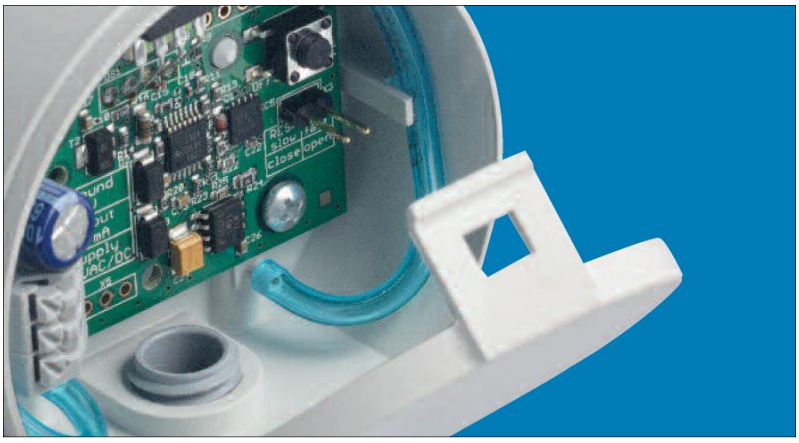
Beck.

Differential pressure transmitter for air



Differential pressure transmitter 982R

General description

The differential pressure transmitters of the 982R series are used to measure differential pressure, overpressure and vacuum. They provide one adjustable pressure range and one output signal.

Applications

Monitoring of gaseous, non-combustible and non-aggressive media.

Possible usage areas are:

- Building automation, air conditioning systems and clean room monitoring
- Valve and flap control
- Filter, ventilator and blower monitoring
- Control of air flows

Adjustable pressure range

The end of the pressure range can be reduced to 50% of its factory set full scale value simply by the use of a push-button.

Output signal

0 ... 10 V or 4 ... 20 mA. Other signals on request.

Easy offset calibration

The output signal can be calibrated to zero by pressing the push-button (pressure transmitter must be depressurised).

Configurable response time

The response time of the output signal can be configured using a jumper. If the jumper is in place the response time is slow (factory setting), which is useful for suppressing brief pressure peaks. If the application requires a fast response time the jumper must be removed.

Volume flow measurement (optional)

The shape of the output signal can be programmed to square root by the factory.

Reset

The transmitter can be reset to its factory setting, just by pressing the push-button for >10 sec.

Measuring method

Piezoresistive pressure transducer.

Mounting position

Can be mounted in any position. The zero offset calibration eliminates any possible position error.

Packaging unit

60 pcs. per carton, OEM

Technical data

Supply voltage 3-wire version 2-wire version	 18 ... 30 VAC / VDC 18 ... 30 VDC
Output signal 3-wire version 2-wire version	 0 ... 10 V or 4 ... 20 mA 4 é 20 mA
Maximum current draw	< 40 mA at 3-wire / 0 é 10 V < 60 mA at 3-wire / 4 é 20 mA < 21 mA at 2-wire / 4 é 20 mA
Load for output 4 ... 20 mA 0 ... 10 V	 20 ... 500 Ý Ó1kÝ
Medium	Air and non-combustible and non-aggressive gases
Working and storage temperature	-20 ... 70°C
Linearity (incl. hysteresis and repeatability)	Ò±0.5% FS, min. ±1 Pa
Uncertainty (Total Error Band w/o long-term and temperature effects)	±1% FS, min. ±1 Pa
Long-term stability	Ò±1% FS
Humidity	0 ... 95 % rel, non-condensing
2 custom response times selectable between 0.2 s and 20 s	Standard 1.0 s and 0.2 s
Process connection P1 and P2	6 mm hose connection
Electrical connection	Spring terminals for wires and leads up to 1.5 mm^2 or circular connectors M12 / 4-pole
Mounting	Screw mounting with serrated screws
Housing material	ABS
Housing dimensions	approx. Ø 66 x 28 mm
Weight	approx. 50 gr
Protection class according to EN 60529	IP54 with protection cover
CE Conformance	EMC Directive RoHS Directive

Accuracy specifications according to EN 60770 based on the pressure measurement at 23 °C

Differential pressure transmitter 982R

Pressure ranges

Model	Pressure range	Overload capacity	Bursting pressure	Additional uncertainty with temperature [% FS/10K]
982R.623	0 é 100 Pa	60 kPa	100 kPa	± 1.0
982R.633	0 é 250 Pa	60 kPa	100 kPa	± 0.7
982R.643	0 é 500 Pa	75 kPa	125 kPa	± 0.5
982R.653	0 é 1 kPa	75 kPa	125 kPa	± 0.3
982R.663	0 é 2.5 kPa	85 kPa	135 kPa	± 0.3
982R.673	0 é 5 kPa	85 kPa	135 kPa	± 0.3
982R.683	0 é 10 kPa	85 kPa	135 kPa	± 0.3
982R.693	0 é 25 kPa	135 kPa	275 kPa	± 0.3
982R.6A3	0 é 50 kPa	200 kPa	400 kPa	± 0.3
982R.6B3	0 é 100 kPa	200 kPa	400 kPa	± 0.3

Further pressure ranges on request.

Order matrix

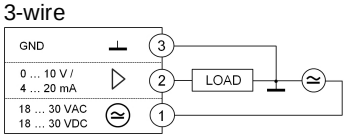
Configurable pressure range	0 ... 100 Pa	(1.0 mbar)	**982R.6**	2				
	0 ... 250 Pa	(2.5 mbar)		3				
	0 ... 500 Pa	(5.0 mbar)		4				
	0 ... 1 kPa	(10 mbar)		5				
	0 ... 2.5 kPa	(25 mbar)		6				
	0 ... 5 kPa	(50 mbar)		7				
	0 ... 10 kPa	(100 mbar)		8				
	0 ... 25 kPa	(250 mbar)		9				
	0 ... 50 kPa	(500 mbar)		A				
	0 ... 100 kPa	(1000 mbar)		B				
Pressure unit	mbar				1			
	Pascal				3			
Output signal and supply voltage	0 ... 10 V, 3-wire, linear					7		
	4 ... 20 mA, 3-wire, linear					D		
	0 ... 10 V, 3-wire, square rooted					L		
	4 ... 20 mA, 3-wire, square rooted					P		
	4 ... 20 mA, 2-wire, linear					2		
	4 ... 20 mA, 2-wire, square rooted					U		
Display	no display						0	
Electrical connection	via spring terminals							6
	via circular connectors M12 / 4-pole							8

Accessories

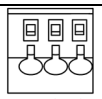
Climaset® consisting of 2m PVC hose and 2 plastic pipes	Article No. 6555
Climaset® consisting of 2m Silicone hose and 2 plastic pipes	Article No. 6557
Climaset® consisting of 2m PVC hose and 2 angled metal pipes	Article No. 6550
Climaset® consisting of 2m Silicone hose and 2 angled metal pipes	Article No. 6556
Duct connecting pipe for Climaset® 6555	Article No. 6551
Angled metal pipe for Climaset® 6550	Article No. 6552
Rubber grommet for Climaset® 6550	Article No. 6553
Roll with 100 m PVC hose	Article No. 6424
Roll with 100 m Silicone hose	Article No. 6425

Terminal assignments

3-wire

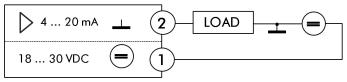


Spring terminals 2-or 3-pole



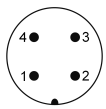
3	Ground (GND)
2	Output signal (0é 10 V / 4é 20 mA)
1	Supply voltage (18...30 VAC / VDC)

2-wire



2	Output signal (4é 20 mA)
1	Supply voltage (18...30 VDC)

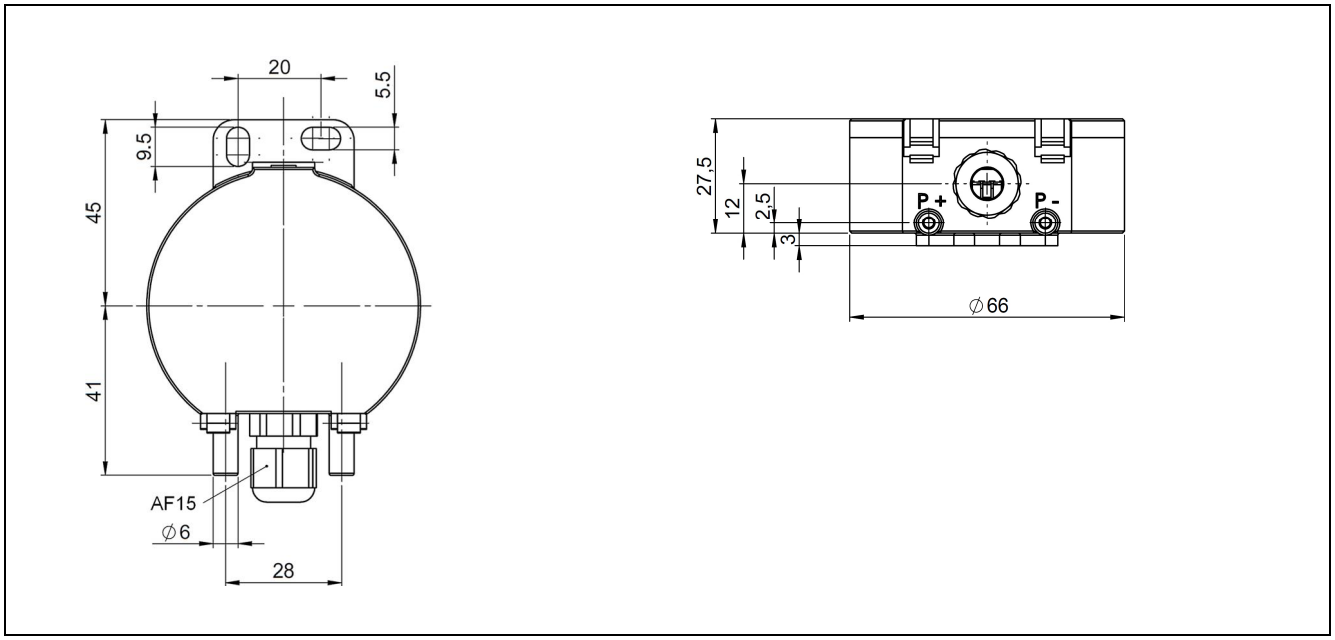
Circular connectors M12, 4-pole



2	Not used
3	Ground (GND)
4	Output signal (0é 10 V / 4é 20 mA)
1	Supply voltage (18...30 VAC / VDC)

2	Output signal (4é 20 mA)
3	Not used
4	Not used
1	Supply voltage (18...30 VDC)

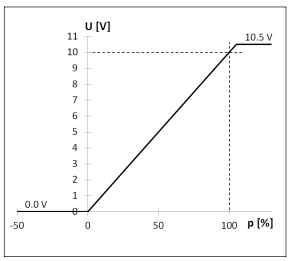
Dimensional Drawings



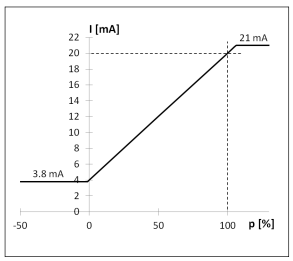
Analog output signal

Linear

0 ï 10 V

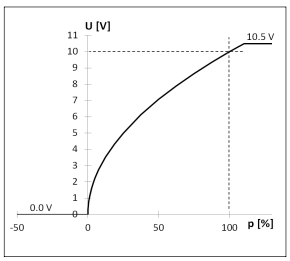


4 ï 20 mA

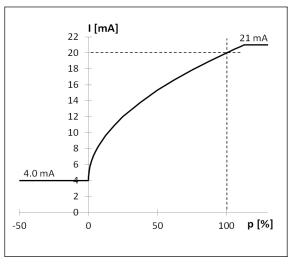


Square root

0 ï 10 V



4 ï 20 mA



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