

# 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 extreme temperatures
- 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)
Repture pressure		3 x fs (max. 90 bar)

### Materials

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

### Electrical overview

	Output	Power supply	Load	Current consumption <sup>1)</sup>
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
3 wire	0 ... 5 V	9.0 ... 33 VDC	> 10 kOhm / < 100 nF	< 5 mA
	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
	ratiom. 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
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### Electrical connection

Cable 1.5 m
Connector DIN EN 175301-803-A
Connector DIN EN 175301-803-C (mini DIN)
Connector M12x1

### Pressure connection

Inside thread	G ¼ mit O-Ring sealing ¼ -18 NPT
Outside thread	G ¼, sealed at back, DIN 3852 form E
	R ¼ DIN 2999
	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 <sup>2)</sup>	max.	% fs/10K	± 0.4
TC sensitivity <sup>2)</sup>	typ.	% fs/10K	- 0.15
TC sensitivity <sup>2)</sup>	max.	% fs/10K	- 0.3

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

<sup>1)</sup> At nominal pressure

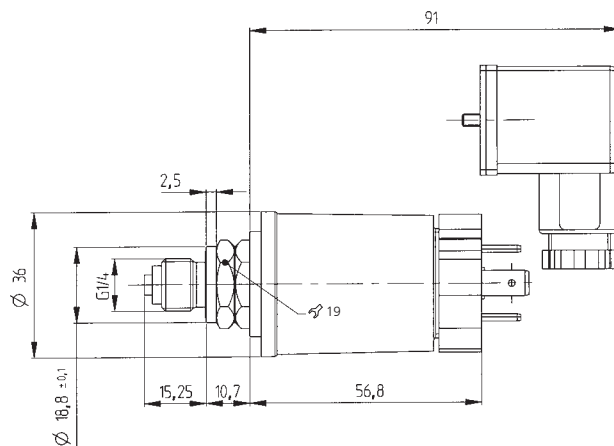
<sup>2)</sup> TC = Temperature coefficient

Order code selection table		501. X 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 signale at these pressures											
Sealing material <sup>1)</sup>	FPM Fluoro elastomer									0	
	EPDM Ethylene propylene									1	
	NBR Butadiene Acrylonitrile									2	
	MVQ Silicone polymer									3	
Adjustment	Factory									0	
Output / power supply	0 ... 5 V	9.0 ... 33 VDC									1
	1 ... 6 V	10.4 ... 33 VDC									6
	0 ... 10 V	16.2 ... 33 VDC									2
	4 ... 20 mA	10.0 ... 33 VDC									3
	4 ... 20 mA	8.0 ... 33 VDC									8
	ration. 10 ... 90%	5 VDC ±5%									
Electrical connection	Cable 1.5 m										0
	Connector <sup>2)</sup> DIN EN 175301-803-A										1
	Connector <sup>2)</sup> DIN EN 175301-803-C (mini DIN)										2
	Connector <sup>2)</sup> M12x1 plastic thread										3
Pressure connection	Inside thread	G ¼ with O-Ring seal									1
	Outside thread	¼ - 18 NPT									3
	Outside thread	G ¼ sealed at back, DIN 3852 form E									4
	Outside thread	R ¼ DIN 2999									7
	Outside thread	G ¼, sealed at back and manometer (combi)									5
	Outside thread	G ½, sealed at back and manometer (combi)									8
Pressure tip orifice	Without										1
	With										2
Pressure range variation	Indicate W and state range on order (e.g.: W0... + 9bar/OUT1...9V)										W

### Storage versions

Output	4 ... 20 mA
Power supply	10 ... 33 VDC
Electrical connection <sup>2)</sup>	Connector DIN EN 175301-803-A, IP 65
Pressure connection	G ¼ sealed at back and manometer
Sealing material	FPM Fluoro-elastomer
Colour of cover	black

Pressure range	Order number
-1 ... 0 bar	501.914023151W - 1...0 bar (high overload protection)
0 ... 10 bar	501.930023151
0 ... 25 bar	501.932023151



Female connector  
DIN EN 175301-803-A

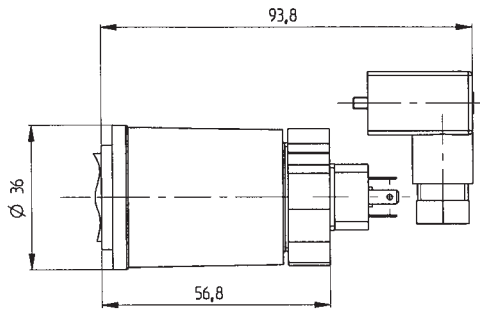
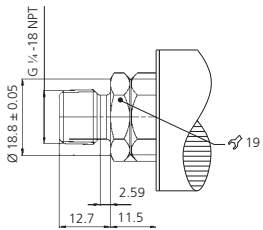
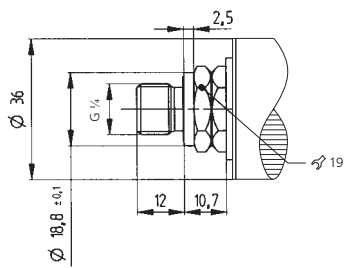
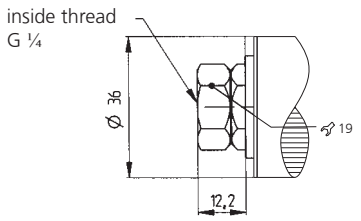
### Accessories <sup>3)</sup>

	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 (mini DIN) with seal (IP 65, when installed and latched)	104244
Female connector M12x1	106975
Calibration certificate	104551

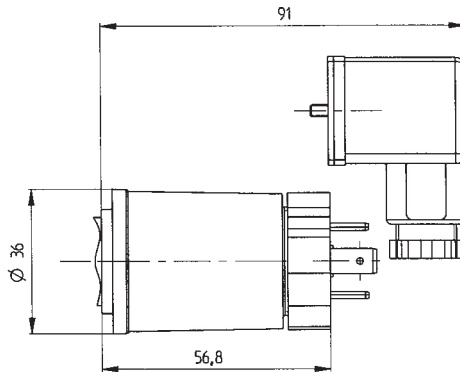
<sup>1)</sup> According to ISO standard R 1629, other sealing materials on request

<sup>2)</sup> Without female connector

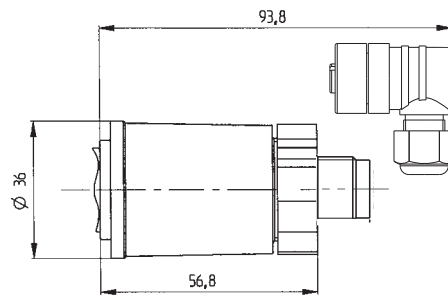
<sup>3)</sup> Accessories supplied loose



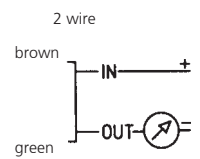
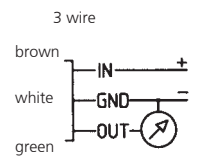
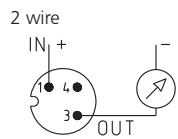
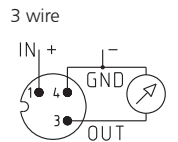
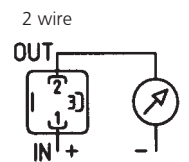
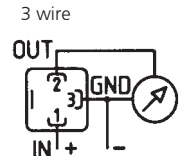
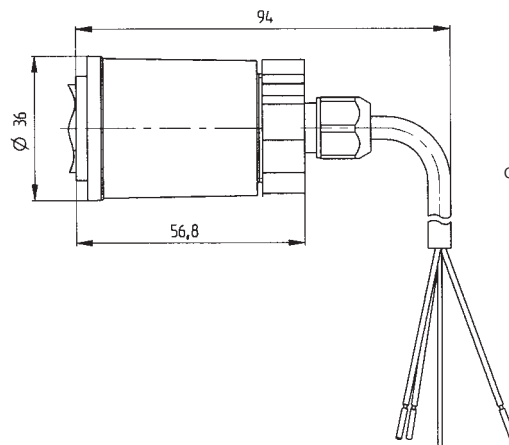
Female connector  
DIN EN 175301-803-C



Female connector  
DIN EN 175301-803-A



Female connector  
M12x1





FOR FINE PRESSURE AND FLOW MEASUREMENT

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