

Pressure Transmitter Series

Mobile Hydraulics

SML-MO-2
ADZ-SML-60

Pressure Range:	0...4000 bar
Output:	PWM (500 Hz, 5 kHz,) variable frequency (200 Hz to 2,2 kHz)
Supply voltage	8 to 32 V DC
Operational temperature	-40°C to +110°C
Medium	up to +135°C

- Resistant to pressure peaks
- Shock-proof and vibration-proof
- Components contacted by the measuring medium and the housing made of CrNi steel
- Protection Class IP 65 acc. to DIN EN 60 529 up to IP 69 KWetted Materials Sensor: Stainless-steel

Construction

- Stainless steel membrane
- Thin-film technology (poly-Si on SiO₂)
- Welded to hermetically tight
- Mixed signal ASIC with PIC - Controller
- Case:
 - Stainless steel,
 - Length ca 40 mm, ø 22 mm
- Accuracy:
 - Class 0,5 %
 - (PWM-500 Hz, f=0,2 kHz to 1,2 kHz)
- Pressure fitting: G ¼ " Form E *)
- Electrical connector: cable or plug *)
- Weight: ca. 90 g



*) others on request

Application / possible uses

- Automotive technology
- Mobile hydraulics
- Test facilities
- Measuring and testing

Description

Pressure transmitters of the dimensions: installation length 40 mm and diameter 22 mm are preferably applied in mobile hydraulics and automotive technology. The pressure fitting G ¼" Form E *) with HEX 22 provides for manifold applications.

The pressure transmitter SML-MO-2 guarantees high operational safety:

- EMV 100 V/m (16 MHz up to 1 GHz)**
- Vibration 50 g, 20 to 2.800 Hz**
- Pressure cycles > 10 million**
- Response time < 5 ms**
- Shock resistance 1.000 g**
- Load dump 150 V**
- Short-circuit-proof, pole-mismatch-proof**

The hermetically welded stainless steel membrane guarantees long-term tightness and stability. The stainless steel membrane is absolutely vacuum-tight, extremely resistant against bursting and applicable with all standard media in automotive, mobile hydraulic and testing technologies, as long as such media are compatible with stainless steel. The stainless steel membrane guarantees high precision by means of its robust and compact structure.

Technical information

Typ: ADZ SML-MO-2

Parameter	Min	Typ	Max	Unit	Remark
Pressure range			35,5	MPa	1
Pressure type	SR				
Span		83,6		%	2,3
Output at FS		94,2		%	2,3
Clamped output			94	%	
Zero output		10,6		%	2,3
Output frequency		5-1		kHz	
Transfer function (pulse width modulation)	D% = (Pin/kPa * 0,00235479 + 10,5904)				3
Output level	low		1,0	V	4
	high	4,0		V	4
ECM load to +5 V	2			k	
Load capacity			5,5	nF	
Add. load resistor to +32 V or GND	5			k	
Max. source current			7	mA	
Max. sink current			>50	mA	5
Total error from -40°C to 110°C			3,0	%FS	6
Response time			5	ms	7
Supply voltage (Vs)	8		32	V	8
Supply current		19	35	mA	
Isolation resistance	100			M	9
Over pressure			2,0 times		
Burst pressure	3,0 times				
Operating temperature	-40		110	°C	
Storage temperature	-55		135	°C	
Weight			ca. 105	g	
Mounting direction			no restriction		10

Remarks:

- All parameter guaranteed for specified conditions
- Nominal values.
- Output is calibrated acc. transfer function.
- Output is short protected against +32 V or GND.
- Driven by +5 V ext.
- Total accuracy includes no linearity, hysteresis, repeatability and temperature effects. (New parts max. drift 0,1%FS/year). Compensated range.
- Measured from initial value to output at 90%.
- Over voltage protection is given for 80 V / 2 min., reverse voltage protection is given for -32 V.
- Measured between case and pins (V_{DC} 50 V for one minute).
- Mounting force max. 45-5 Nm.
 - Wetted components 17-4PH stainless steel. No O-rings, no silicone oil.
 - Measuring volume less than 1mm³. - IP65.
 - Piezoresistive principle, calibrated using mixed signal ASIC, no potentiometer, no laser trimming.
 - Pressure port 9/16-18 UNF, electrical connection cable 0,4 m with connector DT06-3
 - With EMC Filter

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