

# OEM Relative pressure transmitter type 400

Pressure range  
0 ... 10 – 100 mbar



The type 400 pressure transmitter, with its proven ceramic lever technology, has adjusted temperature compensated sensor signals and is available with a voltage output. The voltage output (VDC) is an amplified, linear signal suitable for direct processing in electronic control systems. The sensors are ideal for continuous level measurement in washing machines, dishwashers etc.

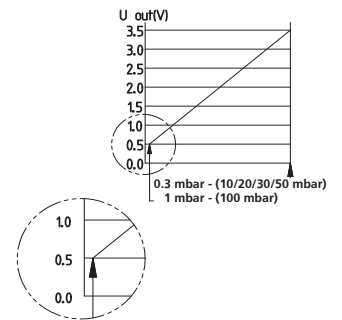
- Robust construction, sensor element has no contact with media
- Special design developed for large scale manufacture at an attractive price
- Fully automated manufacture, including in-line adjustment of zero point and full scale value
- Special snap mounting bracket for easy single handed mounting in sheet steel of varying thicknesses

## Technical Overview

<b>Pressure range <sup>1)</sup></b>							
Relative		0 ... 10 – 100 mbar					
<b>Operating conditions</b>							
Medium		Liquids and neutral gases					
Temperature	Medium / ambient	0 ... +70 °C					
	Storage	-10 ... +70 °C					
Tolerable overload		200 mbar					
Rupture pressure		500 mbar					
Leak rate		< 0.2 cm <sup>3</sup> /h (Air)					
<b>Materials in contact with the medium</b>							
Cover		Polypropylene					
Diaphragm		Thermoplastic elastomer					
<b>Electrical overview</b>							
Output / Power supply <sup>2)</sup>	ratiom. 10 ... 70%	5 VDC ±5%					
Load		> 50 kOhm / < 10 nF					
Current consumption	At nominal voltage with 50 kOhm load	< 3 mA					
Polarity reversal protection		mechanically protected					
Electromagnetic compatibility	The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.						
<b>Dynamical response</b>							
Response time		< 10 ms					
Load cycle		< 10 Hz					
<b>Protection standard</b>		<b>Protection class</b>					
IP 00		III					
<b>Electrical connections</b>							
3-pole plug connector RAST 2.5							
<b>Pressure connection</b>							
Pipe Ø 6.2 mm							
<b>Mounting instruction</b>							
Installation arrangement	Diaphragm horizontal (Recommendation)	Pressure connection and electrical connections downward					
	Diaphragm vertical (on request)	To be agreed, signal is approx. 0.3 mbar higher than real pressure <sup>3)</sup>					
Mounting		Snap mounting in sheet steel from 0.9 to 1.5 mm					
<b>Weight</b>							
~ 17 g							
<b>Packaging</b>							
Cardboard boxes with blister pack inserts (35 pcs)							
<b>Ordering batches quantities / Transport volumes</b>							
Pieces	Execution	Length (cm)	Width (cm)	Height (cm)	Weight (kg)	Blister (35 pcs)	
2520	12 boxes per Euro-pallet	120	80	93	103	72	
210	1 box	59	39	26	6.9	6	

## Accuracy

Parameter	Unit	10 mbar	20 mbar	30 mbar	50 mbar	100 mbar
Tolerance zero point <sup>4)</sup>	max. % fs	–	± 1.5	± 1.5	± 1.5	± 1.5
Tolerance at 0.5 mbar	max. % fs	± 1.5	–	–	–	–
Tolerance full scale <sup>4)</sup>	max. % fs	± 2.5	± 2.5	± 1.5	± 1.5	± 1.5
Resolution	% fs	0.1	0.1	0.1	0.1	0.1
Total of linearity, hysteresis and repeatability at 0.3 mbar (10 ... 50 mbar) and 1 mbar (100 mbar)	% fs	± 0.5	± 0.5	± 0.5	± 0.5	± 0.5
Long term stability acc. to DIN IEC 60770	% fs	± 1.0	± 1.0	± 0.5	± 0.5	± 0.5
TC zero point <sup>5)</sup>	typ. % fs/10K	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2
TC zero point <sup>5)</sup>	max. % fs/10K	± 0.4	± 0.4	± 0.4	± 0.4	± 0.4
TC sensibility <sup>5)</sup>	max. % fs/10K	± 0.2	± 0.2	± 0.2	± 0.2	± 0.4
Positional error <sup>4)</sup>	mbar	~ 0.3	~ 0.3	~ 0.3	~ 0.3	~ 0.3
Ratiometric error	typ. % fs	0.5	0.5	0.5	0.5	0.5
Ratiometric error	max. % fs	1.0	1.0	1.0	1.0	1.0



Test conditions: 25 °C, 45% rF, Power supply 5 VDC  
TK0 / TKE: 0 ... +70 °C

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

<sup>2)</sup> Other supply voltages and outputs on request.

<sup>3)</sup> In Case of condensed water, auto-zero significant.

<sup>4)</sup> For changing diaphragm position from horizontal to vertical, approx. 0.3 mbar.

<sup>5)</sup> TC = Temperature coefficient

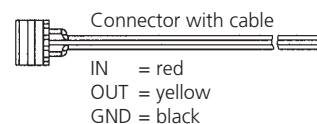
Order code selection table		Order number								
Pressure range	0 ... 10 mbar	4	0	0	.	9	1	1	0	0
	0 ... 20 mbar	4	0	0	.	9	2	1	0	0
	0 ... 30 mbar	4	0	0	.	9	3	1	0	0
	0 ... 50 mbar	4	0	0	.	9	5	1	0	0
	0 ... 100 mbar	4	0	0	.	9	7	1	0	0

▲ Full scale signal at these pressure

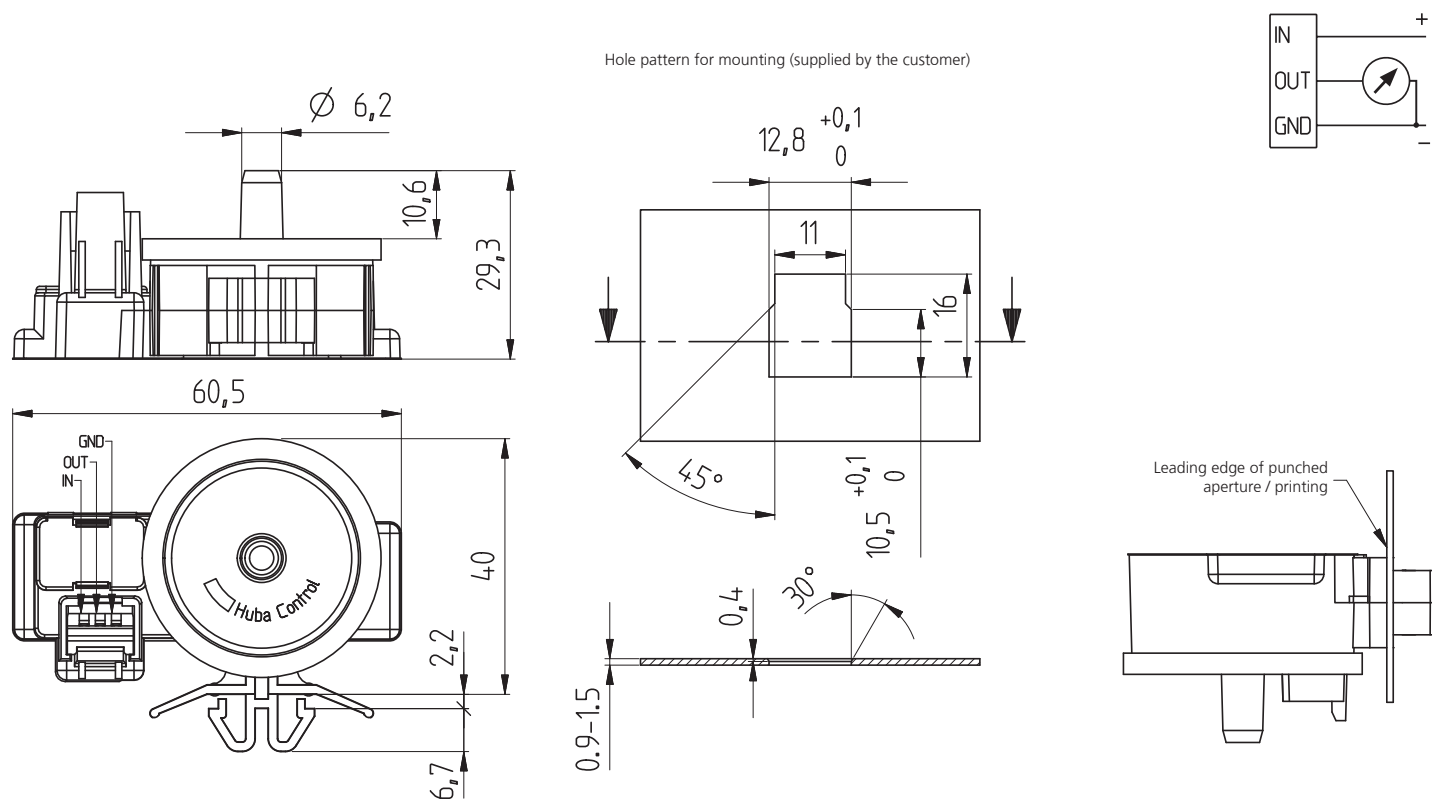
### Accessories <sup>1)</sup>

		Order number
Connector RAST 2.5 with cable 30 cm		111668
Connector RAST 2.5 with cable 110 cm		101817
Connector RAST 2.5 with cable 150 cm		112282
Calibration certificat		104551

AMP Connector <sup>2)</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



<sup>1)</sup> Accessories supplied loose

<sup>2)</sup> To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049.

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