

## Pressure Transmitter Series

**ADZ - SML-31.0**  
0,5...4.5 V

**Measuring range from:** -0,1 MPa...+0,1 MPa and 0,06 MPa bis 200 MPa  
-1...+1 bar and 0...600 mbar bis 2000 bar  
**Output signal:** 0,5...4,5 V ratiometric  
**Operating temperature:** -40°C bis +125°C  
**Media:** to +125°C

- Resistant to pressure peaks
- shockproof and vibration-proof
- Insensitive to temperature shocks
- Protective system IP 65 according to DIN EN 60 529
- Parts and casing with contact to measuring material of CrNi steel

### Construction

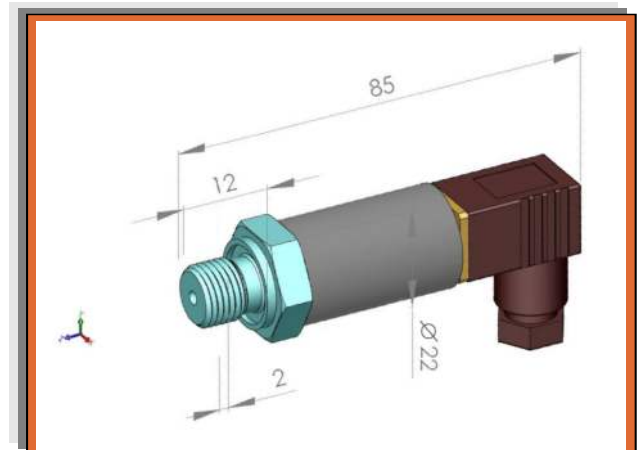
- Piezo-resistive, vacuum-proof
- Stainless steel membrane
- Poly-Si on SiO<sub>2</sub> (thin film resistances)
- Mixed signal ASIC
- Case: Stainless steel
- Electrical connection: MVS DIN EN 175 301 803 \*)
- Port configuration: G 1/4 " Design E \*)
- Accuracy: ±0.5% F.S. (RT) standard
- Weight: 90 g



\*) other on request thread types and plug connections

### Application / possible uses

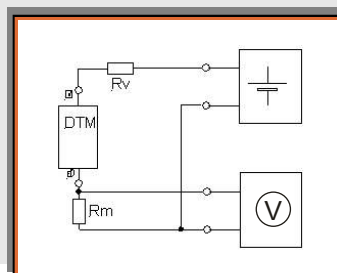
- Hydraulics
- Air Conditioning + Heating
- Testing Technology
- Industrial Robots
- Process Control
- Water Technology
- Pneumatics



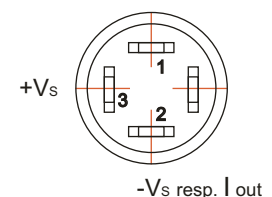
### Description

The ADZ SML 31.0 pressure transmitters contain only a small number of active components, such as the sensor element, a signal processing ASIC and electric transmission protection. 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. The special steel membrane is completely vacuum-tight, extremely burst-proof and can be used with all standard media in hydraulics, pneumatics, environmental technology, process technology, semi-conductor technology and automotive engineering, in as far as they are compatible 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 protocol, approbations work certificate or (DKD protocol) calibrate certificate - is supplied.



Connection - PIN



Technical information		Typ: ADZ-SML-31.0			
Measuring range (bar / Mpa) standard pressure ranges *)		bar	MPa	bar	MPa
		0,6	0,06	60,0	6,0
		1,0	0,1	100,0	10,0
		1,6	0,16	160,0	16,0
		2,5	0,25	250,0	25,0
		4,0	0,4	400,0	40,0
		6,0	0,6	600,0	60,0
		10,0	1,0	1000,0	100,0
		16,0	1,6	1600,0	160,0
		25,0	2,5	2000,0	200,0
		40,0	4,0		
Overload range (bar)	2 times > 350 bar; 1,5 times > 700 bar; 1,2 times up to 1000 bar				
Bursting pressure (bar)	2 times > 350 bar; 1,5 times > 700 bar; 1,2 times up to 1000 bar				
Pressure type	Relative pressure				
Pressure connection *)	G 1/4" E Standard Optionally, different pressure connections available				
Materials used Materials of parts with contact to measuring medium: Materials of casing:	Stainless steel 17-4 PH, no O-ring, no silicone oil				
Diaphragm	Stainless steel				
Electrical parameters Output signal *) ratiometric Operating voltage U <sub>b</sub> admissible. Load resistor RI Response time (10...90 %)	0,5 to 4,5 V 5 V  4,7 k < 1 ms				
Insulating resistance at 50 V	100 M				
Electrical connection *) Protection system according to DIN EN 60 529	Standard design device plug MVS, DIN EN 175 301-803 BF C IP 65 - according to plug system				
Linearity error at RT (% F.S.) (B.S.F.L.) **)	0,5 max. (optional 0,25) ****)				
Ambient values Reproducibility stability per year, permitted - Ambient temperature (°C) - Media temperature (°C) - Storage temperature (°C)	- 40 ... + 125 °C - 40 ... + 125 °C - 40 ... + 140 °C				
Total error ***) max. ****)	- 40 °C... - 20 °C 3,0 % typ. 2,0 %				+ 85 °C... 100 °C 2.5 % typ. 1,5 %
	- 20 °C... + 85 °C 1,0 % typ. 0,7 %				
Electromagnetic compatibility EMV Testomg according to DIN EN 55011 and DIN EN 61000-4-3	< 30 dBµ V/m 25 V/m				
Resistance to shock Testing according to IEC 68-2-32	1 m (free-fall onto steel plate)				
Vibration resistance Testing according to IEC 68-2-6 and IEC 68-2-36	20 g				

\*) Others on request

\*\*) Integral linearity deviation (F.S. = Full Scale; B.F.S.L. = Best Fit Straight Line)

\*\*\*) The total error includes non-linearity, hysteresis, repeatability and temperature influence

\*\*\*\*) Customer-specific special design with optional better exactness on request

- Mistakes and changes in the sense of technical improvements reserved. -