

Product Information

EDP1

Differential Pressure Transmitter EDP1



- 4..20 mA two-wire differential pressure transducer
- Ideally suited to wet/wet applications
- Can also be used at high differential pressures
- High chemical resistance thanks to top-quality materials
- Compact design

Characteristics

The differential pressure transmitter EDP1 is intended for the measurement of differential pressures in liquids and gases. It consists of a differential pressure sensor cell as a sensor, and of an integrated transformer.

The differential pressure measuring cell has two separate ceramic pressure sensors with a measuring bridge applied by thick film technology. The bridge signal of each sensor is temperature-compensated. The integrated microcontroller measures the signals from the two sensors, and calculates the pressure difference. This is output as a 4..20 mA signal (two-wire).

The ceramic sensors are available in various pressure ranges. This limits the maximum pressure applied to each connection. The differential pressure, which should correspond to an output signal of 20 mA, can be freely selected within this range, but should not be less than 10 % of the metering range of the single cells, so that a sufficient resolution and accuracy are ensured.

The microcontroller also permits customer-specific characteristic curves and output signals, e.g. measurement of positive and negative pressure differences (available on request).

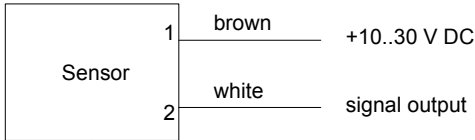
The medium comes into contact exclusively with top-quality materials such as AL₂O₃ -ceramic, stainless steel, FKM seals.

Technical data

Sensor	ceramic cell with measuring bridge in thick film technology			
Process connection	2 x female thread G 1/8			
Operating ranges of the measurement cells	Range		Over-pressure**	Burst pressure
	bar	psi	bar	bar
	0.. 1	0... 14,5	5	6
	0.. 2	0... 29,0	5	6
	0.. 5	0... 72,5	7,5	15
	0.. 10	0... 145	15	30
	0.. 20	0... 290	30	60
	0.. 50	0... 725	75	150
	0..100	0...1450	150	250
	*Optional operating ranges on request All pressure values relative (differential pressure to the environment)			
	**The pressure transmitters may be loaded with the specified overpressure < 1 sec.			
Differential pressure range	when ordering please state: minimum: 10 % of the operating range maximum: operating range			
Measurement accuracy	±1 % of full scale value; plus. 0.05 %/K at < 0 °C and > 60 °C			
Repeatability	±0.5 % of full scale value			
Pressure resistance	corresponds to operating range			
Dynamics	measuring cycle 50 ms			
Media temperature	-20..+70 °C			
Ambient temperature	-20..+70 °C			
Storage temperature	-20..+80 °C			
Media	fluids and gases			
Materials medium-contact	Connection	1.4571		
	Ceramic cell	Al ₂ O ₃		
	Seal	FKM		
Materials, non-medium-contact	Housing	Al anodised 1.4305		
	Plug	PA6.6		
	Contacts	gold-plated		
Supply voltage	10..30 V DC			
Analog output	4..20 mA two-wire			
Load	max. 800 Ohm at 24 V (100 Ohm at 10 V, 1,1 kOhm at 30 V, linear at operating voltage)			
Electrical connection	for round plug connector M12x1, 4-pole			
Reversal polarity protected	yes			
Protection class	IP 67			
Weight	approx. 0.25 kg			
Conformity	CE			

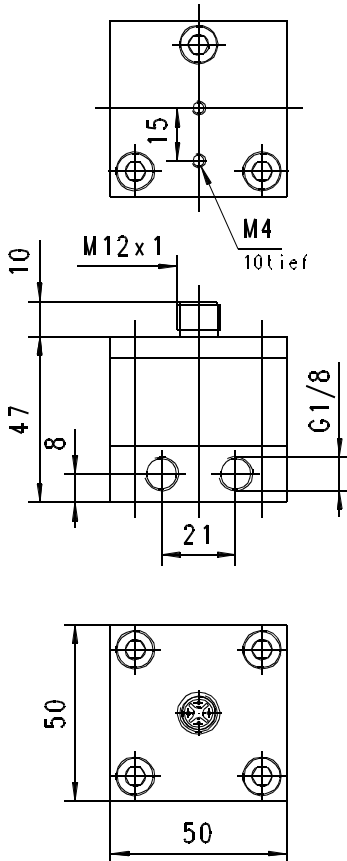
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Wiring

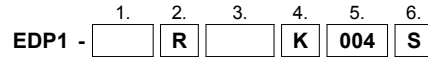


Before the electrical installation, it must be ensured that the supply voltage complies with the data sheet. It is recommended to use shielded wiring.

Dimensions



Ordering code



1. Operating range	
001	0.. 1 bar
002	0.. 2 bar
005	0.. 5 bar
010	0.. 10 bar
020	0.. 20 bar
050	0.. 50 bar
100	0..100 bar
200	0..200 bar (on request)
400	0..400 bar (on request)
2. Pressure type	
R	relative pressure
3. Differential pressure range	
0001	example 0055 = 5.5 bar (min. 10 %, max. 100 % of the operating range)
...	
1000	
4. Connection material	
K	stainless steel 1.4571
5. Connection size	
004	female thread G 1/8
6. Electronic connection	
S	for round plug connector M12x1, 4-pole

Accessories

- Round plug connector/cable (K04..., KB04...)
- converter OMNI-TA
- Device configurator ECI-3

Handling and operation

Installation

Connect the pipework to P1 and P2. When sealing off, ensure that it is carried out cleanly.

The standard version is designed for P1 > P2. However, if the connections are reversed, no damage occurs.

When cleaning the pressure cells from the media side, the bolts of the part with the media connections are to be loosened (the electronics remain closed in this case). Cleaning should be carried out very carefully, using a cotton tip.

