

Relative and differential pressure transmitter type 402

Pressure range
0 ... 3 – 50 mbar

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.

- 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

Operating conditions

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



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¹⁾ max. 1.6 mm thickness

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

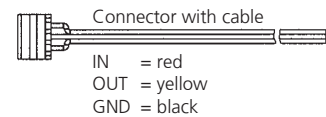
³⁾ TC = Temperature coefficient

Order code selection table		402.9	X	X	X	X	X	X
Pressure range ¹⁾	0 ... 3 mbar	1						
	0 ... 5 mbar	2						
	0 ... 10 mbar	3						
	0 ... 30 mbar	4						
	0 ... 50 mbar	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			
Electrical connection	Print version						1	
	Connector version Rast 2.5						2	
	Print version, mounted and soldered on adapter plate						3	
Pressure connection	Pipe Ø 6.2 mm							1

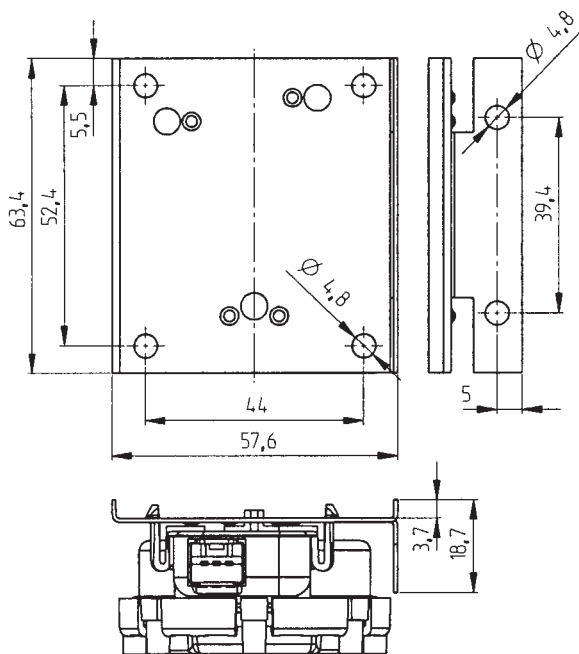
Accessories ³⁾

	Order number
Fixing screw for wall thickness 1 – 2 mm	102976
Fixing screw for wall thickness 4.1 – 6 mm	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

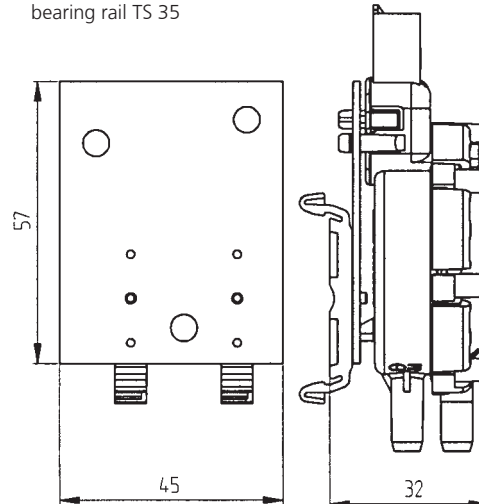
AMP connector ⁴⁾	Manufacturer's Part No.	Colour	for flexible wire
	3-829868-3	grey	7 x 0.20 mm = 0.22 mm ² or 12 x 0.20 mm = 0.35 mm ²
	1-966194-3	beige	7 x 0.25 mm = 0.35 mm ²



Mounting Bracket



Base plate for rail mounting suitable for bearing rail TS 35



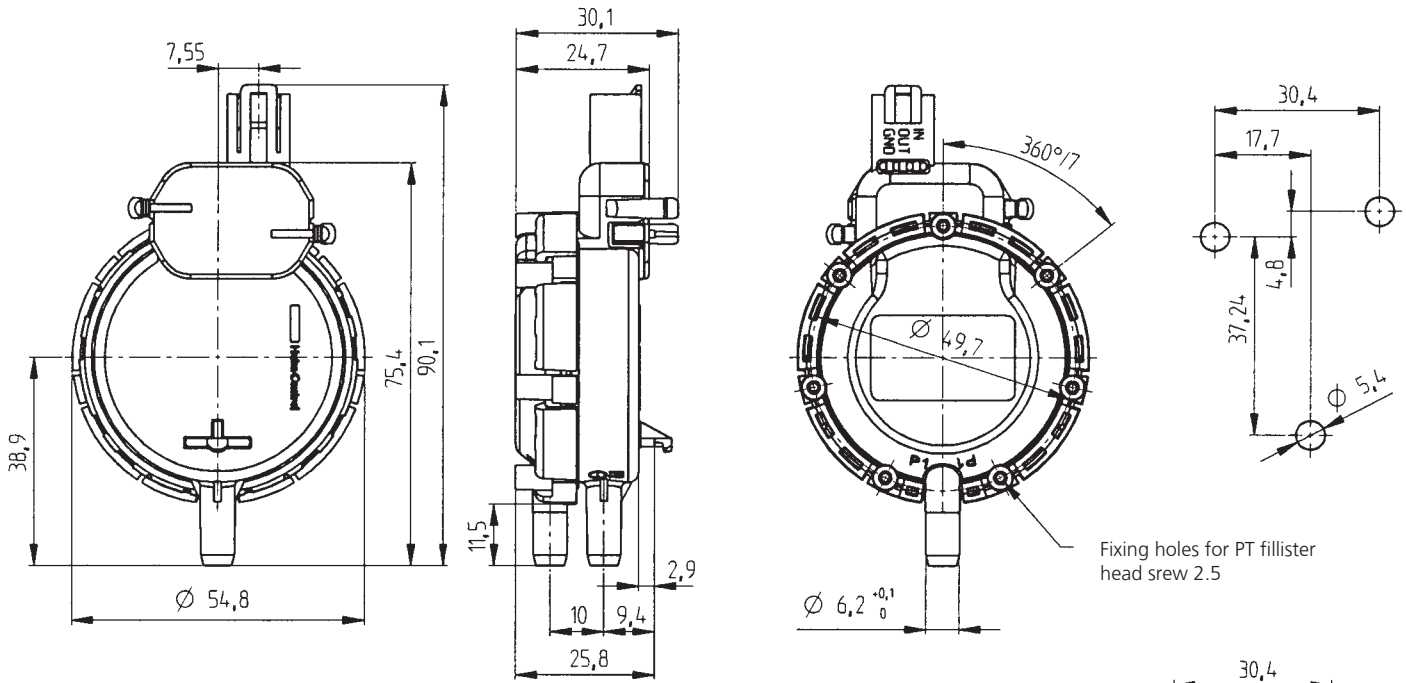
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¹⁾ Other pressure range on request
³⁾ Accessories supplied loose

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

⁴⁾ To be ordered separately from original manufacturer. Further information can be found in the manufacturer specification No. 114-18049.

Connector version



Print version

