

OEM Relative and absolute pressure transmitter type 501

Pressure ranges
-1 ... 0 – 60 bar



Type 501 pressure transmitters, with partially automated production processes, are suitable for larger quantity industrial OEM applications.

Various pressure and electrical connections, together with several standardised output signals, provide suitability for a wide variety of applications.

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

Technical overview

Pressure range

Relative	-1 ... 0 – 60 bar
Absolute	0 ... 2.5 – 16 bar

Operating conditions

Medium	Liquids and gases
Temperature	Medium / ambient -15 ... +80 °C Storage -40 ... +80 °C
Tolerable overload	2 x fs (max. 80 bar)
Rupture pressure	3 x fs (max. 90 bar)

Materials

Case	PA6	
Materials in contact with the medium	Sensor	Ceramic Al ₂ O ₃ (96%)
	Pressure connection	Stainless steel 1.4305 / AISI 303
	Sealing material	FPM, EPDM, NBR, MVQ

Electrical overview

	Output	Power supply	Load	Current consumption ¹⁾
2 wire	4 ... 20 mA	8.0 ... 33 VDC	< $\frac{\text{Supply voltage} - 8 \text{ V}}{0.02 \text{ A}}$ [Ohm]	< 20 mA
	4 ... 20 mA	10.0 ... 33 VDC	< $\frac{\text{Supply voltage} - 10 \text{ V}}{0.02 \text{ A}}$ [Ohm]	< 20 mA
	0 ... 5 V	9.0 ... 33 VDC	> 10 kOhm / < 100 nF	< 5 mA
3 wire	1 ... 6 V	10.4 ... 33 VDC	> 10 kOhm / < 100 nF	< 5 mA
	0 ... 10 V	16.2 ... 33 VDC	> 10 kOhm / < 100 nF	< 6 mA
	ration, 10 ... 90%	5 VDC ±5%	> 10 kOhm / < 100 nF	< 3 mA

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

Dynamic response

Response time	< 5 ms
Load cycle	< 50 Hz

Protection standard

IP 65

Electrical connection

Cable 1.5 m
Connector DIN EN 175301-803-A
Connector DIN EN 175301-803-C (industrial standard 9.4 mm)
Connector M12x1

Pressure connection

Inside thread	G ¼ with O-Ring sealing
	¼ -18 NPT
Outside thread	G ¼, sealed at back, DIN 3852-E
	R ¼ EN 10226
	G ¼, sealed at back and manometer (combi) G ½, sealed at back and manometer (combi)

Installation arrangement

Recommended: Pressure connection downwards
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Tests / Admissions

Electromagnetic compatibility	CE conformity acc. EN 61326-2-3
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Weight

With inside thread	~ 95 g
With outside thread	~ 110 g
With cable 1.5 m additional	~ 40 g

Packaging (Please state on order)

Single packaging in cardboard
Multiple packaging in cardboard per 25 pcs.

Accuracy

Parameter		Unite	
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 EN 60770		% fs	± 1.0
TC zero point ²⁾	max.	% fs/10K	± 0.4
TC sensitivity ²⁾	typ.	% fs/10K	- 0.15
TC sensitivity ²⁾	max.	% fs/10K	- 0.3

Test conditions: 25 °C, 45% RH, power supply 24 VDC
TC z.p. / TC s. -40 ... +80 °C

¹⁾ At nominal pressure

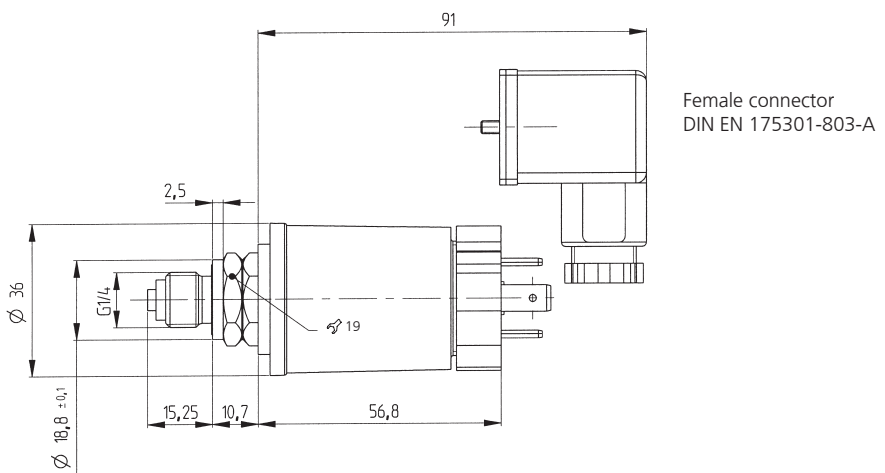
²⁾ TC = Temperature coefficient

Order code selection table 501. X X X X X X X X X X

Pressure mode	Relative	9																		
	Absolute	8																		
Pressure range	-1 ... 0 bar	9	0	0																
	0 ... 1 bar	9	1	1																
	0 ... 1.6 bar	9	1	2																
	0 ... 2.5 bar		1	4																
	0 ... 4 bar		1	5																
	0 ... 6 bar		1	7																
	0 ... 10 bar		3	0																
	0 ... 16 bar		3	1																
	0 ... 25 bar	9	3	2																
	0 ... 40 bar	9	3	3																
	0 ... 60 bar	9	4	0																
▲ Full scale signal at these pressures																				
Sealing material ¹⁾	FPM Fluoro elastomer																			
	EPDM Ethylene propylene																			
	NBR Butadiene Acrylonitrile																			
	MVQ Silicone polymer																			
Adjustment	Factory																			
	0 ... 5 V																			
Output / power supply	1 ... 6 V																			
	0 ... 10 V																			
	4 ... 20 mA																			
	4 ... 20 mA																			
	4 ... 20 mA																			
ration. 10 ... 90%	5 VDC ±5%																			
Electrical connection	Cable 1.5 m																			
	Connector ²⁾	DIN EN 175301-803-A																		
		DIN EN 175301-803-C (industrial standard 9.4 mm)																		
		M12x1 plastic thread																		
Pressure connection	Inside thread	G 1/4 with O-Ring seal																		
		1/4 - 18 NPT																		
	Outside thread	G 1/4, sealed at back, DIN 3852-E																		
		R 1/4 EN 10226																		
		G 1/4, sealed at back and manometer (combi)																		
Pressure tip orifice	Without																			
	With																			
Pressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 9bar/OUT1...9V)																			W

Storage versions

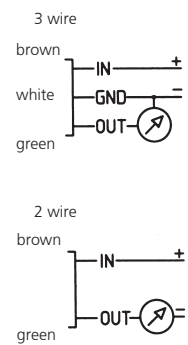
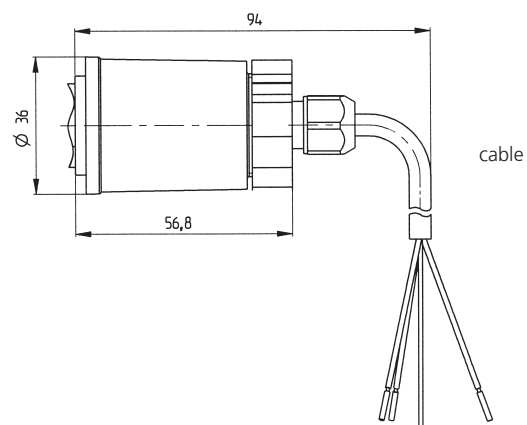
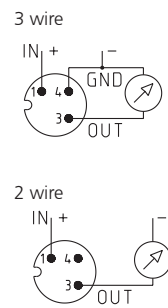
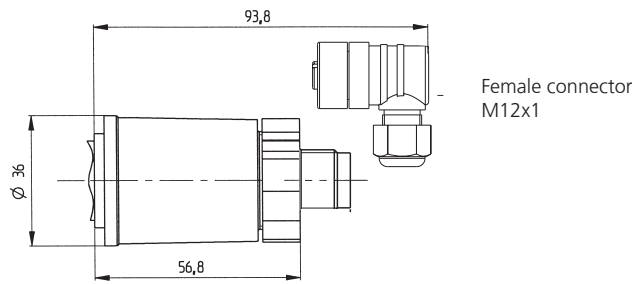
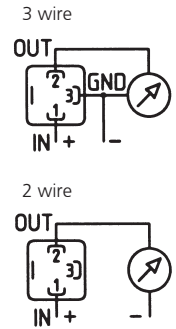
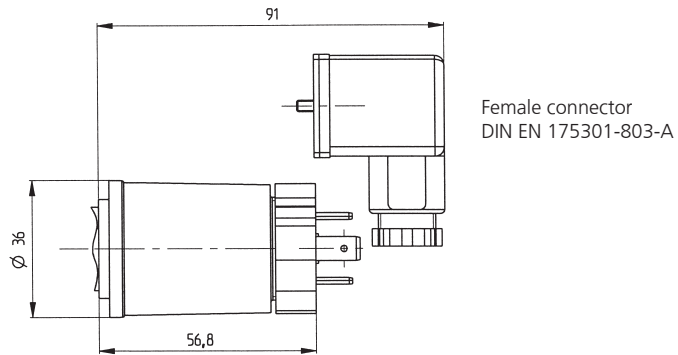
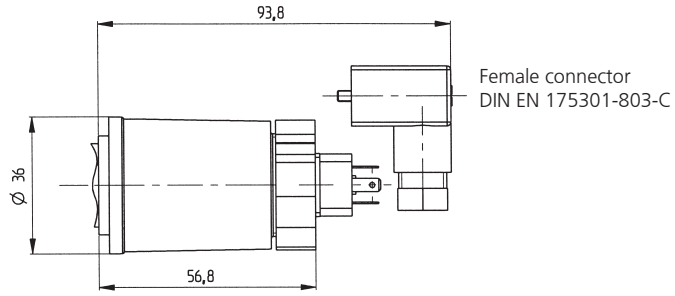
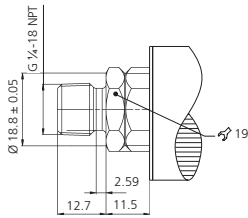
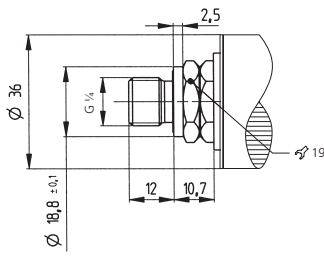
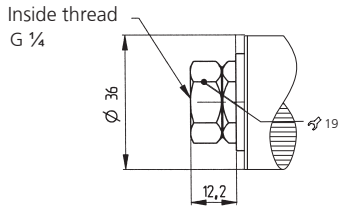
Output	4 ... 20 mA	Pressure range	Order number
Power supply	10 ... 33 VDC	-1 ... 0 bar	501.914023151W - 1...0 bar (high overload protection)
Electrical connection ²⁾	Connector DIN EN 175301-803-A, IP 65	0 ... 10 bar	501.930023151
Pressure connection	G 1/4 sealed at back and manometer	0 ... 25 bar	501.932023151
Sealing material	FPM - Fluoro elastomer		
Colour of cover	black		



Accessories ³⁾ Order number

Female connector DIN EN 175301-803-A	with seal (IP 65, when installed and latched)	103510
Female connector DIN EN 175301-803-C	with seal (IP 65, when installed and latched)	104244
Female connector M12x1		106975
Calibration certificate		104551

¹⁾ According to ISO standard R 1629, other sealing materials on request ²⁾ Without female connector ³⁾ Accessories supplied loose





Huba Control

FOR FINE PRESSURE AND FLOW MEASUREMENT

Huba Control AG

Headquarters

Industriestrasse 17
5436 Würenlos
Telefon +41 (0) 56 436 82 00
Telefax +41 (0) 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG

Niederlassung Deutschland

Schlattgrabenstrasse 24
72141 Walddorfhäslach
Telefon +49 (0) 7127 23 93 00
Telefax +49 (0) 7127 23 93 20
info.de@hubacontrol.com

Huba Control SA

Succursale France

Rue Lavoisier
Technopôle Forbach-Sud
57602 Forbach Cedex
Téléphone +33 (0) 387 847 300
Télécopieur +33 (0) 387 847 301
info.fr@hubacontrol.com

Huba Control AG

Vestiging Nederland

Hamseweg 20A
3828 AD Hoogland
Telefoon +31 (0) 33 433 03 66
Telefax +31 (0) 33 433 03 77
info.nl@hubacontrol.com

Huba Control AG

Branch Office United Kingdom

Unit 13 Berkshire House
County Park Business Centre
Shrivenham Road
Swindon Wiltshire SN1 2NR
Phone +44 (0) 1993 776667
Fax +44 (0) 1993 776671
info.uk@hubacontrol.com

www.hubacontrol.com