

Pressure Sensor Air PSB-2

This sensor is designed for precise measurements of absolute air pressure, especially the air box and boost pressure of gasoline or Diesel engines.

An integrated circuit combines a piezo-resistive sensor element and 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.



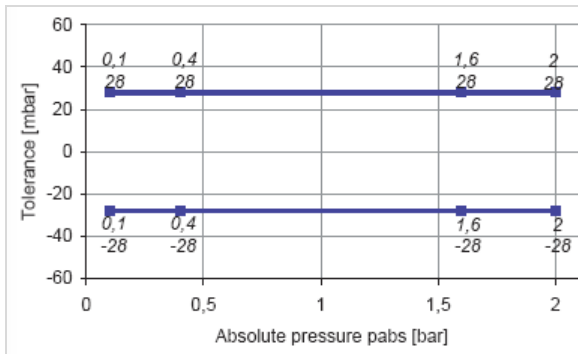
Application	
Application	0.1 ... 2.0 bar (a)
Pressure Reference Type	absolute
Max. Pressure	5 bar
Operating Temp. Range	-40 ... 130 °C
Media Temp. Range	-40 ... 130 °C
Storage Temp. Range	-40 ... 130 °C
Max. Vibration	280 m/s ² @ 200 Hz 125 m/s ² @ 440 Hz sine

Electrical Data	
Power Supply U _s	4.75 ... 5.25 V
Max Power Supply U _s max	16 V
Full Scale Output U _A @ 5 V	0.3 ... 4.8 V
Current I _s	9 mA

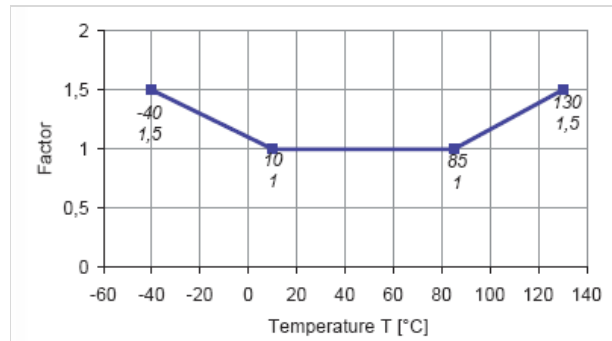
Mechanical Data	
Mounting	M6
Fitting	12,05 mm
Weight w/o Wire	17 g
Sealing	O-ring 7.59 x 2.62 mm

Characteristic	
Response Time T _{10/90}	1 ms
Compensated Range	10 ... 85 °C
Tolerance (FS) @ U _s = 5 V	± 0.028 bar
Tolerance (FS)	± 1.4 %
Sensitivity	2236 mV/bar (an individual calibration sheet will be delivered)
Offset	176 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	Us
Pin 5	-
Various motorsport and automotive connectors are available on request.	
Sleeve	DR-25
Wire Size	AWG 24
Wire Length L	15 ... 100 cm
Various motorsport and automotive connectors are available on request.	
Please specify the required wire length with your order.	

Application Hint

The PSB-2 is designed for engines using ROZ95, ROZ98, M15, E22 and Diesel.

The sensor can be connected directly to most control units.

To avoid noise, an ECU-input circuit with a RC-lowpass filter ($\tau = 2 \text{ ms}$) is recommended.

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

Avoid miss-pinning (max. 5 minutes @ $I = 0.3 \text{ A}$).

To optimise the accuracy of this sensor, an individual calibration data 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-2

B 261 209 337

