

# OEM Relative pressure transmitter type 503

Pressure range  
0 ... 2.5 – 25 bar



Type 503 pressure transmitters, with their excellent price / performance ratio, are specially designed for industrial OEM applications.

Partially automated production techniques allow us to produce high quantities, yet retaining the flexibility to offer different versions.

- Partial automatic production, giving ideal price / performance ratio.
- Ideal for use as a control element, owing as a result of a small hysteresis
- Incorporates all the benefits of ceramics technology for industrial applications

## Technical overview

### Pressure range

Relative 0 ... 2.5 – 25 bar

### Operating conditions

Medium		Liquids and neutral gases
Temperature	Medium	+2 ... +90 °C
	Ambient	+10 ... +60 °C
	Storage	-30 ... +85 °C
Overload admissible		2 x fs
Rupture pressure		3 x fs (max. 50 bar)

### Materials

Housing material	ABS for cover with connector RAST 2.5	ABS
	PA 6 for cover with connector DIN or cable	PA 6
Materials in contact with the medium	Sensor	Ceramic Al <sub>2</sub> O <sub>3</sub> (96%)
	Pressure connector	Grivory GV 5H or Noryl GTX 20% GF
	Sealing material	FPM, EPDM, NBR

### Electrical overview

	Output	Power supply	Load	Current consumption
2 wire	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	0 ... 10 V	16.2 ... 33 VDC	> 10 kOhm / < 100 nF	< 5 mA
	ratiom. 10 ... 90%	5 VDC ±5%	> 10 kOhm / < 100 nF	< 5 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal. For connector versions mechanical protection only. The correct wiring acc. to the scheme has to be guaranteed by the OEM-customer.			
Electromagnetic compatibility	The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.			

### Dynamic response

Response time	< 5 ms
Load cycle	< 50 Hz

### Protection standard

With connector RAST 2.5	IP 00
With DIN connector or cable 1.5 m	IP 54

### Electrical connections

DIN connector EN 175301-803-A  
Cable 1.5 m  
Connector RAST 2.5

### Pressure connections

Outside thread	G 3/8 seal at front	Grivory GV 5H
	G 3/8 seal at back	Grivory GV 5H
	G 1/4 seal at back	Grivory GV 5H
Plug connector	(to max. 6 bar nominal pressure)	Grivory GV 5H

### Mounting instructions

Installation arrangement		Unrestricted
Starting torque G 3/8	min. 0.4 Nm / max. 0.8 Nm	Destruction > 30 Nm

### Weight

With connector RAST 2.5	~ 41 g
With connector DIN	~ 55 g
With cable	~ 95 g

### Packaging

Multiple packaging Cardboard boxes with blister pack inserts	per 240 pcs.
	per 600 pcs.

## Accuracy

Parameter		Unit	
Tolerance zero point	max.	% fs	± 1.5
Tolerance full scale	max.	% fs	± 1.5
Resolution		% fs	0.1
Total of linearity, hysteresis and repeatability		% fs	± 1.0
Long term stability acc. DIN EN 60770		% fs	± 0.5
TC zero point <sup>1)</sup>	max.	% fs/10K	± 0.6
TC sensitivity <sup>1)</sup>	max.	% fs/10K	± 0.15

Test conditions: 25 °C, 45% RH, power supply 24 VDC / 5 VDC  
TK0 / TKE 2 ... 85 °C

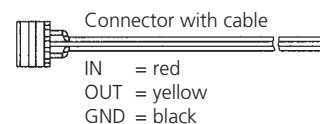
<sup>1)</sup> TC = Temperature coefficient

			1	2	3	4	5	6	7	8	9
<b>Order code selection table</b>			503. X X X X X X X X X								
Pressure range <sup>1)</sup>	0 ... 2.5 bar		9	1	4						
	0 ... 4 bar		9	1	5						
	0 ... 6 bar		9	1	7						
	0 ... 10 bar		9	3	0						
	0 ... 16 bar		9	3	1						
	0 ... 25 bar		9	3	2						
▲ Fullscale signal at these pressures											
Sealing material <sup>2)</sup>	FPM	Fluoro-elastomer					0				
	EPDM	Ethylene propylene					1				
	NBR	Butadiene Acrylonitrile					2				
Adjustment	Factory						0				
Output / power supply	0 ... 5 V	9.0 ... 33 VDC							3		
	0 ... 10 V	16.2 ... 33 VDC							4		
	4 ... 20 mA	10.0 ... 33VDC							5		
	ratiom. 10 ... 90%	5 VDC ±5%							6		
Electrical connection <sup>3)</sup>	Connector	RAST 2.5							6	0	
	Cable 1.5 m	DIN EN 175301-803-A								1	2
Pressure connection	Outside thread	G 3/8, seal at front	Grivory GV 5H	1							0
		G 3/8, seal at back	Grivory GV 5H								1
		G 1/4, seal at back	Grivory GV 5H	3							3
	Plug connector	(to max. 6 bar measuring range)	Noryl GV 5H	1			1				2
Pressure range variation (optional)	Indicate W and state range on order (e.g.: W0... + 9bar/OUT1...9V)										W

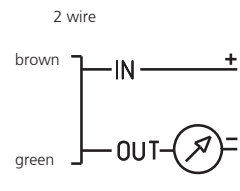
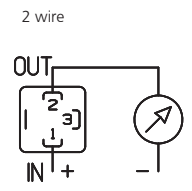
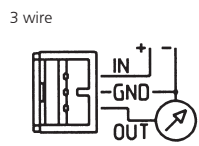
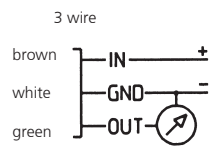
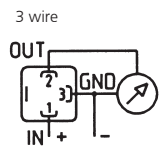
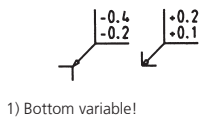
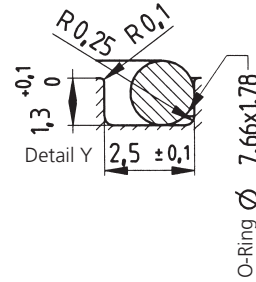
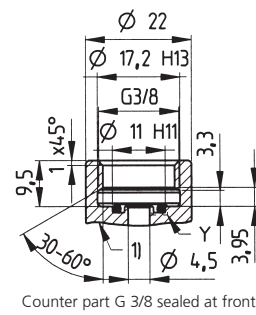
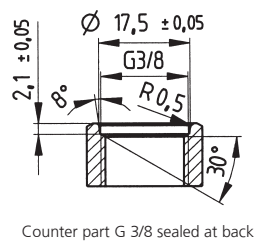
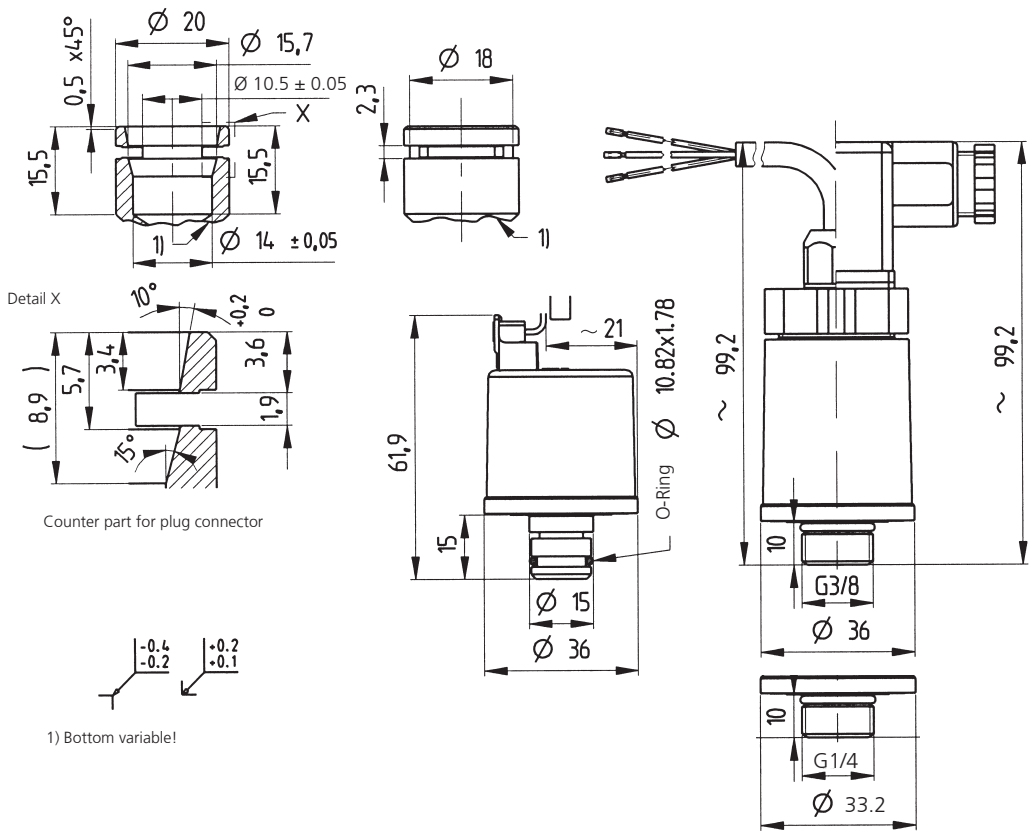
### Accessories <sup>4)</sup>

	Order number
Safety spring for plug connector	105883
Female connector DIN EN 175301-803-A with sealing	103510
Female connector RAST 2.5 with cable 1450 mm	103167
Calibration Certificate	104551

AMP connector <sup>5)</sup>	Manufacturer's Part No.	Colour	For flexible wire
	3-829868-3	grey	7 x 0.20 mm = 0.22 mm <sup>2</sup> or 12 x 0.20 mm = 0.35 mm <sup>2</sup>
	1-966194-3	beige	7 x 0.25 mm = 0.35 mm <sup>2</sup>



<sup>1)</sup> Other pressure ranges on request      <sup>2)</sup> According to ISO standard R 1629, other sealing materials on request      <sup>3)</sup> Delivery without female connector  
<sup>4)</sup> Accessories supplied loose      <sup>5)</sup> To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049



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