

Pressure Sensor Air PSA-C

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Invented for life



- ▶ Absolute air pressure measurement
- ▶ Measurement range 0.2 to 1.05 bar or 0.2 to 2.5 bar
- ▶ Analog output
- ▶ External tube connector

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, ratio metric 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	Please see Ordering information
Pressure reference type	absolute
Max. pressure	5 bar
Operating temp. range	-40 to 130°C
Media temp. range	-40 to 125°C
Storage temp. range	-40 to 130°C
Max. vibration	20 m/s ² at 10 to 1,000 Hz

Technical Specifications

Variations

	PSA-C (0.2 to 1.05 bar)	PSA-C (0.2 to 2.50 bar)
Tolerance (FS) at U _s = 5 V	± 0.014 bar	± 0.034 bar
Tolerance (FS)	± 1.33 %	± 1.36 %
Sensitivity	5,000 mV/bar	1,848 mV/bar
Offset	-600 mV	30 mV

Mechanical Data

Mounting	M6
Fitting	6 mm
Weight w/o wire	40 g

Electrical Data

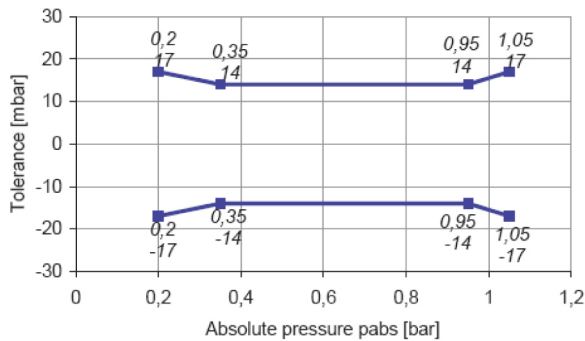
Power supply U _s	4.75 to 5.25 V
Max power supply U _s max.	16 V

Full scale output U_A at 5 V	0.3 to 4.8 V
Current I_s	9 mA

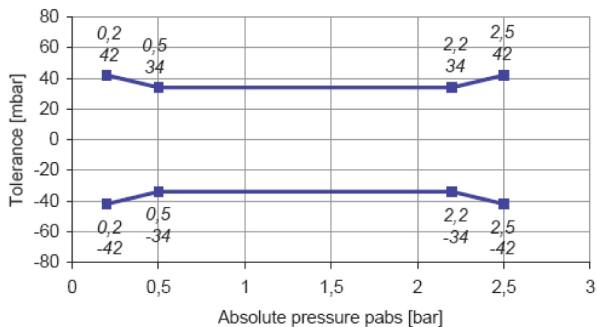
Characteristic

Response time T10/90	10 ms
Compensated range	10 to 85°C
Tolerance (FS) at $U_s = 5 V$	Please see variations
Tolerance (FS)	Please see variations
Sensitivity	Please see variations
Offset	Please see variations

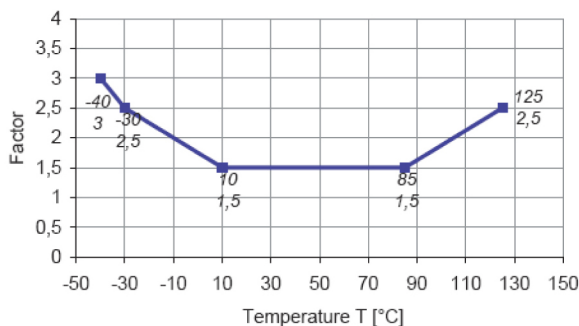
Tolerance 0.2 to 1.05 bar



Tolerance 0.2 to 2.50 bar



Expansion of Tolerance



Connectors and Wires

Connector	Bosch Jetronic
Mating connector	D 261 205 289-01
3-pole Jetronic	
Pin 1	U_s
Pin 2	Gnd
Pin 3	Sig
Pin 4	-
Pin 5	-

Installation Notes

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

Avoid liquid entering the measuring cell.

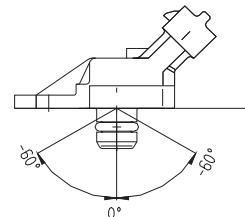
The sensor can be connected directly to most control units.

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

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

Please find further application hints in the offer drawing and free download of the sensor configuration file (*.sdf) for the Bosch Data Logging System at our homepage.

To avoid damage caused by condensate the maximum mounting position from vertical is $\pm 60^\circ$.



Safety Note

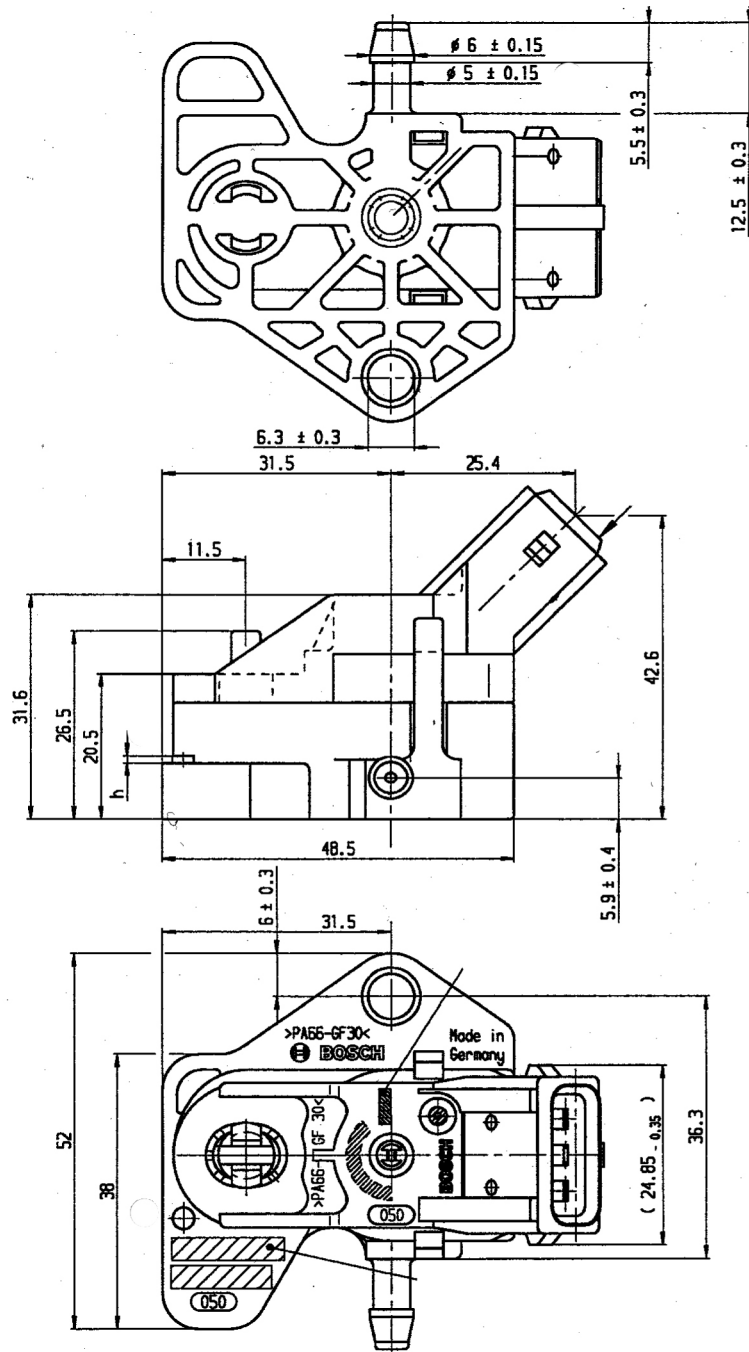
The sensor is not intended to be used for safety related applications without appropriate measures for signal validation in the application system.

Ordering Information

Pressure Sensor Air PSA-C
0.2 to 1.05 bar
Order number **0 261 230 037**

Pressure Sensor Air PSA-C
0.2 to 2.50 bar
Order number **0 281 002 389**

Dimensions



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