

Pressure Sensor Air PSA-B

This sensor is designed to measure absolute air pressure, especially the air box pressure of gasoline or Diesel engines.

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

Two different pressure ranges are available (0.1 ... 1.15 bar or 0.2 ... 2.5 bar).

The main feature and benefit of this sensor is the combination of both high quality production part and motorsport connector.

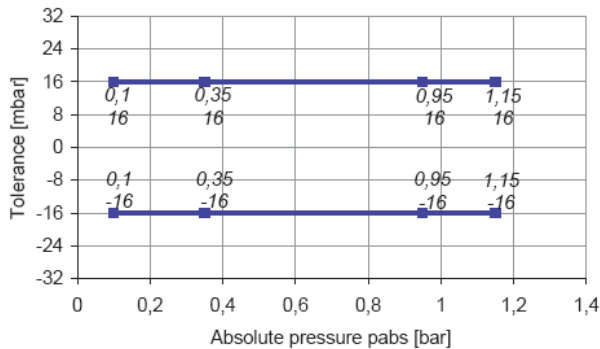
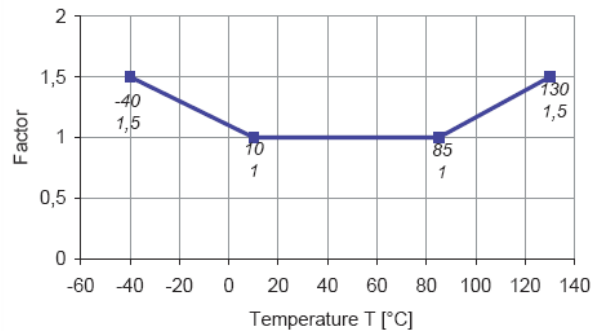
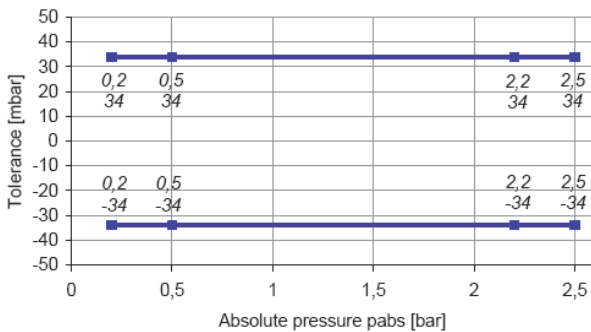
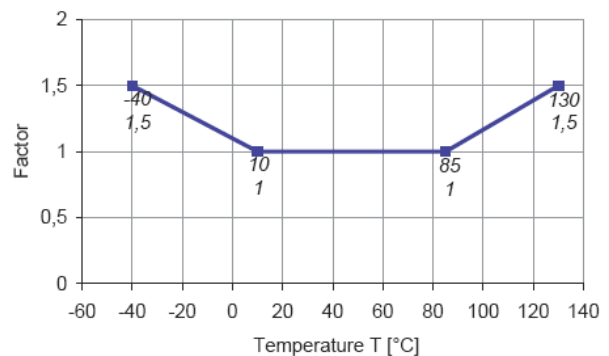


Application	
Application	[1] 0.1 ... 1.15 bar (a) [2] 0.2 ... 2.50 bar (a)
Pressure reference type	absolute
Max. pressure	5 bar
Operating temp. range	-40 ... 130 °C
Media temp. range	-40 ... 130 °C
Storage temp. range	-40 ... 130 °C
Max. vibration	280 m/s ² @ 200 Hz 125 m/s ² @ 440 Hz sine

Electrical Data	
Power Supply U _s	4.75 ... 5.25 V
Max. Power Supply	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 T10/90	1 ms
Compensated range	10 ... 85 °C
Tolerance (FS) @ U _s = 5 V	[1] ± 0.016 bar [2] ± 0.034 bar
Tolerance (FS)	[1] ± 1.39 % [2] ± 1.36 %
Sensitivity	[1] 4,040 mV/bar [2] 1,848 mV/bar
Offset	[1] -4.8 mV [2] 30.4 mV

Tolerance [1]

Expansion of Tolerance f(T) [1]

Tolerance [2]

Expansion of Tolerance f(T) [2]

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
Please specify the requested wire length with your order.	

Application Hint

The PSA-B 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 ($\tau = 2$ ms) is recommended.

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

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

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 Numbers

PSA-B [1]	B 261 209 702-01
PSA-B [2]	B 261 209 710-01
Adapter for PSA-B	B 261 209 725-01

