

Pressure Sensor Air PSA-C

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 electronics for signal-amplification and temperature-compensation. Air pressure is supplied to the sensor via a tube connector. 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 a low price.



Application	
Application	[1] 0.2 ... 1.05 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	20 m/s ² @ 10 ... 1,000 Hz

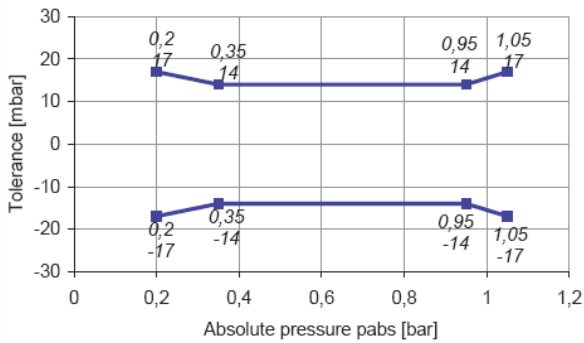
Electrical Data	
Power Supply U _s	4.75 ... 5.25 V
Max Power Supply U _s max.	16 V
Full Scale Output U _a @ 5 V	0.3 ... 4.8 V
Current I _s	9 mA

Mechanical Data	
Mounting	M6
Fitting	6 mm
Weight w/o Wire	40 g

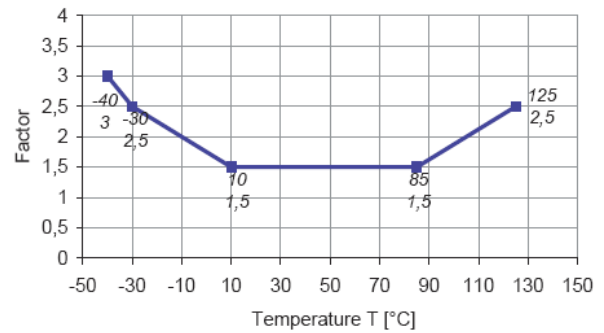
Characteristic	
Response Time T _{10/90}	10 ms
Compensated Range	10 ... 85 °C
Tolerance (FS) @ U _s = 5 V	[1] ± 0.017 bar [2] ± 0.042 bar
Tolerance (FS)	[1] ± 1.62 % [2] ± 1.68 %
Sensitivity	[1] 5,000 mV/bar [2] 1,532 mV/bar
Offset	[1] -600 mV [2] 724 mV



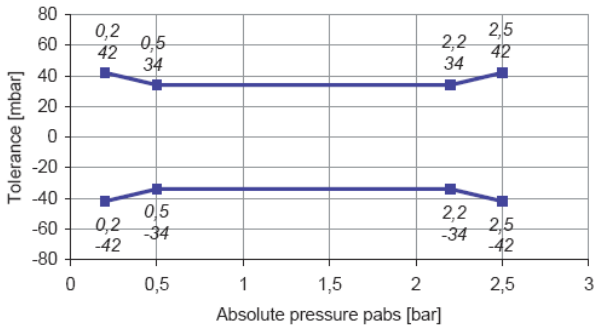
Tolerance [1]



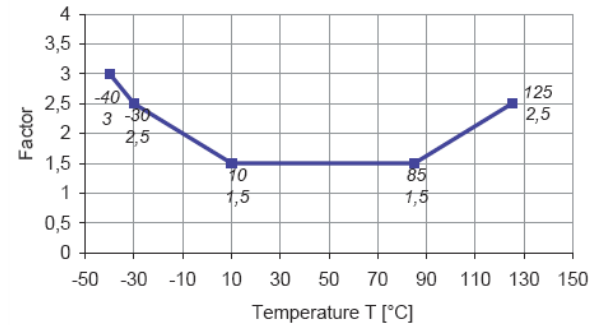
Expansion of Tolerance f(T) [1]



Tolerance [2]



Expansion of Tolerance f(T) [2]



Connectors and Wires

Connector	Bosch Jetronic
Mating connector	D 261 205 289
Pin 1	U _s
Pin 2	GND
Pin 3	SIG
Pin 4	-
Pin 5	-

Various motorsport and automotive connectors are available on request.

Please specify the required wire length with your order.

Application Hint

The PSA-C is designed for engines using ROZ95, ROZ98, M15, E22 and Diesel.

Avoid liquid entering the measuring cell.

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.

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-C [1]	0 261 230 037
PSA-C [2]	0 281 002 389



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