

Model 101B-a15G OEM Pressure Sensors



101B-a15G OEM pressure sensors are manufactured from BCM piezo resistive silicon dies. The sensors are designed with CAD, the performance is simulated and the sensor prototype is fully tested before batch production. Serious quality control and dedicated calibration processes guarantee the specifications of these OEM pressure sensors in mass production and the higher production eligible rate.

101B-a15G OEM pressure sensors possess a flush diaphragm facing the pressure media, able to measure pressures of viscous liquids, the diaphragm form a chamber, in which oil is filled to isolate the sensing element and transfer pressure. This isolation enables the sensor to measure the pressures of corrosive fluids as well as electro conductive liquids.

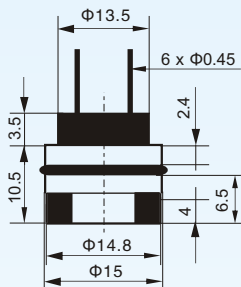
The model of 101B-a15G has a wide pressure range of 0~35 to 0~350 bar, and a high accuracy up to 0.15%fso, although the compensation temperature range is 0~70°C, the sensor can still work in the temperature range of -45°C ~ +125°C. another advantage is constant current or constant voltage are both available as excitation power supply, this making 101B-a15G has a wide application areas.

Model 101B-a15G OEM pressure sensors are designed for easy installation with O-rings as sealing method, the sensor has a diameter of 15 mm, the suffix G stands for general pressure applications.

All OEM pressure sensors are delivered with an individual certificate to aid their further application.



Dimensions:



Applications:

- Process control systems
- Level systems
- Hydraulic systems and valves
- Biomedical instruments

Reference specifications:

- Media Temperature: 25 ± 1 °C
- Ambient Temperature: 25 ± 1 °C
- Vibration: 0.1 g (1m/s/s) max
- Humidity: 50% ± 10%
- Ambient Pressure: 86 ~ 106 kPa
- Excitation Source: 1.5 ± 0.0015 mAdc

Features:

- Measuring ranges: 0~35 to 0~350 bar
- Isolated construction, suitable for various fluid medium
- Wide suitability and easy operation, solid, reliability
- Temperature compensation by laser trimming
- Gauge, absolute, sealed gauge pressure type
- Mass production, cost-effective
- Constant current or voltage excitation

Physical properties:

- Diaphragm: 316L
- Pressure port: 1Cr18Ni9Ti
- O-rings: Viton
- Lead: Gold-plated Kovar
- Fill Fluid: Silicon oil < 0.5CC
- Laser trim board: Ceramic
- Weight: 13 g

Environmental conditions:

- Position Effect: <0.1% of Zero shift for 90° tilt in any direction
- Vibration Effect: No change at 10gs' RMS, 20 ~ 2000Hz
- Shock: 100g, for 10 millisecond
- Life: 100 million cycles

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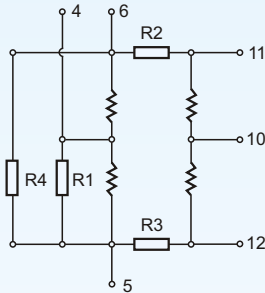
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Specifications:

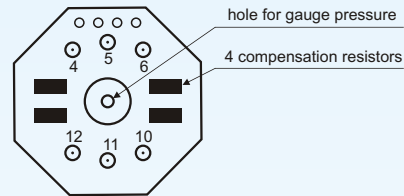
pressure media		viscous fluid or fluid with grains, compatible to wetted parts
pressure range	bar	0~35, 0~70, 0~100, 0~160, 0~200, 0~350
pressure type		absolute, gauge, sealed gauge pressure
overload pressure	%fs	300 (500 bar max.)
full scale output	mVdc	90 ~110 (standard), 70 ~ 130 (option)
zero offset voltage	mVdc	1 (standard), 2 (max.)
combined error (NL+HY+RP)	%fso	0.15 (typical), 0.30 (max)
temperature effect on ZERO & SPAN	%fso/25°C	0.5 (typical), 1.0 (max)
compensation temperature range	°C	0 ~ 70
media temperature range	°C	-20 ~ 80
storage temperature range	°C	-40 ~ 125
long term stability	%fso/year	0.1 (min), 0.2 (typical), 0.3 (max)
excitation power supply		0.5 ~ 2.0 mA, or 5 ~ 10 V dc
input impedance	Ω	3000 ~ 6000
output impedance	Ω	2500 ~ 6000
insulation resistance	MΩ	100 @ 50 V dc
response time	ms	≤1 (10% ~ 90% of leading edge)
dynamic response time	ms	2
heat hysteresis	%fso	0.1 @ 25°C
electrical connection		6P (6 gold-plated kovar pins, Φ0.45); 4R (4-wire ribbon cable, width x length = 10 x 50 mm); 4F (4 colored PVC flexible wires, 100 mm length)

The listed specifications are subject to change without prior notice.

Wheatstone-bridge Circuit: compensated bridge



Electronic connections:



connection of 6-pin/4-wire for compensation circuits when excited by current

pin	connection	color
4	signal +	green
5	excitation +	red
6	excitation -	black
10	signal -	white
11	N.C. (*)	N.A. (**)
12	N.C. (*)	N.A. (**)

* N.C.: not connected

** N.A.: not available

How to Order: model - range & type - accuracy - electric connection - excitation - customer specific requests

ordering code example: 101B-a15G - 0/35 barG - 0.15%fso - 6P - 5V - no specific requests



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ISO9001 Certified Company