



Pressure transmitter



# Huba Control

## OEM Relative pressure transmitter

### Type 503

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.

## Pressure range 0 ... 2.5 – 25 bar

- + 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
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### 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
	0 ... 10 V	16.2 ... 33 VDC	> 10 kOhm / < 100 nF	< 5 mA
3 wire	ratio 10 ... 90%	5 VDC ±5%	> 10 kOhm / < 100 nF	< 5 mA
	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.			
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

### Electrical connections

DIN connector EN 175301-803-A	Protection standard
Cable 1.5 m	IP 65
Connector RAST 2.5	IP 00

### 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 <sup>1)</sup>	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>2)</sup>	max.	% fs/10K	± 0.6
TC sensitivity <sup>2)</sup>	max.	% fs/10K	- 0.15

Test conditions: 25 °C, 45% RH, power supply 24 VDC / 5 VDC  
TC0 / TCS 2 ... 85 °C

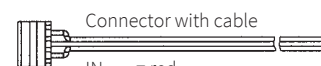
<sup>1)</sup> with blister pack inserts

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

Order code selection table			1	2	3	4	5	6	7	8	9
			503.	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						
	▲ Full scale 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	
		DIN EN 175301-803-A								1	
	Cable 1.5 m									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 (supplied loose)	Order number
Safety spring for plug connector	112442
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>4)</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>



Connector with cable

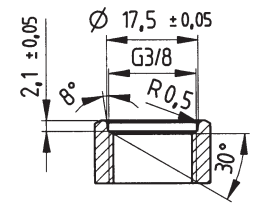
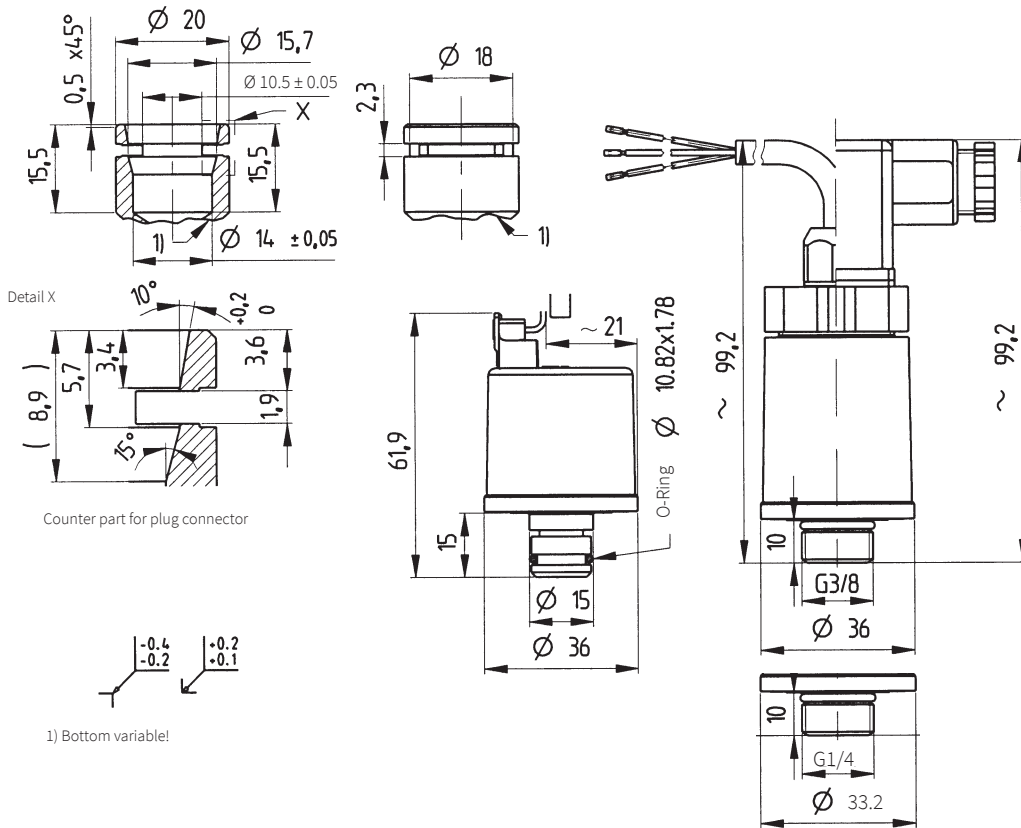
IN = red  
OUT = yellow  
GND = black

<sup>1)</sup> Other pressure ranges on request

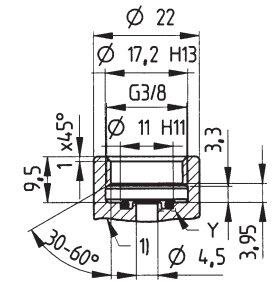
<sup>2)</sup> According to ISO standard R 1629, other sealing materials on request

<sup>3)</sup> Delivery without female connector

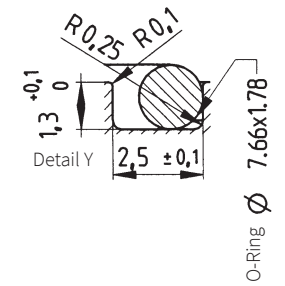
<sup>4)</sup> To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049



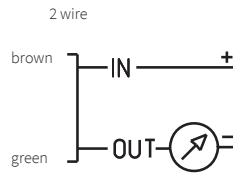
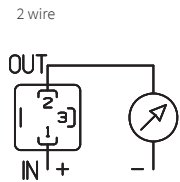
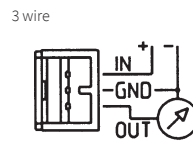
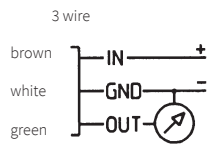
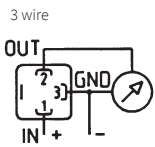
Counter part G 3/8 sealed at back



Counter part G 3/8 sealed at front



O-Ring Ø 7.66x1.78



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