

# OEM relative pressure transmitter type 505

Pressure range  
0 ... 4 – 16 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 – 16 bar

### Operating conditions

Medium		Liquids and not aggressive gases
Temperature	Medium	+2 ... +90 °C
	Ambient	+2 ... +85 °C
	Storage	-30 ... +85 °C
Tolerable overload	≤ 4 bar	8 bar
	> 4 bar	20 bar
Rupture pressure	≤ 4 bar	12 bar
	> 4 bar	25 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

### Pressure connection

Connection plug fitting		Standard
		Form 2 without orifice
		Form 3
		Form 4 without orifice
Outside thread	G ¼	without orifice
	G ⅜	
	G ½	material admission for portable water ≤ 85 °C
	G ⅝	with bedstop for plug value
	G ¾	without orifice
	G 1	with bedstop for plug value without orifice

### Electrical connection

Connector RAST 2.5

### Installation arrangement

Recommended: Electrical connection upwards

### 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

### Packaging

Bulk cargo in cardboard boxes on Euro pallet (500 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	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 <sup>4)</sup>
TC sensitivity <sup>3)</sup>	typ.	% FS/10K	± 0.15
Ratiometric error <sup>5)</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

<sup>1)</sup> At nominal pressure  
<sup>4)</sup> ≥10 bar = max. ±1.0 % FS/10K

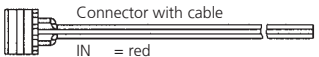
<sup>2)</sup> Ratiometric version only through the electrical connector mechanically protected.  
<sup>5)</sup> At ratiometric version only

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

Variantenplan		1	2	3	4	5
		<b>505. X X X X X</b>				
Pressure range <sup>1)</sup>	0 ... 4 bar	9	1	5		
	0 ... 10 bar	9	3	0	7,B	2
	0 ... 12 bar	9	3	B	7,B	
	0 ... 16 bar	9	3	1	7,B	
▲ Full scale signal at this pressure						
Pressure connection	Connection plug fitting standard			5	3	
	Connection plug fitting standard without orifice			5	9	
	Connection plug fitting form 2 without orifice			5	C	
	Connection plug fitting form 3			5	1	
	Connection plug fitting form 4 without orifice			5	A	
	Outside thread G 3/8			5	4	
	Outside thread G 3/8 material admission for drinking water ≤ 85 °C			5	5	
	Outside thread G 3/8 with needle valve			5	6	
	Outside thread G 3/8 without orifice				7	
	Outside thread G 3/8 with with needle valve without orifice			5	8	
Output / power supply	Outside thread G 1/4 without orifice				B	
	0.5 ... 3.5 V					0
	8.5 ... 30 VDC (not possible with 0 ... 10 bar)					
ration. 10 ... 70%						1
ration. 10 ... 50%						2
	5 VDC ±5% (not possible with 0 ... 10 bar)					
	5 VDC ±5%					

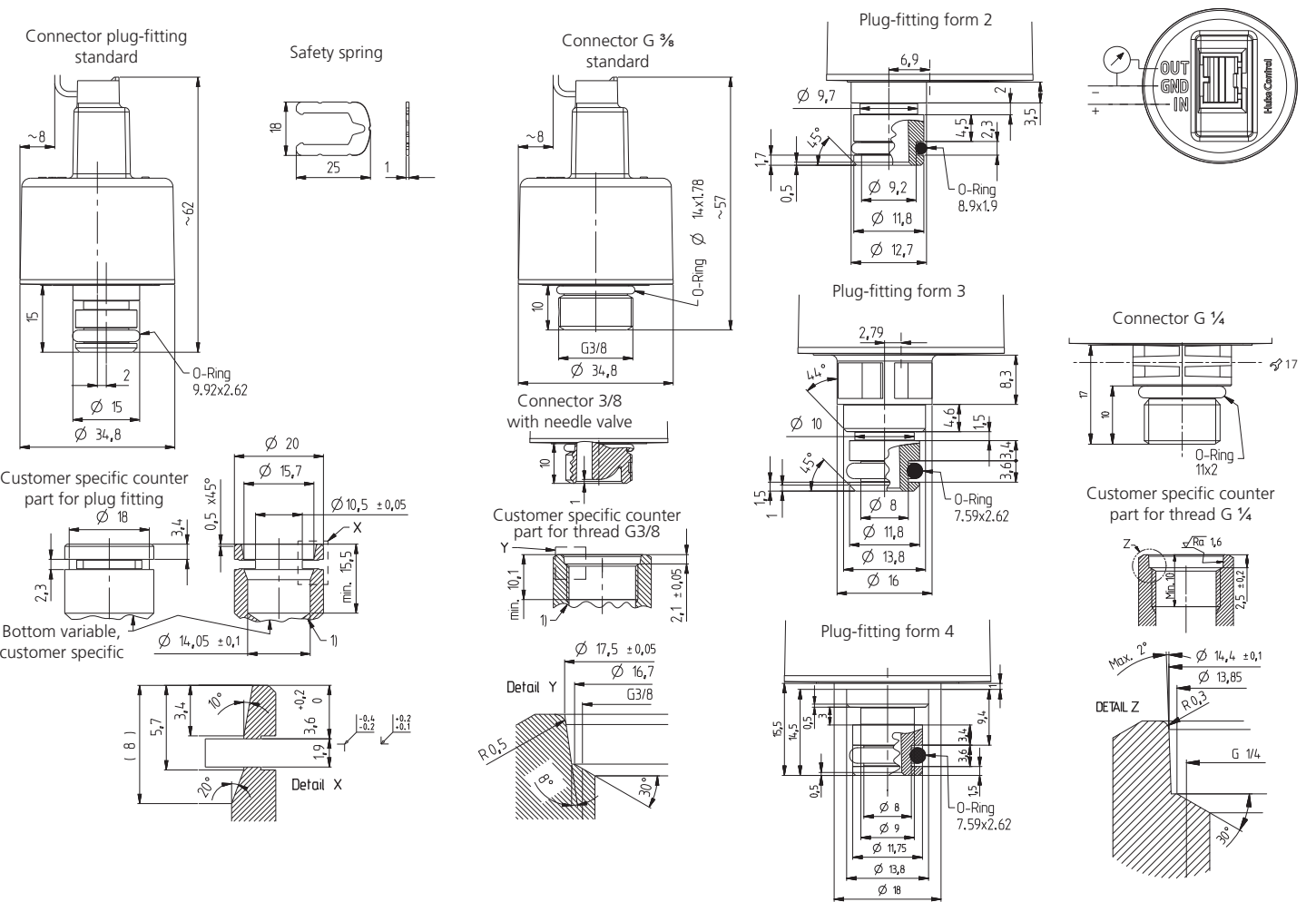
Accessories <sup>2)</sup>	Order number
Safety spring for plug connector standard	105883
Female connector RAST 2.5 with cable 1450 mm	103167
Calibration certificate	104551

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

### Dimensions in mm / Electrical connections



<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

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