

# Model 112S

## Plastic Housing OEM Pressure Sensors



Based on piezo resistive effect, BCM 112S OEM pressure sensors are packaged with plastic housing, with a BCM silicon die (model SE103) mounted on a substrate and accommodate six pins for through-board assembly. There is a molded pressure port on the top of the cap, which makes the sensor simple for pressure connection.

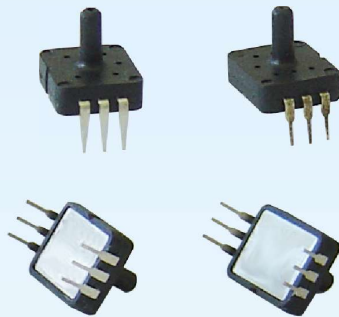
Thanks to mass production, the 112S series is a coincident and low-cost pressure sensor for the OEM user, widely used in medical instruments and monitoring, blood pressure, consumer and sports, process control, environmental monitoring, HVAC etc.

Model 112S pressure sensor can be used to measure pressure ranges of 0~5 to 0~100 psi in gauge or absolute pressure, feature nice accuracy of 0.5%fs0 in operating temperature ranges of -20~ +85 °C, the sensor can be excited by constant current of 0.5~1.5 mA, or constant voltage of 5V. resulting in output signal of Wheatstone bridge output voltage (mV).

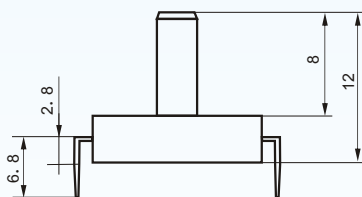
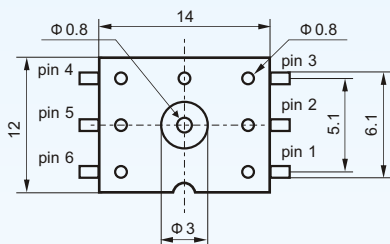
The sensor is temperature uncompensated, because silicon resistors are very temperature dependent, so the maximum value of temperature coefficient of SPAN is high to 2.7%fs0/10°C (fs0 = full scale output), It's very important to understand it with various specifications and their effects to accuracy.

### Features:

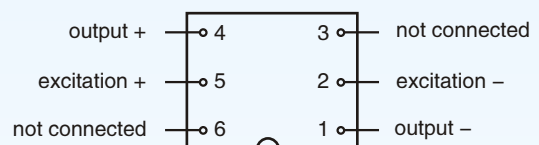
- low pressure ranges of 0~5, ..., 0~100 psi (G, A)
- sensitive output signal > 50mV
- nice accuracy of 0.5%fs0
- operating temperature range of -20 ~ +85 °C
- no temperature compensation, temperature effective less than 2.7%fs0/10°C
- Dual In-line Package (DIP)
- molded pressure tube on the top cap
- compact and light weight
- low cost, nice performance in versatile products for OEM applications



### Dimensions:



### Electrical connection:



**BCM SENSOR TECHNOLOGIES BVBA**

# Model 112S

## Plastic Housing OEM Pressure Sensors



### Specifications:

pressure media		non-electroconductive (suggested insulation resistance >20 Mohm) and non-corrosive gas or dilute-liquid
pressure ranges & type	psiG, psiA	0~5, 0~8, 0~15, 0~25, 0~50, 0~80, 0~100
overload pressure	%fs	200
output signal	mV	> 50
combined error	%fso	0.5
repeatability	%fso	<0.2
excitation		0.5~1.5 mA (maximum: 3 mA); or 5V (max.: 10 V).
zero offset	mV	± 20
input & output resistance	kΩ	3.3 ± 25%
temperature coefficient of ZERO	%fso/10°C	± 0.7
temperature coefficient of SPAN	%fso/10°C	± 2.7
media temperature range	°C	-20 ~ +85
storage temperature range	°C	-30 ~ +125
long-term stability	%fso/year	0.2
fatigue life	circle	10 <sup>8</sup>
response time	ms	1(10% ~90%)
humidity limits	%RH	0~80
insulation resistance	MΩ	100 @ 100 Vdc
weight	gram	1

Conditions: excitation = 5 V, reference temperature = 25 °C, Test Temperature ranges = 0~50 °C; test after 10 minutes excitation on.

NL is calculated using the "least square method". / Completed: 6/09/2006

The listed specifications are subject to change without prior notice.

**How to order:** model - range & type - output - accuracy - customer specific requests  
**ordering code** example: 112S - 0~50 psiG - 50 mV - 0.5%fso - no specific requests



**BCM SENSOR TECHNOLOGIES BVBA**

ISO9001 Certified Company

Industriepark, Brechtsebaan 2  
 B-2900 Schoten - Antwerpen, BELGIUM

Tel.: +32-3-238 6469  
 Fax: +32-3-238 4171

website: [www.bcmsensor.com](http://www.bcmsensor.com)  
 email: [sales@bcmsensor.com](mailto:sales@bcmsensor.com)