

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
	≥ 500 mbar	20 bar
Rupture pressure		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

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

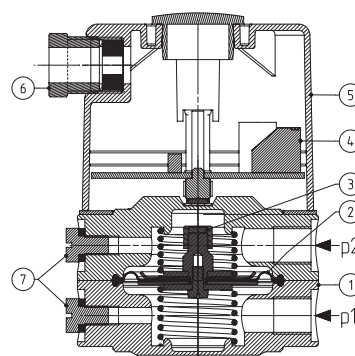
Electromagnetic compatibility	CE conformity acc. EN 61326-2-3
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Weight

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

Packaging

Single packaging in cardboard



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

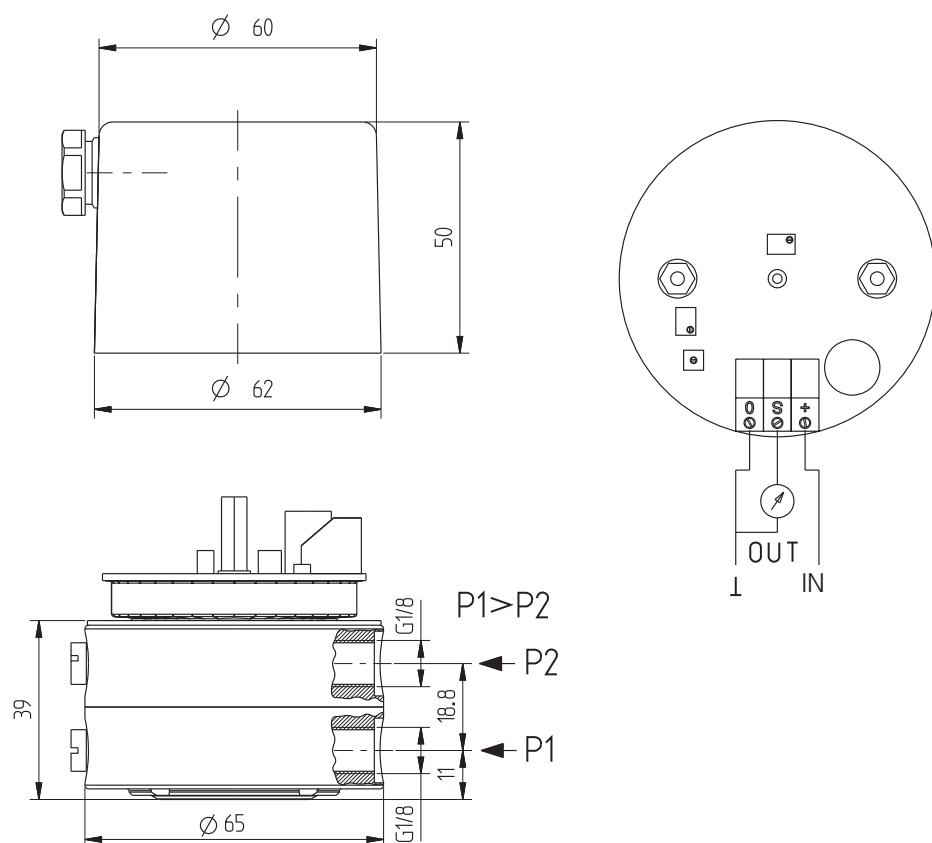
Parameter		Unit	
Tolerance zero point	max.	% fs	± 1.0
Tolerance full scale	max.	% fs	± 1.0
Resolution		% fs	0.2
Total of linearity, Hysteresis and repeatability	max.	% fs	± 1.5
TC zero point ¹⁾	max.	% fs/10 K	± 0.8
TC sensitivity ¹⁾	typ.	% fs/10 K	± 0.3
TC sensitivity ¹⁾	max.	% fs/10 K	± 0.6

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					
Diaphragme	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	

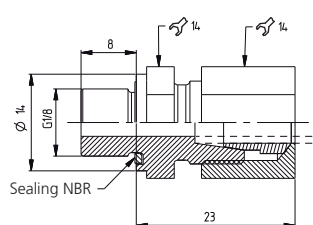
Accessories ⁴⁾

			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

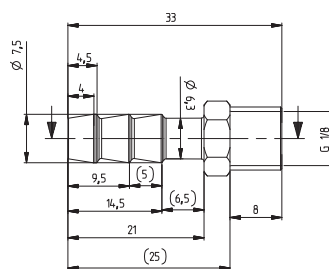


Accessories

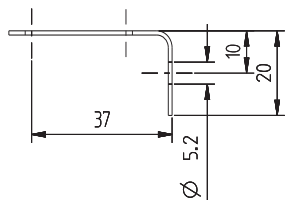
Straight screwed connector G 1/8



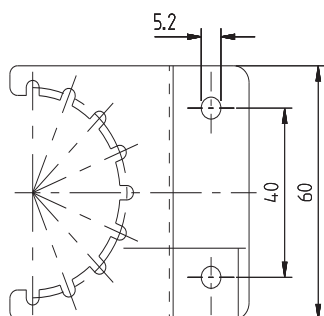
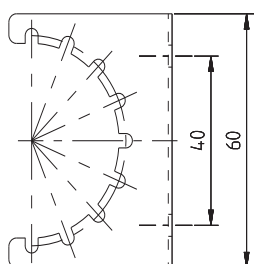
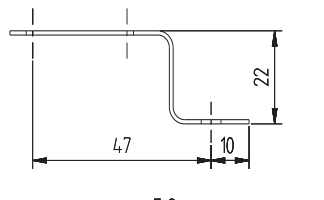
Screwed Socket G 1/8



Mounting bracket type A



Mounting bracket type B





FOR FINE PRESSURE AND FLOW MEASUREMENT

Huba Control AG
Headquarters

Industriestrasse 17
5436 Würenlos
Telefon +41 (0) 56 436 82 00
Telefax +41 (0) 56 436 82 82
info.ch@hubacontrol.com

Huba Control AG
Niederlassung Deutschland

Schlattgrabenstrasse 24
72141 Walddorfhäslach
Telefon +49 (0) 7127 23 93 00
Telefax +49 (0) 7127 23 93 20
info.de@hubacontrol.com

Huba Control SA
Succursale France

Rue Lavoisier
Technopôle Forbach-Sud
57602 Forbach Cedex
Téléphone +33 (0) 387 847 300
Télécopieur +33 (0) 387 847 301
info.fr@hubacontrol.com

Huba Control AG
Vestiging Nederland

Hamseweg 20A
3828 AD Hoogland
Telefoon +31 (0) 33 433 03 66
Telefax +31 (0) 33 433 03 77
info.nl@hubacontrol.com

Huba Control AG
Branch Office United Kingdom

Unit 13 Berkshire House
County Park Business Centre
Shrivenham Road
Swindon - Wiltshire SN1 2NR
Phone +44 (0) 1993 776667
Fax +44 (0) 1993 776671
info.uk@hubacontrol.com

www.hubacontrol.com