for ideal price / performance ratio
- Robust ceramic sensor technology
- High resistance to extreme temperatures
- No mechanical creepage

Medium

Liquids and neutral gases

Pressure range

Relative 0 ... 2.5 – 40 bar
Absolute 0 ... 2.5 – 16 bar

Tolerable overload

2 x Measuring range (fs)

Rupture pressure 3 x Measuring range (fs)
but as a maximum 90 bar

Materials in contact with the medium

Pressure connection:
Stainless steel 1.4305 / AISI 303
Diaphragm: Ceramic Al₂O₃ (96%)
Sealing material: FPM, EPDM, NBR, MVQ

Case material

Cover PA 6, colour red

Temperature

Medium and ambience –15 ... +80 °C
Storage –40 ... +80 °C

Output

3-wire
0 ... 5 VDC
1 ... 6 VDC
0 ... 10 VDC
Ratiom. 10 ... 90% 5 VDC (4.75 ... 5.25)

Power supply

9 ... 33 VDC
10.4 ... 33 VDC
16.2 ... 33 VDC

2-wire

4 ... 20 mA
4 ... 20 mA
8 ... 33 VDC
10 ... 33 VDC

Load

3-wire > 10 kOhm / < 100 nF

2-wire

$\leq \frac{\text{supply voltage} - 10 \text{ V}}{0.02 \text{ A}}$ [Ohm]

Current consumption

At nominal pressure
3-wire
0 ... 5 V < 5 mA
1 ... 6 V < 5 mA
0 ... 10 V < 6 mA
Ratiom. 10 ... 90% < 3 mA

2-wire

4 ... 20 mA 20 mA

Dynamic response

Suitable for static and dynamic measurements

Response time < 5 ms
Load cycle < 50 Hz

Electrical connection

Cable 1.5 meters
Connector DIN EN 175301-803-A
Connector DIN EN 175301-803-C (mini DIN)

Polarity reversal protection

Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.

Protection standard

IP 65

Pressure connection

Inside thread G1/4
Outside thread G1/4 DIN 3852 form E
Other pressure connections on request

Installation arrangement

Unrestricted
Recommended:
Pressure connection downwards

Tests / Admissions

CE conform

Weight

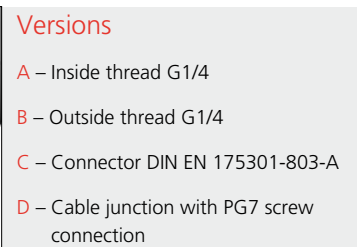
Inside thread, connector DIN approx. 95 g
Outside thread, connector DIN approx. 110 g
With cable 1.5 m, additional approx. 40 g

Packaging

Please state on order

Single packaging
in cardboard

Multiple packaging
in cardboard (25 pcs)



Parameter		Unit		
Tolerance zero point	max.	% fs	±	1.0
Tolerance full scale	max.	% fs	±	1.0
Resolution		% fs		0.1
Total of linearity, hysteresis and repeatability	max.	% fs	±	0.5
Long term stability acc. to DIN IEC 60770		% fs	±	1.0
TC zero point	max.	% fs/10 K	±	0.4
TC sensitivity ¹⁾	typ.	% fs/10 K	–	0.15
TC sensitivity ¹⁾	max.	% fs/10 K	–	0.3

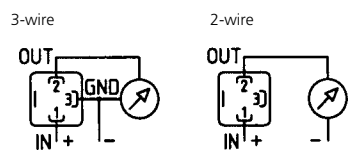
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Output	4 ... 20 mA	Pressure ranges	Order number
Power supply	10 ... 33 V	-1 ... 0 bar	501.914023151W -1...0 bar
Electrical connection ³⁾	Connector DIN EN 175301-803-A, IP 65	0 ... 10 bar	501.930023151
Pressure connection	G1/4 sealed at back with manometer	0 ... 25 bar	501.932023151
Sealing material	FPM Fluoro-caoutchouc		
Colour of cover	Black		

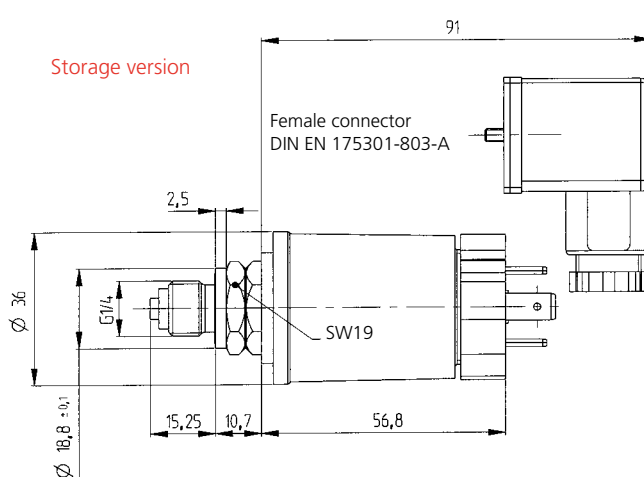
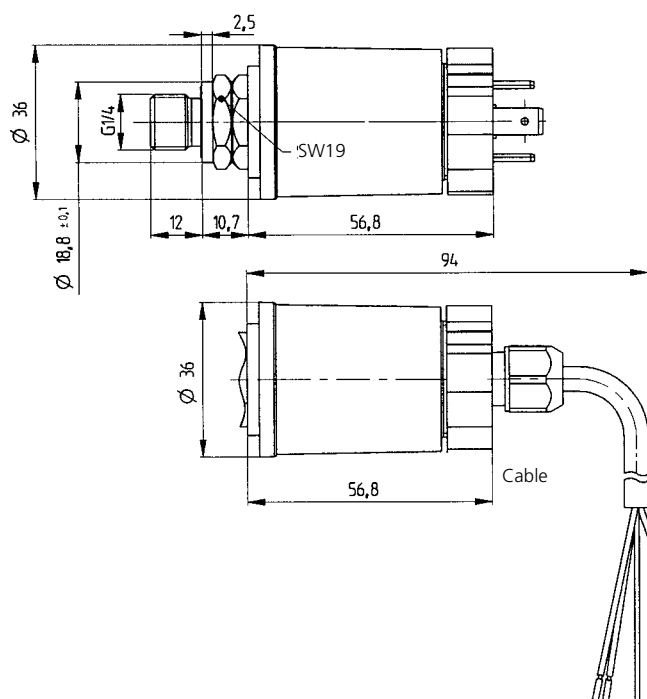
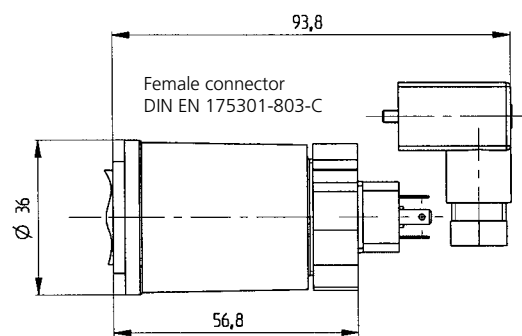
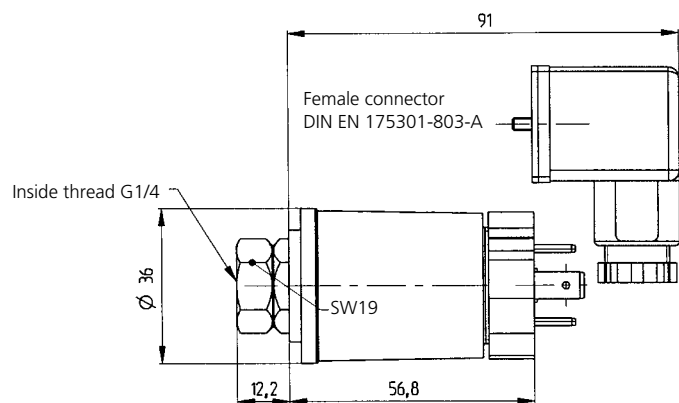
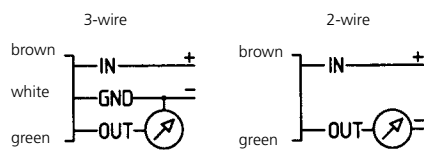
Female connector	DIN EN 175301-803-A	with seal (IP 65, when installed and latched)	Order number
Female connector	DIN EN 175301-803-C (mini DIN)	with seal (IP 65, when installed and latched)	103510
			104244

501 / EDITION 07/2006. Technical data subject to change.

Connector version



Cable version



Electromagnetic compatibility

CE conformity (EMC) by application of harmonized standards: Interference stability EN 61000-6-2 and EN 61326-1, Interference emit EN 6100063 and EN 61326-1

Interference stability	Test standard	Effect
Electrostatic discharge (ESD)	EN 61000-4-2	8 kV air, 6 kV contact no effect
High-frequency electromagnetic radiation (HF)	EN 61000-4-3	10 V/m, 80 ... 1000 MHz 3 V/m, 1 ... 3 GHz 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	Line-Line, Line-Case 500 V, 12 Ohm, 9 µF 1 kV, 42 Ohm, 0.5 µF 500 V, 2 Ohm, 18 µF no failure
Magnetic fields	EN 61000-4-8	Line-Line 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

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