

Relative and differential pressure transmitter type 652

Pressure range
0 ... 50 – 1000 mbar



Type 652 pressure transmitters are ideally suited to the continuous monitoring of liquid and gas flow (or level) in heating, ventilation and process technology. Their especially rugged construction allows a single port overpressure of up to 20 bar, depending upon pressure range.

- High overpressure safety margin 10/20 bar on P1
- 3 standardised output signals for direct Processing in control / monitoring systems
- Functionally simple, rugged mechanics with high operating reliability
- Also for slightly aggressive liquids and gases
- Attractive price / performance ratio

Technical overview

Pressure range

Relative and differential	0 ... 50 – 1000 mbar
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Operating conditions

Medium		Liquids and neutral gases
Temperature	NBR-based	0 ... +80 °C
	FPM	-10 ... +80 °C
	EPDM	-10 ... +80 °C
	Q (Silicone)	-40 ... +80 °C
	Storage	-40 ... +80 °C
Tolerable overload (P1 > P2)	≤ 200 mbar	10 bar
Rupture pressure	≥ 500 mbar	20 bar
		30 bar

Materials in contact with the medium

Diaphragm		NBR-based	
		EPDM	
		FPM	
		Silicon	
Case		Anodized aluminium	
		Brass	
		Brass chemical nickel-plated	
Other components		X14CrMoS17	1.4104
		X5CrNi18-10	1.4301
		X10CrNi18-8	1.4310
		Steel category A2 for screws	
		Polyacetate-C, Polyamide	

Electrical overview

Output (3 wire)		0 ... 10 V
		0 ... 20 mA
		4 ... 20 mA
Power supply		20 ... 30 VDC / 24 VAC +15% / -10%
Load	Current load	≤ 300 Ohm
	Voltage load	≥ 10 kOhm
Current consumption	0 ... 10 V	35 mA
	0 ... 20 mA	max. 55 mA
	4 ... 20 mA	max. 55 mA
Polarity reversal protection		Short circuit proof and with polarity reversal protection

Dynamic response

Response time	< 10 ms
Load cycle	< 10 Hz

Protection standard

With plastic cover (PG9)	IP 65
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Electrical connection

Screw terminals	
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Pressure connection (P1 > P2)

Inside thread		G 1/8
Straight screwed connection	Zinc plated steel with NBR seal for pipe (Ø 6 mm)	G 1/8
Screwed Socket	CuZn nickel plated for tube(Ø 6 mm)	G 1/8

Installation arrangement

Unrestricted. The transmitter is calibrated in the factory with the diaphragm positioned vertically. In the case of liquid media vent screw up, i.e. pressure connection down ¹⁾

Tests / Admissions

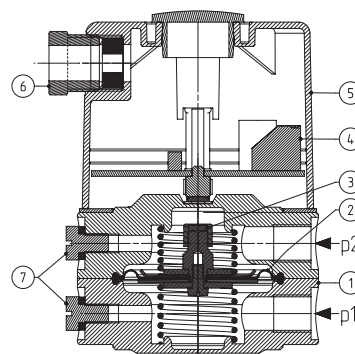
Electromagnetic compatibility	CE conformity acc. EN 61326-2-3
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Weight

With aluminium pressure case	~ 394 g
With brass pressure case	~ 1030 g

Packaging

Single packaging in cardboard	
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Legend to cross-section drawing

- 1 Pressure case
- 2 Diaphragm
- 3 Permanent magnet
- 4 Electronics
- 5 Cover
- 6 PG9 Union
- 7 Vent
- P1 Higher pressure / lower vacuum
- P2 Lower pressure / higher vacuum

¹⁾ Recommendation

Accuracy

Parameter		Unit	
Tolerance zero point	max.	% fs	± 1.0
Tolerance full scale	max.	% fs	± 1.0
Resolution		% fs	0.2
Total of linearity, Hysteresis and repeatability	max.	% fs	± 1.5
TC zero point ¹⁾	max.	% fs/10 K	± 0.8
TC sensitivity ¹⁾	typ.	% fs/10 K	± 0.3
TC sensitivity ¹⁾	max.	% fs/10 K	± 0.6

Test conditions: 25 °C, 45% RH, power supply 24 VDC

Order code selection table type

652.9 X X X X X X X X X X X

Pressure ranges ²⁾	0 ... 50 mbar	0																			
	0 ... 100 mbar	1																			
	0 ... 200 mbar	2																			
	0 ... 500 mbar	3																			
	0 ... 1000 mbar	4																			
Output ³⁾	0 ... 10 V	0																			
	0 ... 20 mA	1																			
	4 ... 20 mA	4																			
Linearity	± 1.5% FS					1															
Power supply (IN)	20 ... 30 VDC / 24 VAC +15% / -10%							0													
Electrical connection	Screw terminals								0												
Pressure connections	Inside thread G 1/8																			0	
	Straight screwed connection G 1/8																			1	
	Screw socket G 1/8																			2	
Pressure case	Anodized aluminium black																			0	
	Brass																			1	
	Nickel-plated brass																			2	
Diaphragm	NBR-based																			0	
	FPM																			1	
	EPDM																			2	
	Q (Silicon)																			3	
Mounting	Without mounting bracket																			0	0
	With mounting bracket type A																			0	1
	With mounting bracket type B																			0	2

Accessories ⁴⁾

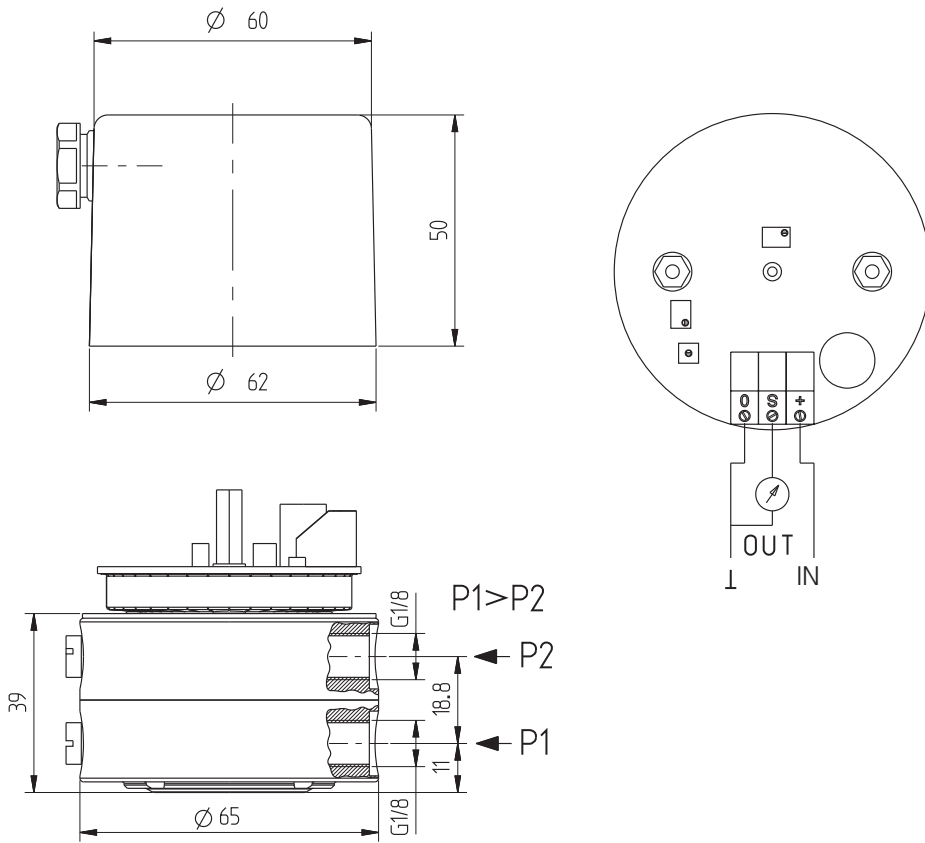
	Order number	
Mounting bracket type A	100996	
Mounting bracket type B	100997	
Straight screwed connection G 1/8	Stainless steel 1.4571 / AISI 316Ti for pipe (Ø 6 mm)	105860
Screw Socket G 1/8	CuZn nickel plated for tube (Ø 6 mm)	108239
Calibration certificate	104551	

¹⁾ TC = Temperature coefficient

²⁾ Other pressure range on request

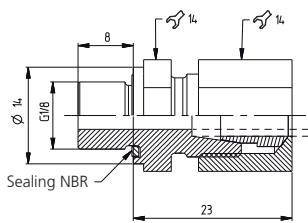
³⁾ Other output signals on request

⁴⁾ Accessories supplied loose

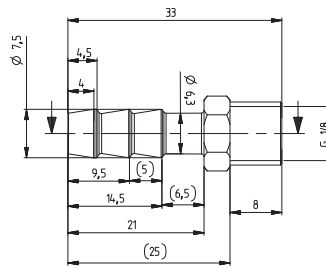


Accessories

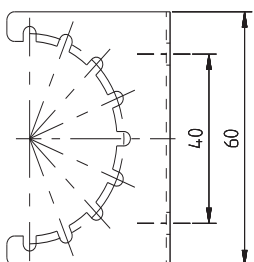
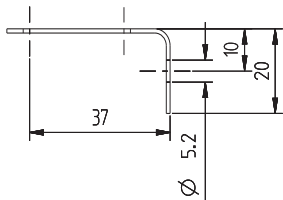
Straight screwed connector G 1/8



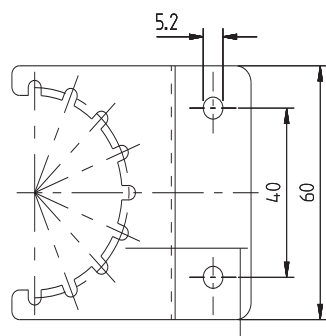
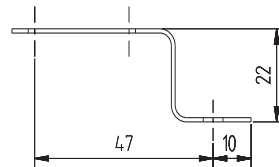
Screwed Socket G 1/8



Mounting bracket type A



Mounting bracket type B



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