

Type DE 61

Measuring transmitter with limit switching functions for acquisition and transmission of lowest pressure and differential pressure.

Typical Applications:

- filter technics
- precision measurements in air conditioning conduits
- clean-room pressure compensation
- burner vacuum measurements
- circulating air controlling in furnaces

Main Features

- high pressure sensitive
- long-time stability
- resistant to shocks and vibration
- high overpressure safety
- with local LC-display



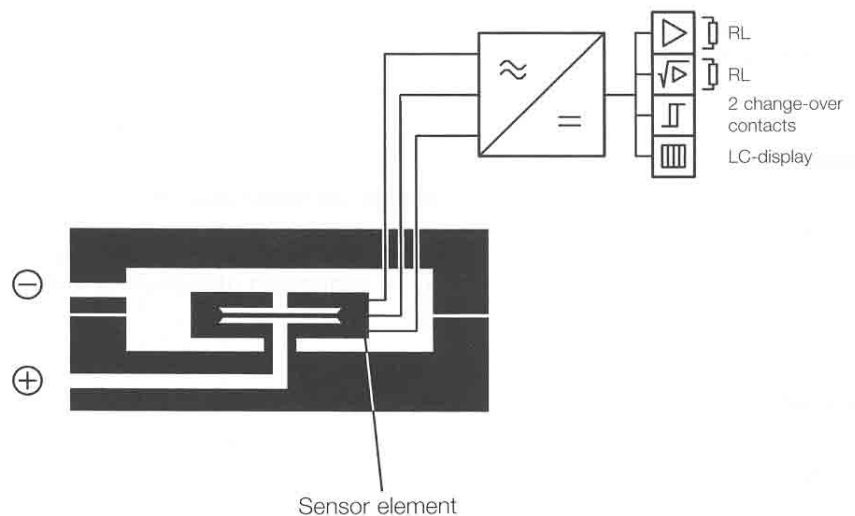
Functional Diagram

Construction and Operation

The function of this transmitter is based on a capacitive sensor element. Due to modern micro-mechanical manufacturing process this sensor is high over-pressure safe, shock and vibration resistant and long-time stable.

The differential pressure, which acts on the sensor element effects a measuring signal. The electronic amplifier generates this into an electrical output signal of 0-20/4-20 mA. This output signal is used for an external data processing and is shown on the LC-display e.g. in mbar.

The LC-display can also be used for indication and precise adjustment of the differential pressure dependent switching functions. Both changeover contacts can be adjusted to any value within the measuring range.



Technical Data DE 61

Measuring ranges	0,25...4 mbar (acc. to ordering code)
Nominal pressure of measuring system	0,6 bar
Max. static pressure	overpressure safe up to permitted nominal pressure
Linearity	1% FS
Hysteresis	0,1 % FS
Temperature drift	0,5% FS/10 K
Permissible ambient temperature	-10° to +60 °C
Permissible medium temperature	-20° to +70 °C
Protection class	IP 54 acc. to DIN 40050

Electrical Data

Electric connections	3-wire	3-wire	2-wire
Operating voltages	24 V DC	24 V DC	24 V DC
Power draw	3 VA approx.	3 VA approx.	3 VA approx.
Output signal	0-20 mA	4-20 mA	4-20 mA
Apparent ohmic resistant	700 Ohm	700 Ohm	max. 450 Ohm
Current limit	30 mA approx.	30 mA approx.	30 mA approx.
Square-rooted output	±0,5%		
with floating figures suppression	2% adjusted		
Slope adjustment	10% approx. of full scale range		
Zero point adjustment	10% approx. of full scale range		

Measuring Value Indication / Switchpoints

Indication	3 1/2-digit LC-display
Switchpoint adjustment	The digital indicator can be switched over between the differential pressure actual value and the switch point adjustments, via a selection switch. Selection of the desired output I or II via a selection switch. The switch now shows the relating, adjusted set point. The set points are adjustable over the complete measuring range.
Switch point hysteresis	2% approx.
Contact output	1 or 2 potential-free change-over contacts
Load data of contacts	U max. = 250 V DC, I max. = 2 A, P max. = 250 VA

Connection

Electrical connections	internal connector bloc, PG 9-screw connections
Pressure connections	female screw thread G 1/4, cutting ring screw connection for 6/8 mm pipe, screw connection aluminium for 6-8-10 mm flexible tube

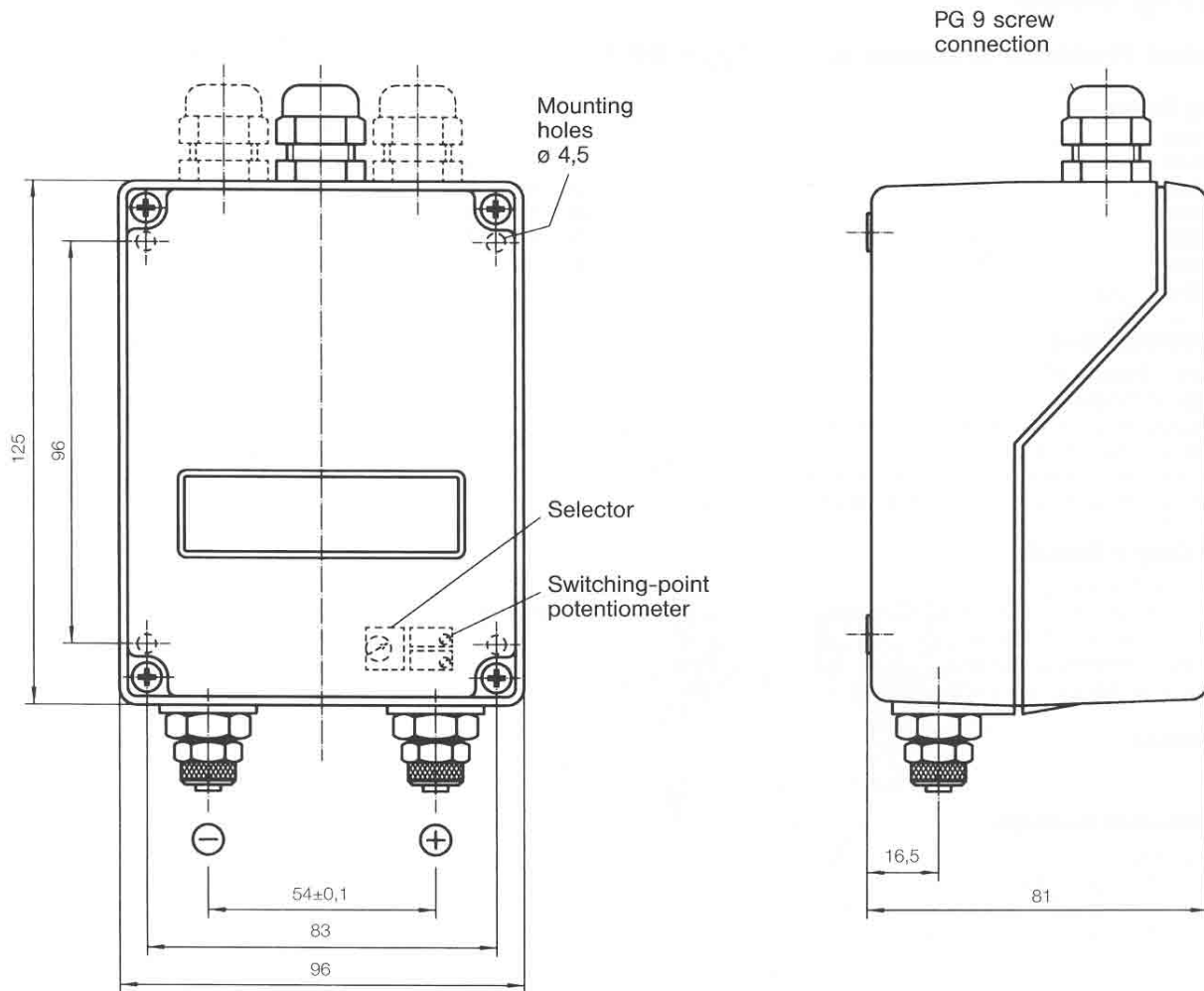
Material

Case	die-cast part, painted
Covering cap	ABS self-extinguishing
Measuring element	silicium, glass, aluminium

Installation

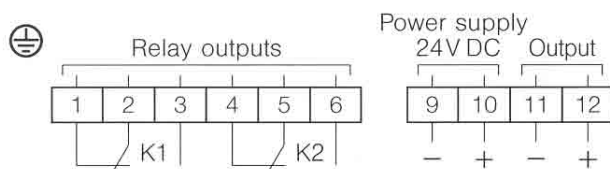
	in case of wallmounting: vertical
	in case of a different fitting position zero point adjustment is recommended

Dimensioned Drawings

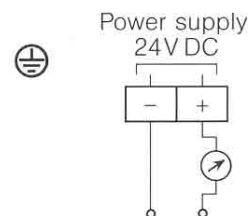


Differential Pressure Transmitter Type DE 61

**Connection Scheme
3-wire**



**Connection Scheme
2-wire**



Ordering Code

Differential Pressure Transmitter

Type DE 61

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Measuring Range

0...0,25 mbar	▷	9	4
0...0,4 mbar	▷	9	5
0...0,6 mbar	▷	9	6
0...1,0 mbar	▷	5	1
0...1,6 mbar	▷	9	7
0...2,5 mbar	▷	9	8
0...4,0 mbar	▷	5	2

Pressure Connections

Female screw thread BSP 1/4"	▷	0	1
Cutting ring connection brass for 6 mm tube	▷	2	8
Cutting ring connection brass for 8 mm tube	▷	2	9
Cutting ring connection brass for 10 mm tube	▷	3	0
Screw connection aluminium for 6 mm flexible tube	▷	4	0
Screw connection aluminium for 8 mm flexible tube	▷	4	1

Electrical Output Signal

0-20 mA, linear, 3-wire	▷	A
4-20 mA, linear, 2-wire, only 24 V DC, without contacts and square-root extracting	▷	B
0-20 mA, square-rooted, 3-wire	▷	E
4-20 mA, square-rooted, 3-wire	▷	F
4-20 mA, linear, 3-wire	▷	P

Supply Voltage

24 V DC

Indication/Switch Sections

Without indication	▷	0	0
3 1/2-digit LC-display	▷	1	0
3 1/2-digit LC-display with 1 potential-free contact	▷	2	F
3 1/2-digit LC-display with 2 potential-free contacts	▷	2	G