



Differential pressure transmitter

# Huba Control

In Proud Partnership with Huba Control

**PAQUIN**  
SENSORS

For technical support, sales, & distribution  
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## Relative and differential pressure transmitter

### Type 402

Type 402 pressure transmitters are ideally suited to measuring fine air flow in air conditioning systems, and fine pressures in the environmental / medical technology sectors. Individually ranged sensors ensure optimum accuracy and long term stability of measurement. Location is quick and easy, either via a mounting plate or directly onto a PCB.



**Pressure range**  
**0 ... 3 – 50 mbar**

- + Attractive price / performance ratio
- + Excellent synergy of diaphragm technology and ceramic elements
- + Special adapter for top-hat rail mounting
- + Direct pcb mounting with simple snap-on system

## Technical Overview

### Pressure range

Relative and differential	0 ... 3 – 50 mbar
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### Operating conditions

Medium		Air and neutral gases
Temperature	Medium / ambient	0 ... +70 °C
	Storage	-30 ... +70 °C
Tolerable overload		100 mbar
Rupture pressure	at room temperature	200 mbar
	at 70 °C	150 mbar

### Materials in contact with the medium

Case construction	Polycarbonate (PC) / Polyamide (PA)	
Diaphragm	Silicone	
Sensor	Ceramic Al <sub>2</sub> O <sub>3</sub> (96%)	

### Electrical overview

Output	0.5 ... 4.5 V	
Power supply	10.2 ... 33.0 VDC	
Load	> 15 kOhm (to GND)	
Current consumption	< 8 mA	
Polarity reversal protection	Connector and pcb version	mechanically protected
Electromagnetic compatibility	The product is designed exclusively for installation in equipment. The customer is responsible for CE conformity.	

### Dynamic response

Response time	< 10 ms
Load cycle	< 10 Hz

### Protection standard

IP 00

### Electrical connections

Solderable pin in circuit board	
3 pole connector RAST 2.5	
Adapter plate	Mounted and soldered

### Pressure connection

Pipe Ø 6.2 mm

### Mounting instruction

Installation arrangement	Diaphragm vertical	Pressure connections facing downward
	Diaphragm horizontal	Pressure connection P1 upwards
Mounting		Snap fitting <sup>1)</sup>
		Adapter
		Mounting bracket

### Weight

~ 28 g

### Packaging

Single packaging in cardboard boxes	
Multiple packaging in cardboard boxes with blister pack inserts	(25 pcs)

## Accuracy

Parameter	Unit	0 .. 3 mbar	0 ... 5 mbar	0 ... 10 mbar	0 ... 30 mbar	0 ... 50 mbar
Tolerance zero point <sup>2)</sup>	max. % fs	± 0.9	± 0.9	± 0.9	± 0.9	± 0.9
Tolerance full scale <sup>2)</sup>	max. % fs	± 1.3	± 1.3	± 1.3	± 0.7	± 0.7
Resolution	% fs	0.1	0.1	0.1	0.1	0.1
Total of linearity, hysteresis and repeatability	max. % fs	± 1.0	± 1.0	± 0.6	± 0.6	± 0.6
Long term stability acc. to DIN EN 60770	% fs	± 1.0	± 1.0	± 1.0	± 1.0	± 1.0
TC zero point <sup>3)</sup>	typ. % fs/10K	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2
TC zero point <sup>3)</sup>	max. % fs/10K	± 0.4	± 0.4	± 0.4	± 0.4	± 0.4
TC sensitivity <sup>3)</sup>	typ. % fs/10K	± 0.3	± 0.3	± 0.2	± 0.2	± 0.2
TC sensitivity <sup>3)</sup>	max. % fs/10K	~ 0.6	~ 0.5	~ 0.4	~ 0.4	~ 0.4

Test conditions: 25 °C, 45% RH, power supply 12 VDC  
TC z.p. / TC s. 0 ... +70 °C

<sup>1)</sup> max. 1.6 mm thickness

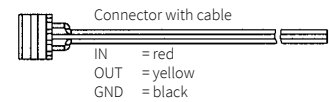
<sup>2)</sup> For changing diaphragm position from horizontal to vertical, approx. -0.13 mbar.

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

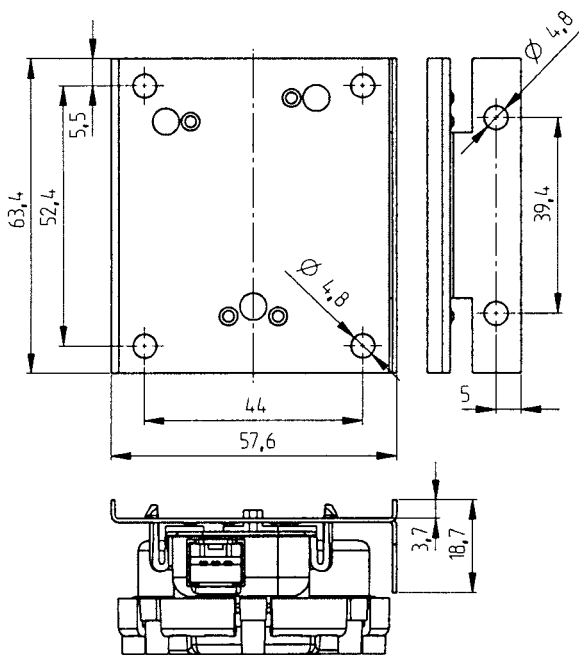
		1	2	3	4	5	6	7
<b>Order code selection table</b>		402. X X X X X X X						
<b>Pressure range <sup>1)</sup></b>	0 ... 3 mbar	9	1					
	0 ... 5 mbar	9	2					
	0 ... 10 mbar	9	3					
	0 ... 30 mbar	9	4					
	0 ... 50 mbar	9	5					
▲ Full scale signal at these pressure								
<b>Adjusting position <sup>2)</sup></b>	Diaphragm vertical			0				
	Diaphragm horizontal			1				
<b>Diaphragm</b>	Silicone			0				
<b>Output / power supply</b>	0.5 ... 4.5 V 10.2 ... 33 VDC				0			
	Print version						1	
<b>Electrical connection</b>	Connector version Rast 2.5						2	
	Print version, mounted and soldered on adapter plate						3	
<b>Pressure connection</b>	Pipe Ø 6.2 mm							1

<b>Accessories (supplied loose)</b>		<b>Order number</b>
Fixing screw for wall thickness 1 – 2 mm	Length of screw 6 mm (min. required 2 pcs)	102976
Fixing screw for wall thickness 4.1 – 6 mm	Length of screw 10 mm (min. required 2 pcs)	112213
Connector Rast 2.5 with cable (110 cm)		101817
Base plate for rail mounting suitable for bearing rail TS 35		110656
Bracket		108222
Calibration certificate		104551

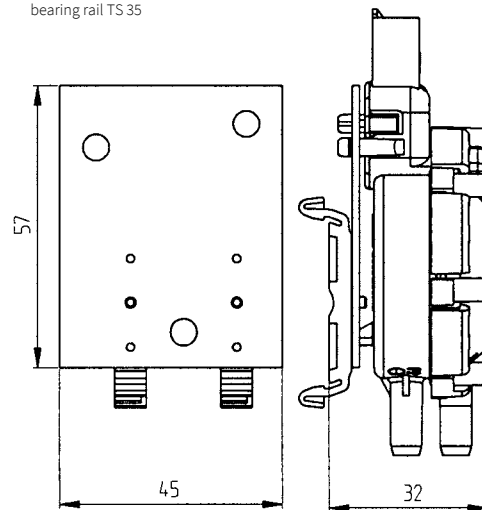
AMP connector <sup>4)</sup>	Manufacturer's Part No.	Colour	for flexible wire
	3-829868-3	grey	7 x 0.20 mm = 0.22 mm <sup>2</sup> or 12 x 0.20 mm = 0.35 mm <sup>2</sup>
	1-966194-3	beige	7 x 0.25 mm = 0.35 mm <sup>2</sup>



Mounting Bracket



Base plate for rail mounting suitable for bearing rail TS 35

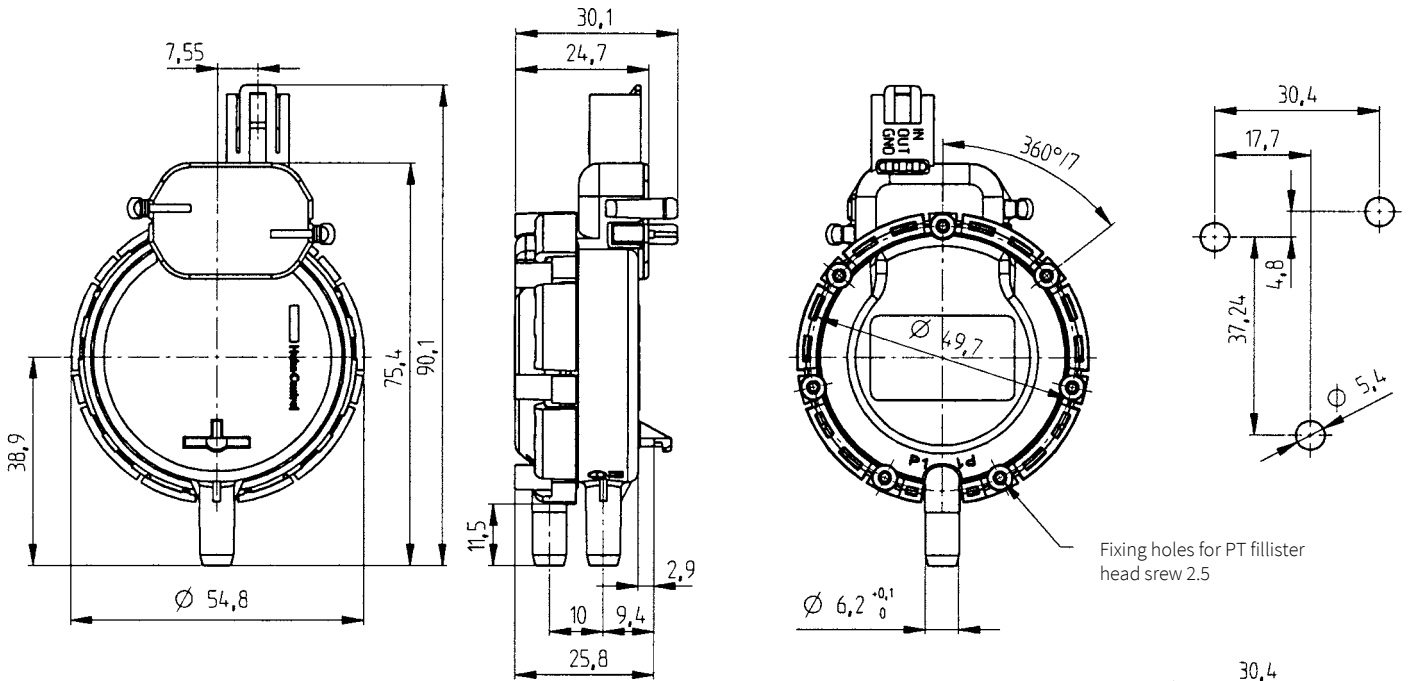


<sup>1)</sup> Other pressure range on request

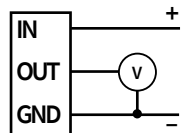
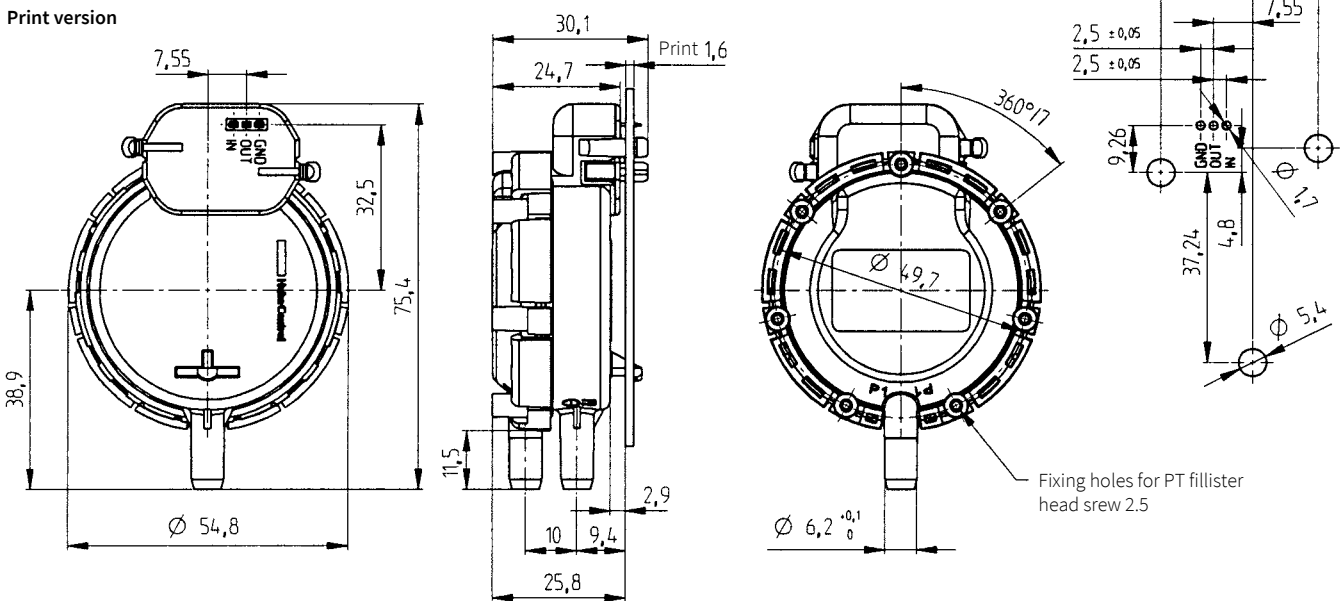
<sup>2)</sup> For changing diaphragm position from horizontal to vertical, approx. -0.13 mbar.

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

Connector version



Print version



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