PRESSURE TRANSMITTER SERIES EExia
"Industy-Standard-Explosion-proof construction"

ADZ NAGANO Sensortechnik

Measuring range: -1..+1 bar to 2000 bar
Output signal: 4...20 mA (2 wire
Tempeature class: T4 (-40 °C ...+85 °C)

- Resistant to pressure peaks
- Shockproof- and vibration-proof
- Insensitive to temperature shocks
- Protection system IP 65 according to DIN EN 60 529
- Case and parts in contact with measuring material of CrNi steel

SMX-10.0

CONSTRUCTION

- Piezo-resistive, vacuum-proof, stainless steel membrane, with pressure range resistor Poly-Si on SiO_2 (thin film resistance)
- Case: stainless steel
- Electrical connection: MSV DIN 175 301 - 803 C *
- Pressure Port: G ¼ " Design E
- Operating temperature -40 °C to +85 °C
- Accracy: < ± 0.5% standard
- Mixed signal ASIC
- Weight: 90 g

APPLICATIONS

- Pneumatics
- Hydraulics
- Air Conditioning
- Heating
- Testing Technology
- Industrial Robots
- Process Control
- Water Technology

DESCRIPTION

The ADZ-SMX pressure transmitters contain only a small number of active components, such as the sensor element, a signal processing ASIC and a U/I converter circuit. Calibration takes place electronically, so that the pressure transmitters display a comparably small total error and are stable in the long term. The hermetically welded thin film-measuring cell ensures a high degree of long term resistance to leakage and stability. The ASIC is a programmable precision CMOS ASIC with EEPROM data storage and analogue signal path, which is suitable for an extended operating temperature range. The special steel membrane is completely vacuum-tight, burst-proof and can be used with all standard media in hydraulics, pneumatics, environmental tech-nology, process technology, semi-conductor technology and automotive engineering, in as far as they are compa-tible with special steel. This thereby covers use in standard applications in mobile hydraulics and in other areas of application. The great exactness and the robust, compact structure guarantee a broad range of possible uses in industry. On the basis of the combinability of different mechanical and electronic connections, a variety of different pressure transmitters is offered.
Upon request, a test certificate is supplied.

Security information / Conditioning governing the use
Observe the applicable safety regulations laid down by the regulatory bodies in the country of use. Observe without failing the warning notices and other instructions laid down in the operating instructions.

- subject to alteration -

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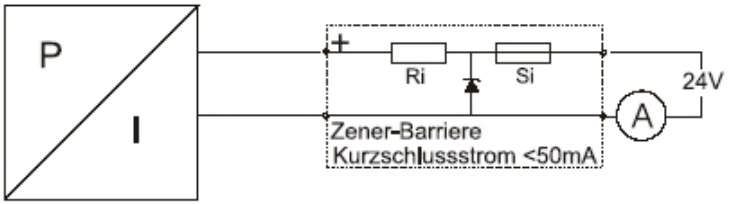
SEE OUR SOLUTION

Technical Information	Type SMX-10.0
Meassuring range (bar) standard pressure ranges *)	0,6 | 1,6 | 2,5 | 4 | 6 | 10 | 16 | 25 | 40 60 | 100 | 160 | 250 | 400 | 600 | 1.000 | 1.600 | 2.000
Überlastbereich (bar) *)	1,5-times / over 500 bar 1,2-times
Bursting pressure (bar) *)	3-times / over 500 bar 1,5-times
Pressure type	Relative pressure or seal reference
Pressure conncection *)	Different pressure connections available
Materials used Materials of parts in contact with measuring medium : Case:	 CrNiCuNb 17-4 PH stainless steel, no O-ring, no silicone oil X5CrNi18-10
Sensor element	Suited to the media stainless steel
Electrical commector	Plug depends on offer
Weight (g)	90 g
Response time (10...90%) t_E	< 1ms
Electrical connection Protective system acc. to DIN 40 050	Standard design plug - MVS DIN 175 301 – 803 C others on request IP 65 – acc. to plug system
Insulating resistance at 50 V Insulating voltage U_{DC} / U_{AC}	100 M 750 V / 500V
Supply Current supply with Ex-licensing Output v oltage max. 24 V DC Output current max. 50 mA Ri (over 24 V) 510	Circuit diagram 
Linearity error at RT (% F.S.) (B.F.S.L.) **)	± 0,5 max. (optional 0,25 ****)
Reproduction range % Stability per year % range Ambient Values Reproducibility stability per year permitted - Processtemperature (°C) - Storragetemperature (°C) - compensated temperature range (°C)	<0,1 <0,2 (above reference condition) -40...+85 °C -40...+125 °C -40...+85 °C

Total error ***) max. ± ****)	-40 °C...-20 °C	-20 °C...+85 °C	+25 °C... ± 5 °C
	3,0 typ. < 2,0 %	1,0 typ.< 0,7 %	0,5 typ. < 0,3 %

Electromagnetic compatibility Unwanted emission acc. to DIN EN 55011 Testing acc. to DIN EN 61000-4-3	 < 30 dBµ V/m 25 V/m
Shockresistance: test acc. to IEC 68-2-32	1 m (free fall onto a steel plate)
Vibration resistance test acc. to IEC 68-2-06 und IEC 68-2-36	20 g
Ex-licensing Ignition protection According Standards Maximum contact Temperature range	 II 2G Eex ia IIC T4 (IBExU 04 ATEX 1182) EN 50014, EN 50020 30 V, 50 mA, 1 W T4 (Ambient temperature –40 °C ... +85 °C)

*) Others on request
**) Integral linearity deviation (F.S.= Full Scale; B.F.S.L.= Best Fit Straight Line)
***) The total error includes non-linearity, hysterese, repeatability, and temperature influence
****) Customer-specific special design with optional better exactness on request

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