



Pressure transmitter



Huba Control

OEM relative pressure transmitter

Type 505

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.

Pressure range
0 ... 4 – 16 bar

- + 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 ₂ O ₃ (96%)
	Sealing material	EPDM (Ethylene propylene)

Electrical overview

Output	Power supply	Load	Current consumption ¹⁾
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
Outside thread		Form 4 without orifice
	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 ¾	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 ³⁾	typ.	% fs/10K	± 0.6 ⁴⁾
TC sensitivity ³⁾	typ.	% fs/10K	± 0.15
Ratiometric error ⁵⁾	typ.	% fs	± 0.5

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

¹⁾ At nominal pressure
⁴⁾ ≥10 bar = max. ±1.0% fs/10K

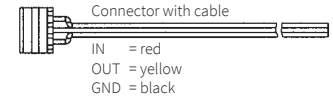
²⁾ Ratiometric version only through the electrical connector mechanically protected.
⁵⁾ At ratiometric version only

³⁾ TC = Temperature coefficient

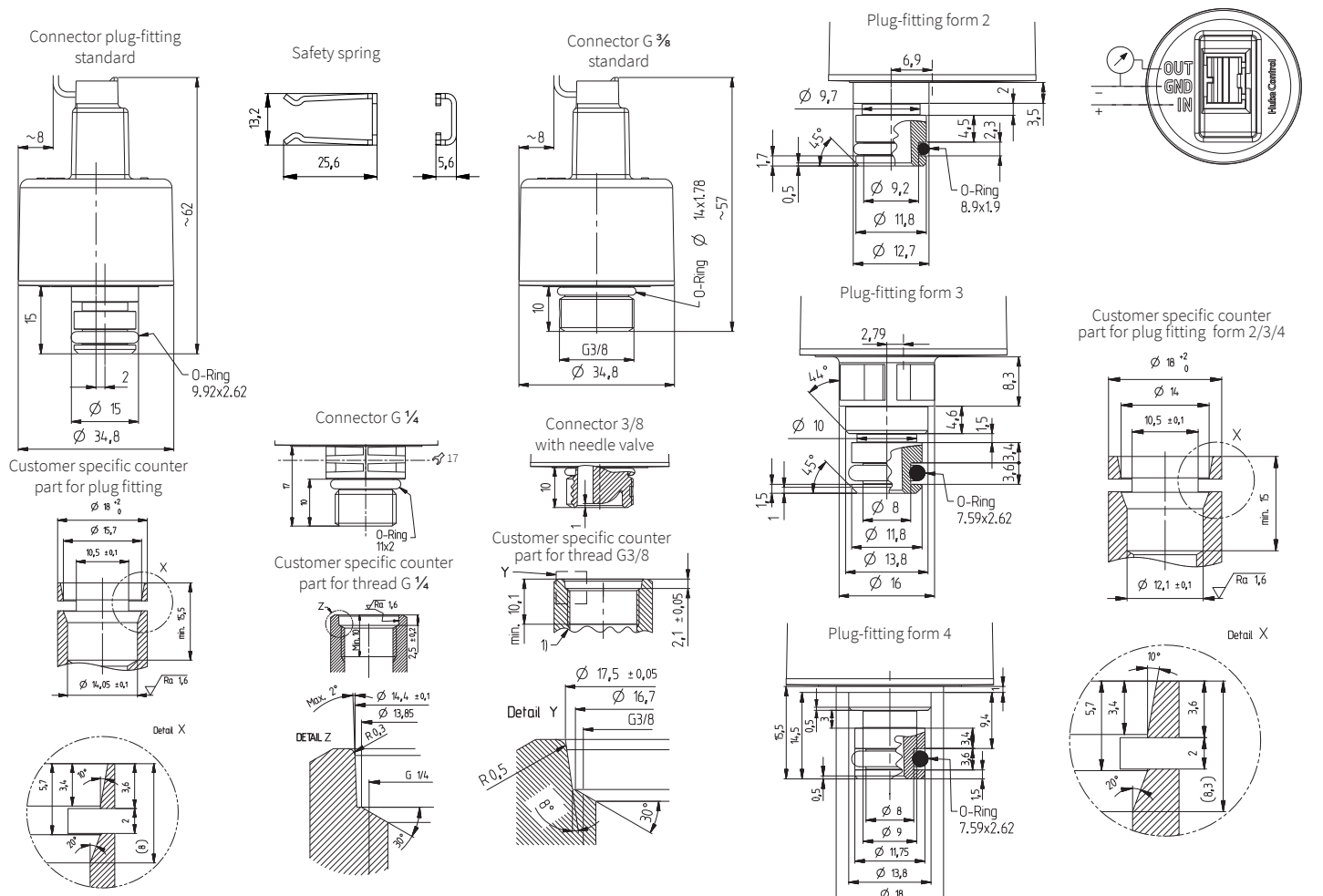
		1	2	3	4	5
Order code selection table		505. X X X X X				
Pressure range ¹⁾	0 ... 4 bar	9	1	5		
	0 ... 10 bar	9	3	0	7,B	2
	0 ... 12 bar	9	3	B	7,B	
	0 ... 16 bar ▲ Full scale signal at this pressure	9	3	1	7,B	
Pressure connection	Connection plug fitting standard			5	3	
	Connection plug fitting standard 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	0.5 ... 3.5 V					0
	ratiom. 10 ... 70%					1
	ratiom. 10 ... 50%					2

Accessories <i>(Accessories supplied loose)</i>	Order number
Safety spring for all plug connector	112442
Female connector RAST 2.5 with cable 1450 mm	103167
Calibration certificate	104551

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



Dimensions in mm / Electrical connections



¹⁾ Other pressure ranges on request ²⁾ To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049



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本 社：〒124-0023 東京都葛飾区東新小岩3丁目9番6号 TEL: (03) 3695-5431 / FAX: (03) 3695-5698
大阪支店：〒530-0054 大阪市北区南森町2-2-9(南森町八千代ビル7F) TEL: (06) 6361-4831 / FAX: (06) 6361-9360
e-mail: sales-tokyo@krone.co.jp URL: <https://www.krone.co.jp>

www.hubacontrol.com

