

# OEM relative pressure transmitter type 505

Pressure range  
0 ... 4 bar



Type 505 pressure transmitters are particularly suitable for measuring water pressure rates in heating and industrial circular flow.

Due to partially automated manufacturing we are able to handle customer orders in high quantities.

- Best price / performance ratio through:
  - electronic integrated in measuring element
  - optimised mounting concept
  - automatic production
- Ideal for use as a control element, owing to small hysteresis
- The measuring element includes the well proven ceramic technology of Huba Control AG.

## Technical overview

### Pressure range

Relative	0 ... 4 bar
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### Operating conditions

Medium		Liquids and not aggressive gases
Temperature	Medium	+2 ... +90 °C
	Ambient	+2 ... +85 °C
	Storage	-30 ... +85 °C
Tolerable overload		8 bar
Rupture pressure		12 bar

### Materials

Case		Plastic thermoplast
Materialien in contact with the medium	Pressure connection	Fibre reinforced plastic
	Sensor	Ceramic Al <sub>2</sub> O <sub>3</sub> (96%)
	Sealing material	EPDM (Ethylene propylene)

### Electrical overview

Output	Power supply	Load	Current consumption <sup>1)</sup>
0.5 ... 3.5 V	8.5 ... 30 VDC	> 10 kOhm / < 100 nF	< 7 mA
Ratiom. 10 ... 70%	5 VDC ±5%	> 10 kOhm / < 100 nF	< 4 mA
Ratiom. 10 ... 50%	5 VDC ±5%	> 10 kOhm / < 100 nF	< 4 mA
Polarity reversal protection	Short circuit proof and protected against polarity reversal. Each connection is protected against crossover up to max. supply voltage.		
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

IP 00
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### Pressure connection

Connection plug fitting		Standard
		Form 2
		Form 3
Outside thread		Form 4
	G 1/4	without orifice
	G 3/8	
	G 3/8	material admission for portable water ≤ 85 °C
	G 3/8	with bedstop for plug value
	G 3/8	without orifice
	G 3/8	with bedstop for plug value without orifice

### Electrical connection

Connector RAST 2.5
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### Installation arrangement

Recommended: Electrical connection upwards
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### Tests / Admissions

Shock acc. to DIN IEC 60068-2-27	40 g, 11 ms half sine wave, all directions. Free fall from 1 m on concrete.
Vibration acc. to DIN IEC 60068-2-6	5 g, 2 ... 2000 Hz

### Weight

~ 30 g
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### Packaging

Bulk cargo in cardboard boxes on Euro pallet (500 pcs.)
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## 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	max.	% FS	± 1.0
Long term stability acc. to DIN EN 60770		% FS	± 0.5
TC zero point <sup>3)</sup>	typ.	% FS/10K	± 0.6
TC sensitivity <sup>3)</sup>	typ.	% FS/10K	± 0.15
Ratiometric error <sup>4)</sup>	typ.	% FS	± 0.5

Test conditions: 25 °C, 45% RH, power supply 24 VDC / 5 VDC  
TC z.p. / TC s. 2 ... +80 °C

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

<sup>2)</sup> Ratiometric version only through the electrical connector mechanically protected.

<sup>3)</sup> TC = Temperature coefficient

<sup>4)</sup> At ratiometric version only

## Order code selection table

505. X X X X X

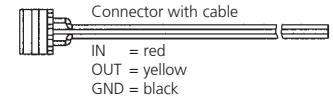
Pressure range <sup>1)</sup>	0 ... 4 bar		9	1	5		
	▲ Full scale signal at this pressure						
Pressure connection	Connection plug fitting standard						3
	Connection plug fitting form 2						2
	Connection plug fitting form 3						1
	Connection plug fitting form 4 without orifice						A
	Outside thread G 3/8						4
	Outside thread G 3/8 material admission for portable water ≤ 85 °C						5
	Outside thread G 3/8 with bedstop for plug value						6
	Outside thread G 3/8 without orifice						7
Output / power supply	Outside thread G 3/8 with bedstop for plug value without orifice						8
	Outside thread G 1/4 without orifice						B
	0.5 ... 3.5 V	8.5 ... 30 VDC					0
	ratiom. 10 ... 70%	5 VDC ±5%					1
	ratiom. 10 ... 50%	5 VDC ±5%					2

## Accessories <sup>2)</sup>

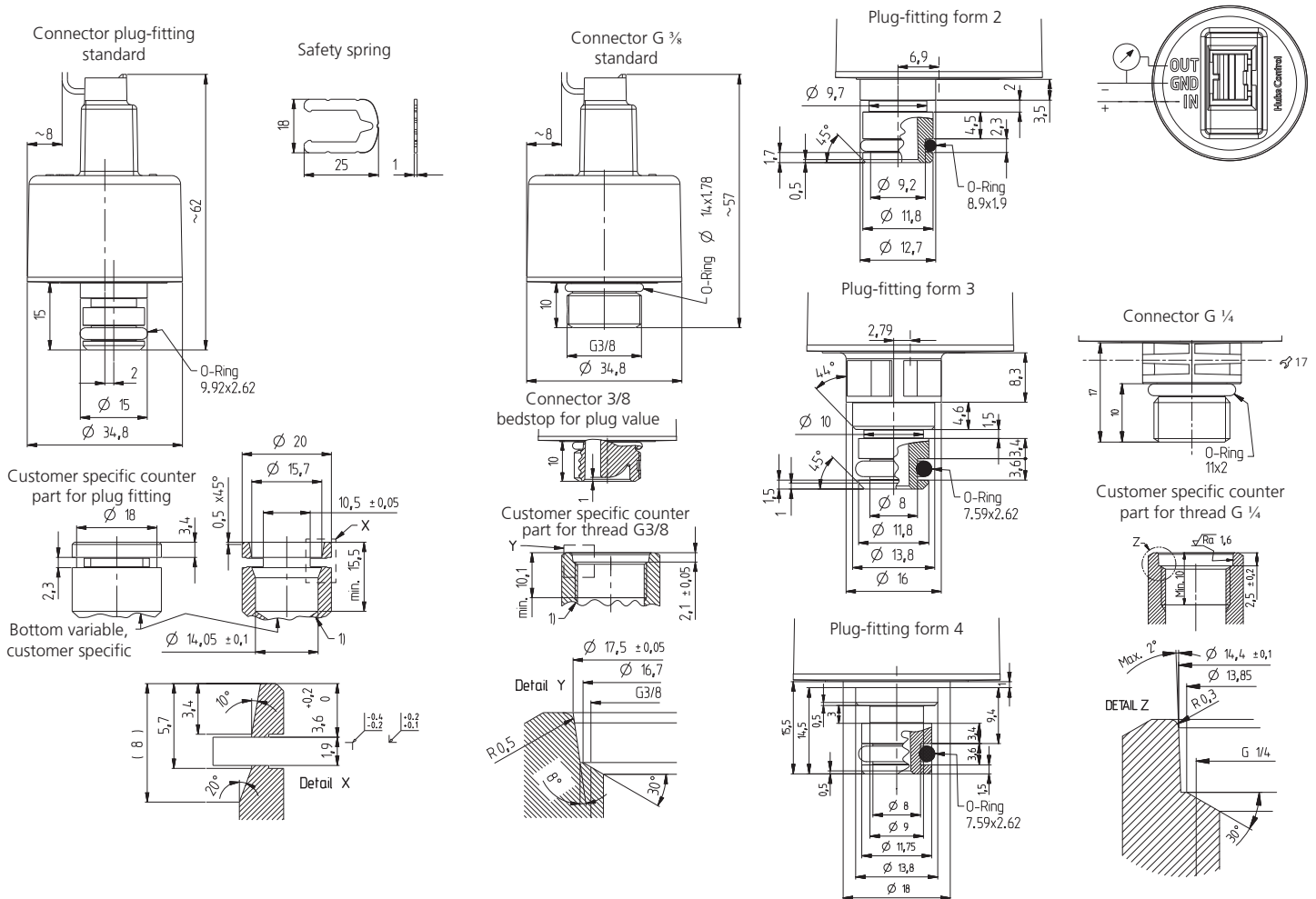
Safety spring for plug connector standard	Order number
Female connector RAST 2.5 with cable 1450 mm	105883
Calibration certificate	103167
	104551

## 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>



## Dimensions in mm / Electrical connections



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

<sup>2)</sup> Accessories supplied loose

<sup>3)</sup> To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049