

DE28 || 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

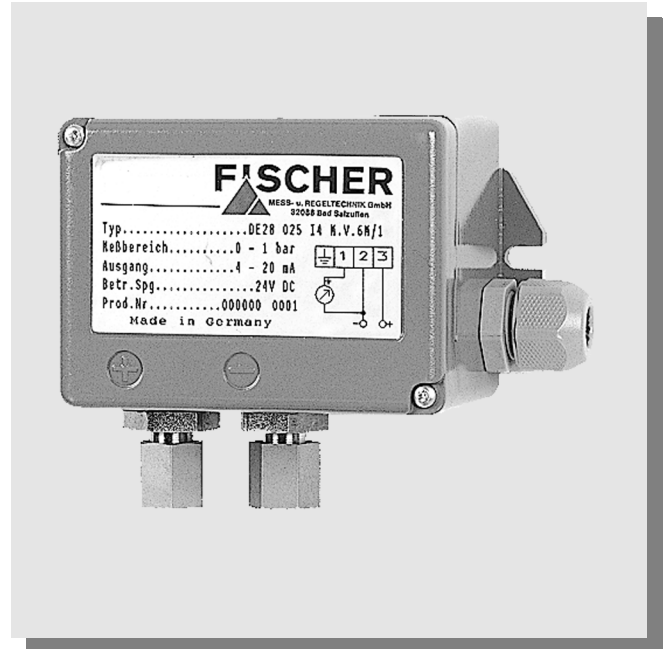
Main Features

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

Construction and Operation

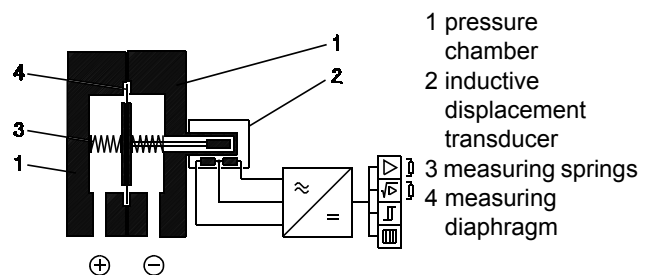
This transmitter is based on a rugged and uncomplicated diaphragm movement. The operating principle of the system is identical for all applications of this type. In a state of equilibrium, the forces of the springs on both sides of the diaphragm are balanced.

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

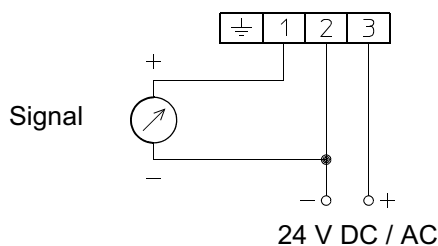


Specifications

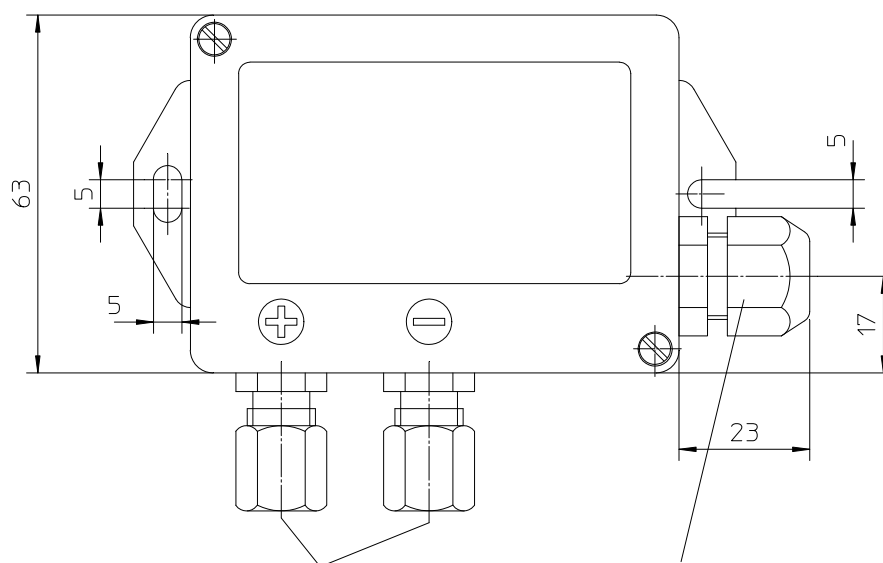
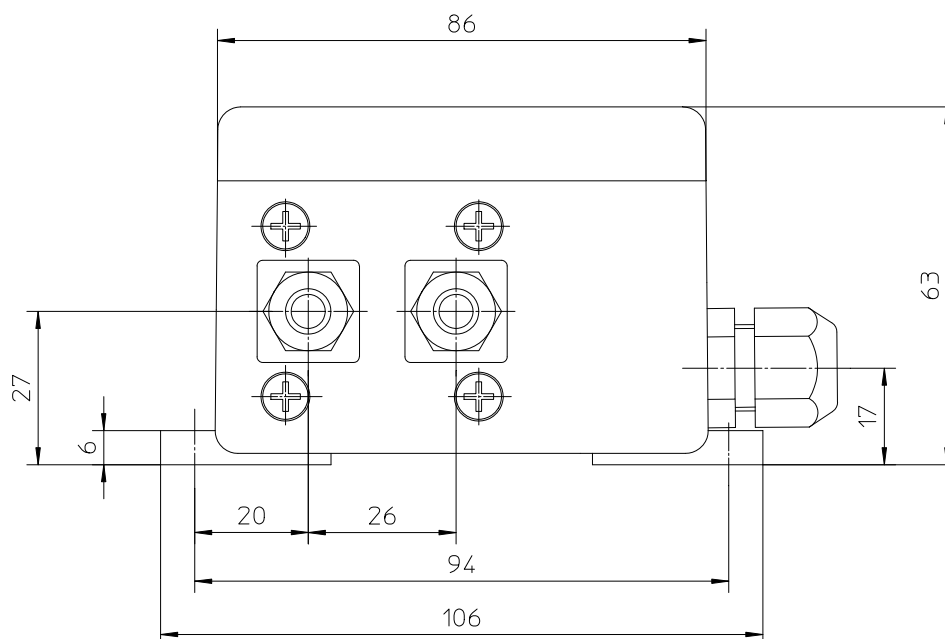
General		
Measuring ranges	0-0.4 0-0.6 0-1 0-1.6 0-2.5 0-4 0-6 bar	
Nominal pressure	16 bar	
Max. pressure load	one-sided overpressure protected up to nominal pressure, on (+) and (-) side of diaphragm, partial vacuum protected	
Permissible ambient temperature	0 up to +70°C	
Max. storage temperature	70 °C	
Protection class	IP54 per DIN EN 60529	
Linearity	≤ 2% FS	
Hysteresis	≤ 1% FS	
Electrical		
Electrical connection	3-wire	
Operating voltage	24 V DC / AC range 15...30 V DC 20...30 V AC	24 V DC / AC range 15...30 V DC 20...28 V AC
Output signal	0...20 mA 4...20 mA	0...10 V
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	
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 (all units in mm unless stated otherwise)



cutting ring connection for \varnothing 6 mm

M12x1.5 cable gland

Ordering Code

Differential Pressure Transmitter DE28 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
--------------------	---	---