



Differential pressure transmitter

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 ₂ O ₃ (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 ¹⁾
		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 ²⁾	max. % fs	± 0.9	± 0.9	± 0.9	± 0.9	± 0.9
Tolerance full scale ²⁾	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 ³⁾	typ. % fs/10K	± 0.2	± 0.2	± 0.2	± 0.2	± 0.2
TC zero point ³⁾	max. % fs/10K	± 0.4	± 0.4	± 0.4	± 0.4	± 0.4
TC sensitivity ³⁾	typ. % fs/10K	± 0.3	± 0.3	± 0.2	± 0.2	± 0.2
TC sensitivity ³⁾	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

¹⁾ max. 1.6 mm thickness

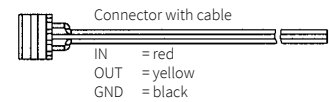
²⁾ For changing diaphragm position from horizontal to vertical, approx. -0.13 mbar.

³⁾ TC = Temperature coefficient

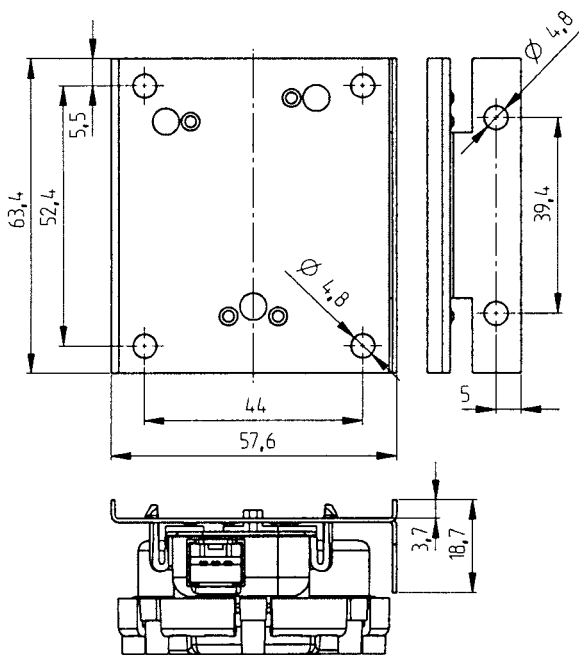
		1	2	3	4	5	6	7
Order code selection table		402. X X X X X X X						
Pressure range ¹⁾	0 ... 3 mbar	9	1					
	0 ... 5 mbar	9	2					
	0 ... 10 mbar	9	3					
	0 ... 30 mbar	9	4					
	0 ... 50 mbar	9	5					
▲ Full scale signal at these pressure								
Adjusting position ²⁾	Diaphragm vertical			0				
	Diaphragm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

Accessories (supplied loose)		Order number
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

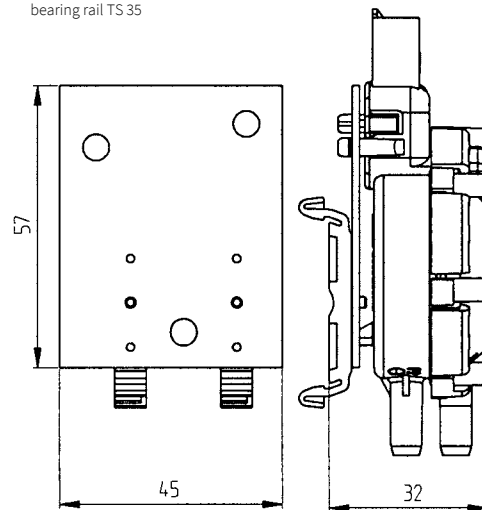
AMP connector ⁴⁾	Manufacturer's Part No.	Colour	for flexible wire
	3-829868-3	grey	7 x 0.20 mm = 0.22 mm ² or 12 x 0.20 mm = 0.35 mm ²
	1-966194-3	beige	7 x 0.25 mm = 0.35 mm ²



Mounting Bracket



Base plate for rail mounting suitable for bearing rail TS 35

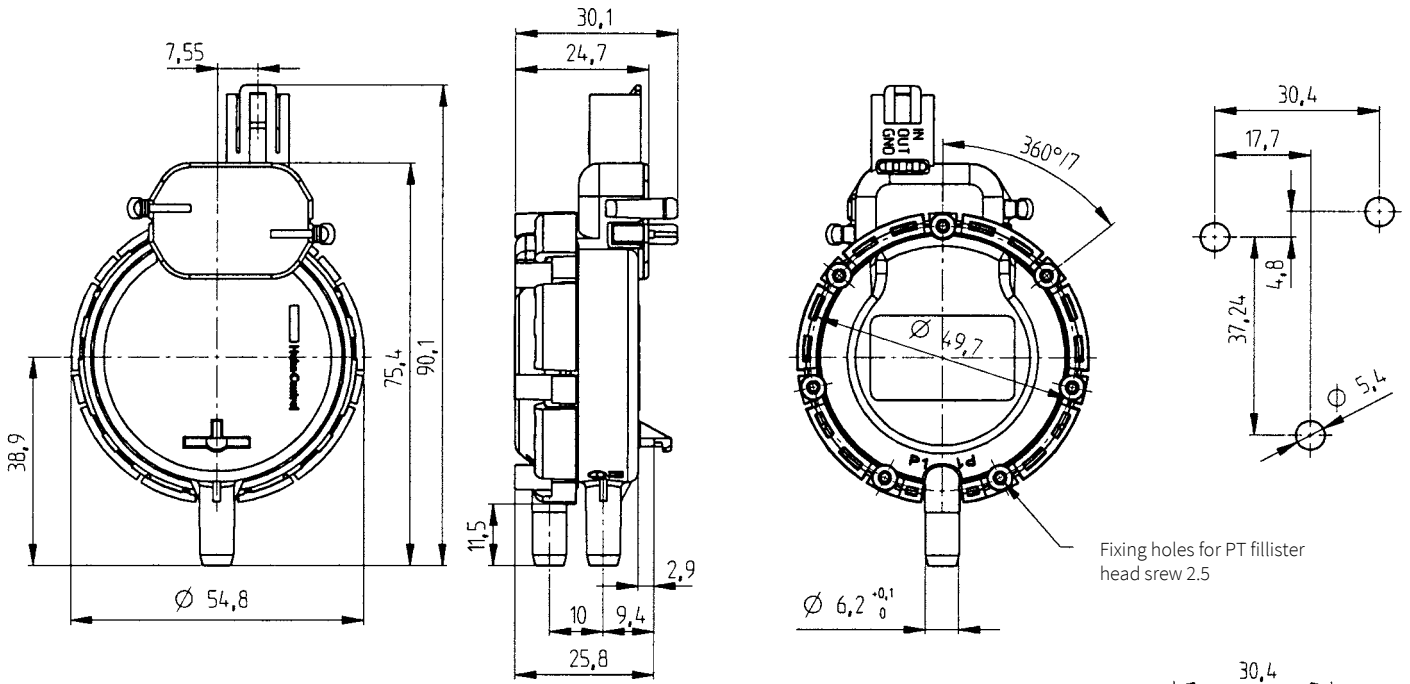


¹⁾ Other pressure range on request

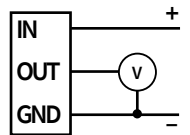
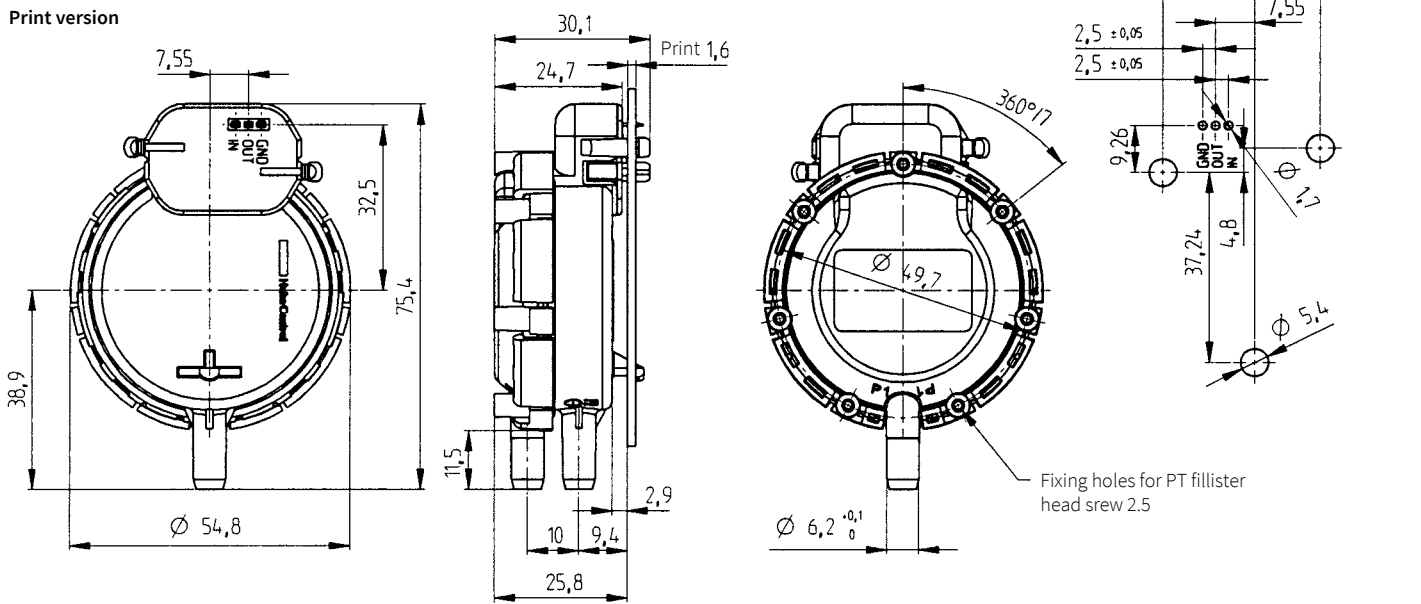
²⁾ For changing diaphragm position from horizontal to vertical, approx. -0.13 mbar.

³⁾ 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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