Pressure transmitter

Huba Control

In Proud Partnership with Huba Control

PAQUIN SENSORS

For technical support, sales, & distribution within the USA & Canada

www.paquin.com | (800) 831-8217 | paquinsensors@paquin.com

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 manfacturing 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_2O_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
		Form 4 without orifice
Outside thread	G ¼	without orifice
	G ¼	without orifice, material admission for potable water < 85 °C
	G ⅜	
	G ⅜	material admission for potable water ≤ 85 °C
	G ⅜	with bedstop for plug value
	G ⅜	without orifce
	G ⅜	with bedstop for plug value without orifce

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 stabilitiy acc. 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
[2] Ratiometric version only through the electrical connector mechanically protected.
[3] TC = Temperature coefficient
[4] ≥10 bar = max. ±1.0% fs/10K
[5] At ratiometric version only

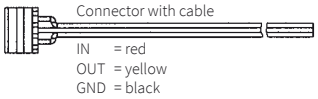
Order code selection table

			1	2	3	4	5
	505.		**X**	**X**	**X**	**X**	**X**
Pressure range [1]	0 ... 4 bar		9	1	5		
	0 ... 10 bar	material admission for drinking water ≤ 85 °C	9	3	0	7,B	2
	0 ... 12 bar	material admission for drinking water ≤ 85 °C	9	3	B	7,B	
	0 ... 16 bar ▲ Full scale signal at this pressure	material admission for drinking water ≤ 85 °C	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 ⅜				5	4	
	Outside thread G ⅜	material admission for potable water ≤ 85 °C			5	5	
	Outside thread G ⅜	with needle valve			5	6	
	Outside thread G ⅜	without orifice				7	
	Outside thread G ⅜	with with needle valve without orifice			5	8	
	Outside thread G ¼	without orifice				B	
	Outside thread G ¼	without orifice, material admission for potable water ≤ 85 °C			5	E	
Output / power supply	0.5 ... 3.5 V	8.5 ... 30 VDC (not possible with 0 ... 10 bar)					0
	ratiom. 10 ... 70%	5 VDC ±5% (not possible with 0 ... 10 bar)					1
	ratiom. 10 ... 50%	5 VDC ±5%					2

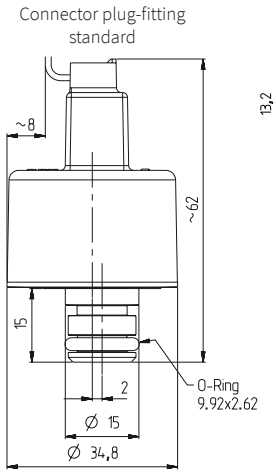
Accessories *(Accessories supplied loose)*

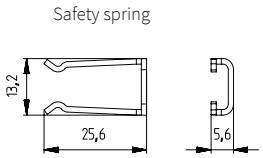
	Order number
Safety spring for all plug connector	112442
Female connector RAST 2.5 with cable 1450 mm	103167
Calibration certificate	104551

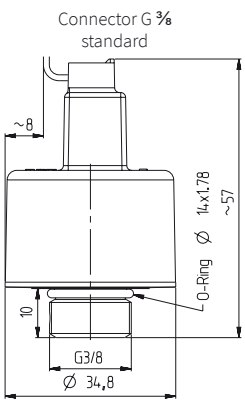
AMP Connector [2]	Manufacturer's Part No.	Colour	For flexible wire
	3-829868-3	grey	7 x 0.20 mm = 0.22 mm² or 12 x 0.20 mm = 0.35 mm²
	1-966194-3	beige	7 x 0.25 mm = 0.35 mm²

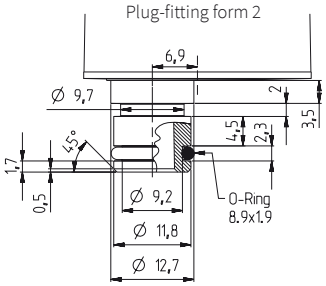


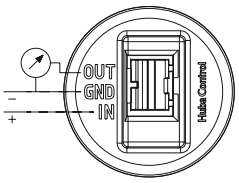
Dimensions in mm / Electrical connections

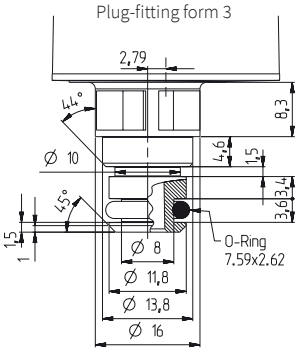


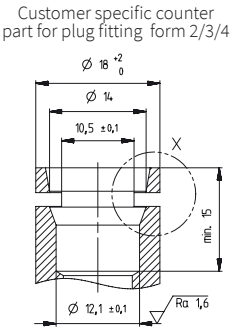


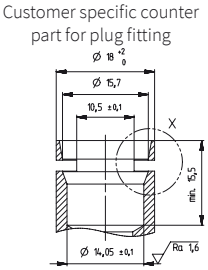


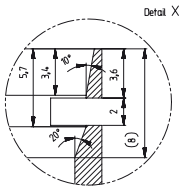


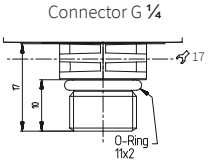


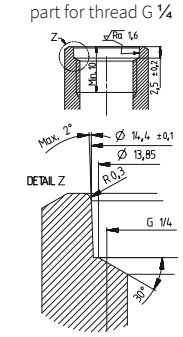


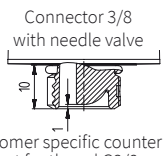


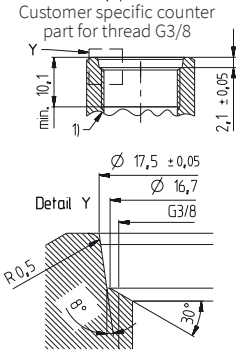


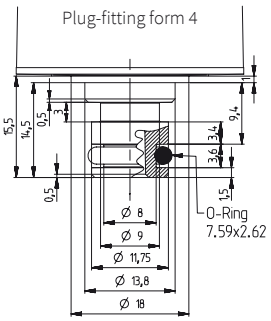


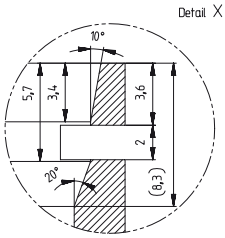












Mounting torque
(Hand-tight 0.5 - 1 Nm)

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[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