

Datasheet pressure transmitter type DS1

description:

The pressure transmitters series IDS1-010 and IDS1-420 are for using in air and non aggressive gases. They measure difference- and absolute pressure, relative pressure and optionally velocity of flow. The analog output signal is 0-10 V or 4-20 mA. The 4-20 mA pressure transmitter is realised in two wire technic. For measurement of velocity of flow its possible to order the square root output. Because of the piezoresistive cell DS1 reach a high reliability and precision. The dependence of zero signal from mounting position is very small. The resistance against overpressure is higher than by using other physical principles. The transmitters are housed in a robust aluminium package. This guarantees good EMC-properties. Optionally IDS1 can be completed with electronic signal damping, power supply 24VAC or 230 VAC.



applications:

- control of blowers
- supervision of airfilters
- mechanical- and system engineering
- environmental technology
- liquid level control
- pressure control and regulation for instance in pressure chambers
- medical engineering

order key:

- IDS1-010 0-10V output
- IDS1-420 4-20mA output

technical data IDS1-010 and IDS1-420 (difference pressure):

pressure range [mbar]	pressure range [kPa]	max. over-pressure [mbar]	max. linear error [± % F.S.]	max. temp.-error [± % F.S.] 0-50 °C	long-term-stability [± % F.S./ year]	repeat-precision [± % F.S.]	response time [ms] without damping
0 - 0.25	0 - 0.025	250	0.5	6	6	4.0	50
0 - 0.5	0 - 0.05	250	0.5	4	4	2.0	50
0 - 1	0 - 0.1	250	0.8	3	2.5	1.0	50
0 - 2.5	0 - 0.25	250	0.8	2	2	0.3	50
0 - 5	0 - 0.5	250	0.8	1	1	0.3	50

technical data IDS1-010 and IDS1-420 (absolute pressure):

700-1100	70-110	triple	± 0.9 mbar	2.3 mbar	0.1	0.1	50
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For the above given ranges we deliver ex-works. For special-ranges please enquire!

Rev. 01-09

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operation temperature range:	-20 bis +50 °C		
medium:	air and all non aggressive gases		
output signals and power supply:	IDS1-010:	0-10 V	$R_L \geq 2 \text{ k}\Omega$ 24VDC/AC+-10%
	IDS1-420:	4-20 mA	$R_b \leq 400 \Omega$ 15-30 VDC
connections:	electrical:	screw clamps for 0.14 - 1.5 mm ²	
	pneumatical:	2 connections for tube with 4 mm or 6 mm diameter inside	
	cable gland:	PG 7	
connection IDS1-010:	plug:	1 : + 24 VDC 2 : output 0 - 10 V 3 : GND	
connection IDS1-420:	plug:	1 : + 24 VDC * 2 : output 4 - 20 mA *	

* Because of a additional special circuitry the transmitter can't be damaged due to a wrong connection.

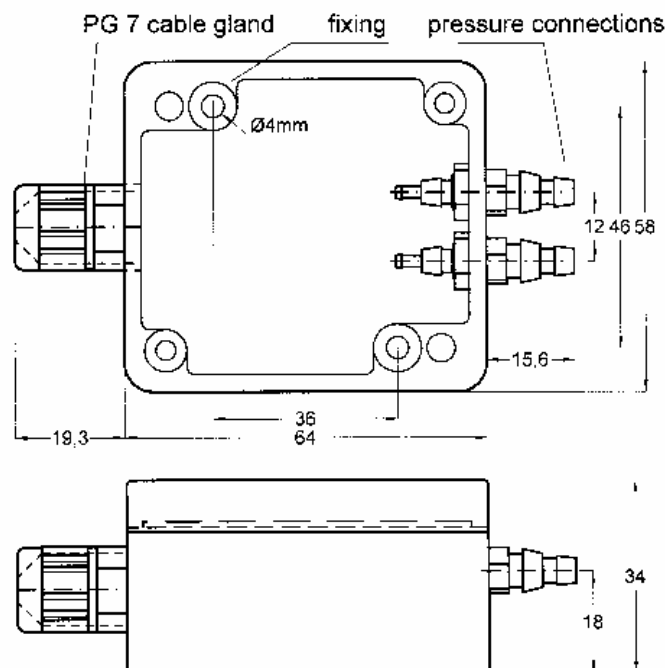
That means: both wires can be changed. Between 2 and GND of the power supply must be connected a resistor $R_b \leq 400 \Omega$ at power supply + 24 VDC.

Option square root output for measurement velocity of flow is available by using larger enclosure.

Option signal damping is available on demand.

weight: ca. 170 g

protection class: IP65



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