

## Pressure Sensor Air PSB-4

This sensor is designed to measure absolute air pressure, especially the air box and boost pressure of gasoline or Diesel engines over a wide range.

An integrated circuit combines a piezo-resistive sensor element, electronics for signal-amplification and temperature-compensation. The output of the sensor is an analog, ratiometric signal.

The main feature and benefit of this sensor is the combination of the high quality of the production part and an individual calibration. Each sensor is delivered with a calibration sheet to enable very small measurement tolerances. Furthermore the sensor has a very short response time.



Application	
Application	0.5 ... 4 bar (a)
Pressure Reference Type	absolute
Max. Pressure	6 bar
Operating Temp. Range	-40 ... 130 °C
Media Temp. Range	-40 ... 130 °C
Storage Temp. Range	-40 ... 130 °C
Max. Vibration	20 m/s <sup>2</sup> @ 10 ... 1,000 Hz

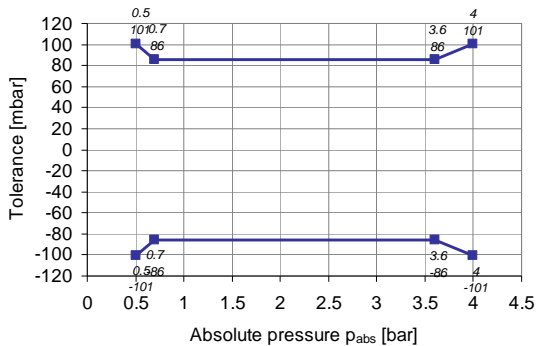
Electrical Data	
Power Supply U <sub>s</sub>	4.5 ... 5.5 V
Max Power Supply U <sub>s</sub> max.	16 V
Full Scale Output U <sub>A</sub> @ 5 V	0.3 ... 4.8 V
Current I <sub>s</sub>	9 mA

Mechanical Data	
Mounting	M6
Fitting	12.05 mm
Weight w/o Cable	20 g
Sealing	O-ring 7.59 x 2.62 mm

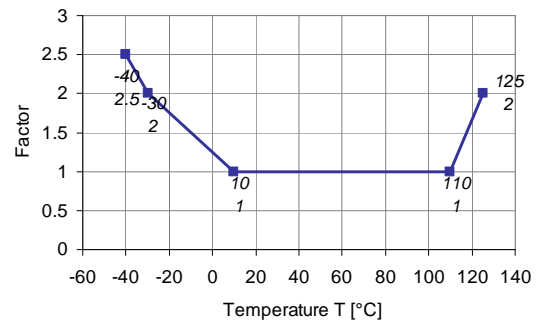
Characteristic	
Response Time T <sub>10/90</sub>	0.2 ms
Compensated Range	0 ... 80 °C
Tolerance (FS) @ U <sub>s</sub> = 5 V	± 0.056 bar
Tolerance (FS)	± 1.4 %
Sensitivity	1142 mV/bar (an individual calibration sheet will be delivered)
Offset	-71 mV (an individual calibration sheet will be delivered)



## Tolerance



## Expansion of Tolerance f(T)



## Connectors and Wires

Connector	ASL 6-06-05PC-HE
Mating connector	ASL 0-06-05SC-HE
Pin 1	-
Pin 2	GND
Pin 3	SIG
Pin 4	U <sub>s</sub>
Pin 5	-
Various motorsport and automotive connectors are available on request.	
Sleeve	DR-25
Wire Size	AWG 24
Wire Length L	15 ... 100 cm
Please specify the required wire length with your order.	

## Application Hint

The PSB-4 is designed for engines using ROZ95, ROZ98, M15, E22 and Diesel.

The sensor can be connected directly to most control units.

Use engine oil (5W40) as O-Ring grease (no silicone based grease).

Avoid miss-pinning (max. 5 minutes @ I = 0.3 A).

Please note that the 6mm tube connector has no function.

To optimize the accuracy of this sensor, an individual calibration sheet is delivered with each sensor.

Please find further application hints in the offer drawing (<http://www.bosch-motorsport.com>).

Free download of the sensor configuration file (\*.sdf) for the Bosch Data Logging System (<http://www.bosch-motorsport.com>).

## Part Number

PSB-4

**B 261 209 348-01**

