

DE 28 || Differential Pressure Transmitter

Application

Measuring Transmitter for overpressure, partial vacuum and differential pressure of liquid and aerial media. Ranges: 0-0.4 up to 0-6 bar. This series of transmitter is suitable for various measuring applications in the field of industrial and sanitary techniques.

Typical applications:

- Measurement of differential pressure between forward and return flow in heating systems
- Monitoring of filters, blowers and compressors

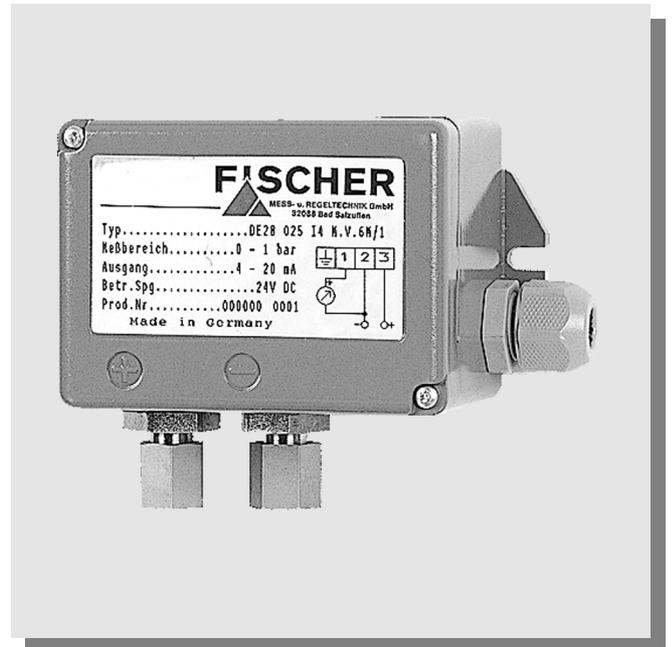
Main Features

- Overpressure protection
- Maintenance-free due to inductive movement
- Multiple applications
- rugged design

Construction and Operation

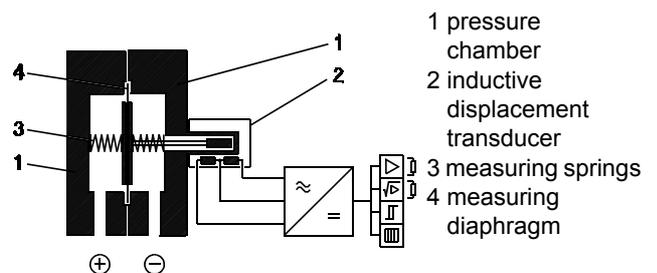
This transmitter is based on a rugged and uncomplicated diaphragm movement. The operating principle of the system is identical for all applications of this type. In a state of equilibrium, the forces of the springs on both sides of the diaphragm are balanced.

The pressure or differential pressure to be measured creates an unbalanced force of the springs for the measuring range until a new equilibrium is reached.



A centre-mounted tappet transfers the motion of the diaphragm system to the core of an inductive displacement transducer. The subsequent converter circuit converts this motion into an electrical output signal 0(4) - 20 mA linear, 3-wire connection. The transmitter is reverse battery and short circuit protected.

Block Schematic Diagram

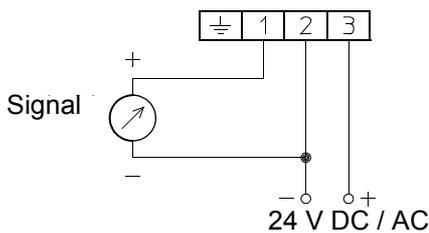


Specifications

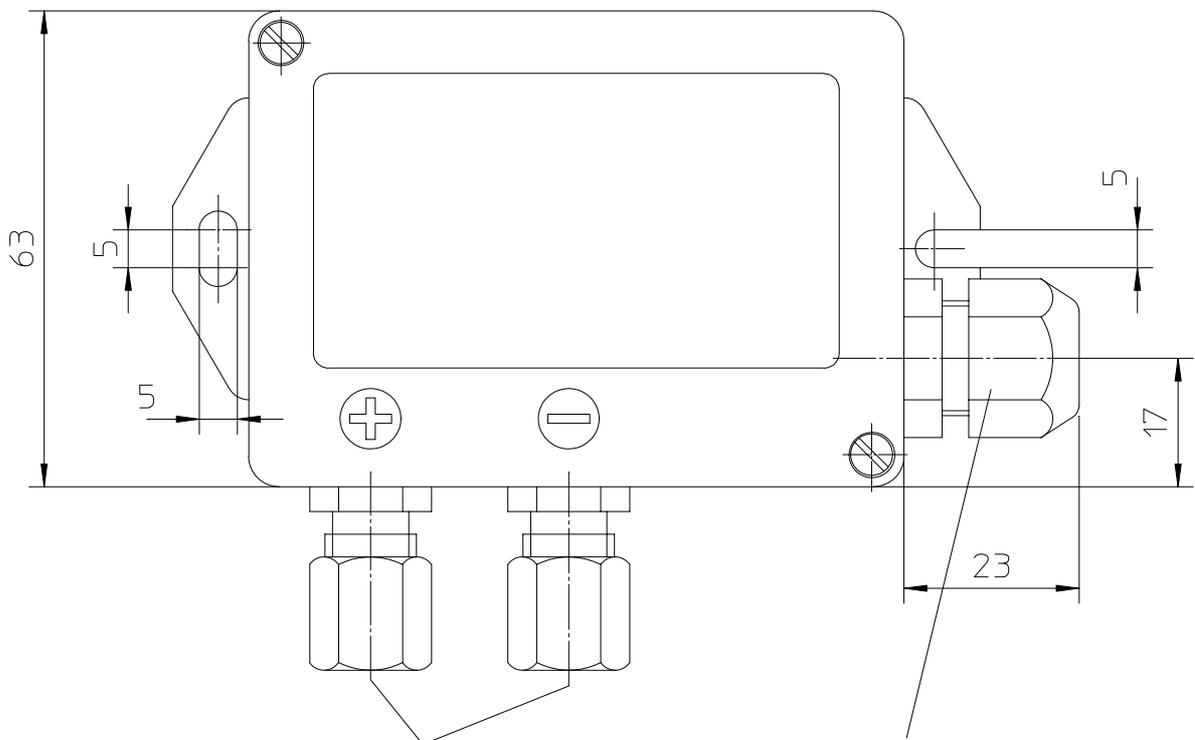
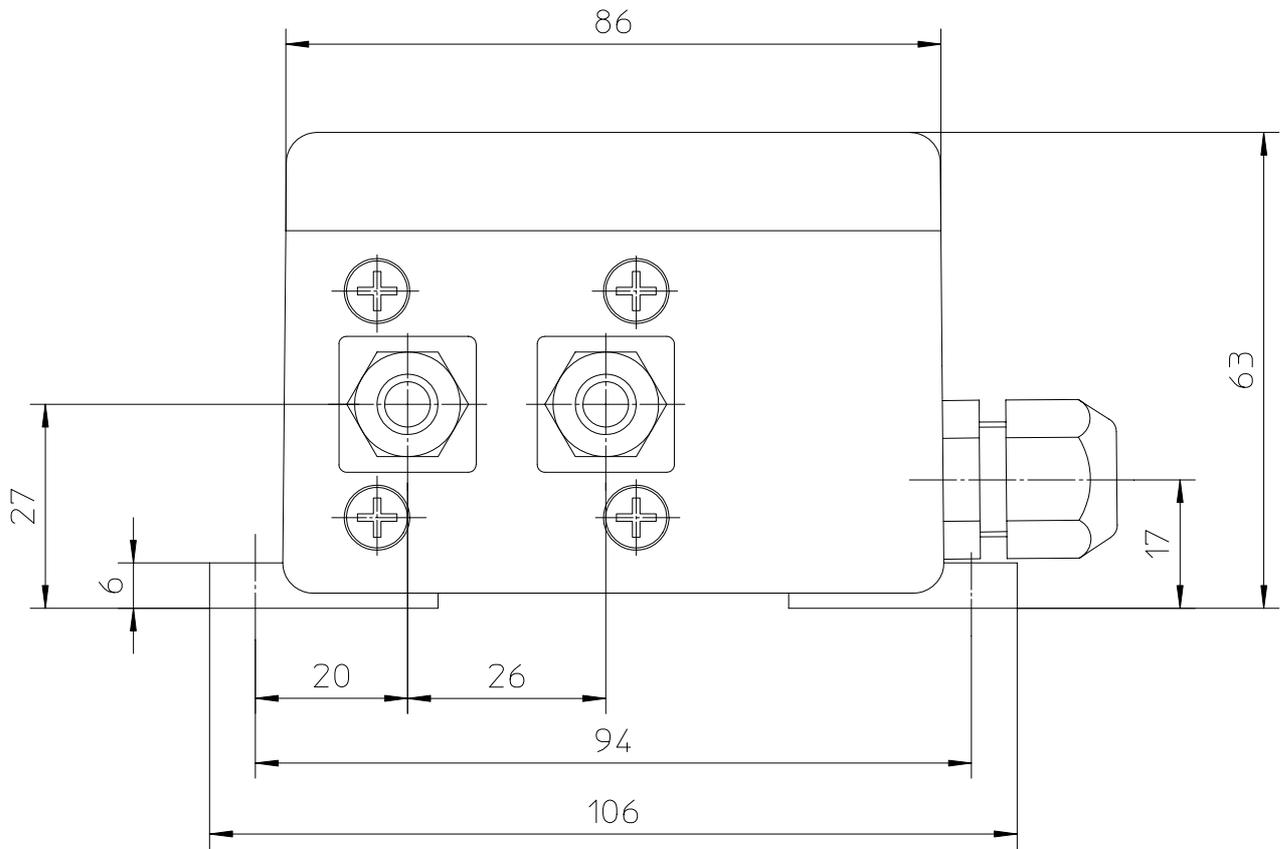
General		0-0.4	0-0.6	0-1	0-1.6	0-2.5	0-4	0-6	bar
Measuring ranges									
Max. static operating pressure		16 bar							
Accuracy		≤ 2.5% FS							
Linearity		≤ 2% FS							
Hysteresis		≤ 1% FS							
Permissible ambient temperature		0 up to +70°C							
Max. storage temperature		70 °C							
Protection class		IP54 per DIN EN 60529							
Electrical									
Output signal		0...20 mA 3-wire 4...20 mA 3-wire				0...10 V 3-wire			
Operating voltage		24 V DC / AC 3-wire range 15...30 V DC 20...30 V AC				24 V DC / AC 3-wire range 15...30 V DC 20...28 V AC			
Load		≤ 380 Ω for all operating voltages				≥ 2 K Ω			
Connections									
Pressure connection		female thread G 1/8 cutting ring connection (brass) for 6mm tube cutting ring connection (brass) for 8mm tube							
Electrical connection		fixed numbered cable, prewired by cable gland							
Materials									
Case material		polycarbonate							
Pressure chamber		brass							
Measuring diaphragm		NBR / Viton®							
Mounting									
Mounting position		upright, pressure ports downward							

Measuring transmitter is reverse battery and short circuit protected.

Electrical Connection



Dimensions



cutting ring connection for $\varnothing 6$ mm

M12x1.5 cable gland

Ordering Code

Differential Pressure Transmitter DE 28 L 0 0 0 0

Measuring Range

0 ... 400 mbar	>	8	3
0 ... 0.6 bar	>	0	1
0 ... 1 bar	>	0	2
0 ... 1.6 bar	>	0	3
0 ... 2.5 bar	>	0	4
0 ... 4 bar	>	0	5
0 ... 6 bar	>	0	6

Pressure Chamber / Gaskets

pressure chamber, measuring diaphragm, gasket: Ms/NBR.....	>	M
pressure chamber, measuring diaphragm, gasket: Ms/Viton®	>	N

Pressure Connection

Female thread G 1/8	>	0	0
Cutting ring connection (brass) for 6mm tube	>	2	8
Cutting ring connection (brass) for 8mm tube	>	2	9

Electrical Connection

Numbered cable, 1m, prewired	>	1
Numbered cable, 2.5m, prewired	>	2
Numbered cable, 5m, prewired	>	5

Output Signal

0 - 20 mA linear, 3-wire connection	>	A
4 - 20 mA linear, 3-wire connection	>	P
0 - 10 V DC linear, 3-wire connection	>	C

Power supply

24 V DC / AC	>	L
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