Pressure Sensor Air PS-AA

- Application: 0.1 to 1.15 bar or 0.2 to 2.5 bar
- Response time: 1 ms
- Pressure reference type: Absolute
- Power supply: 5 V
- Weight: 20 g

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, ratio metric signal. Two different pressure ranges are available (0.1 to 1.15 bar or 0.2 to 2.5 bar).

Application

Application	Please see variations
Pressure reference type	absolute
Max. pressure	5 bar
Operating temp. range	-40 to 130°C
Media temp. range	-40 to 130°C
Storage temp. range	0 to 40°C
Max. vibration	According to ISO 16750-3

Technical Specifications

Variations

	PS-AA (0.1 to 1.15 bar)	PS-AA (0.2 to 2.50 bar)
Tolerance (FS) at U_S = 5 V	± 0.016 bar	± 0.034 bar
Tolerance (FS)	± 1.52 %	± 1.48 %
Sensitivity	4,048 mV/bar	1,848 mV/bar
Offset	-4.8 mV	30.4 mV

Mechanical Data

Mounting	M6
Fitting	12.05 ± 0.8 mm
Weight w/o wire	20 g
Sealing	O-ring 7.59 x 2.62 mm

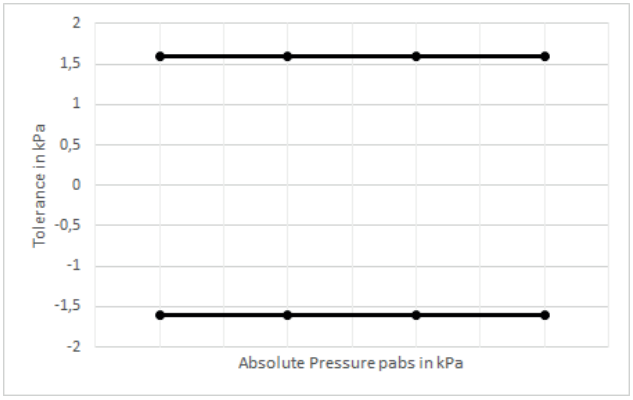
Electrical Dat

Power supply U_S	4.75 to 5.25 V
Max. power supply	16 V
Full scale output U_A at 5 V	0.4 to 4.65 V
Current I_S	9 mA

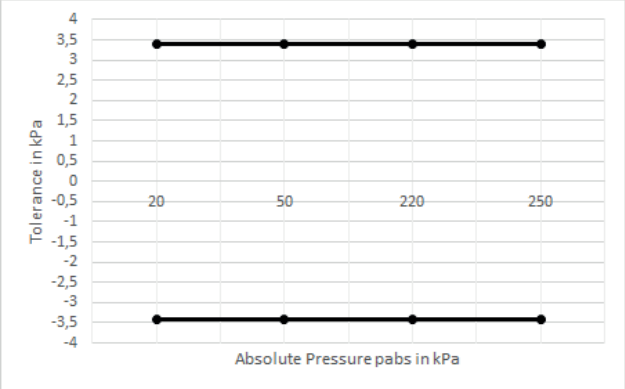
Characteristic

Response time T10/90	1 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

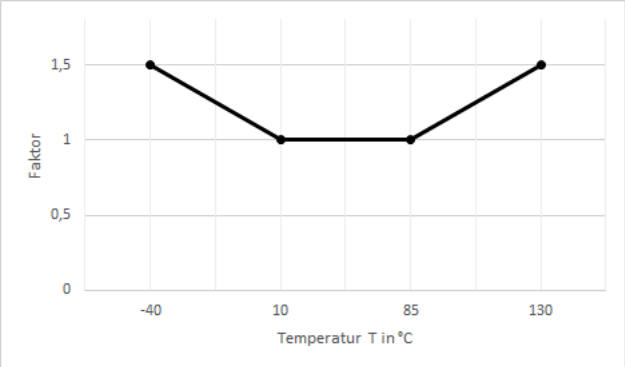
Tolerance 0.1 to 1.15 bar



Tolerance 0.2 to 2.5 bar



Expansion of Tolerance



Connectors and Wires

Connector	RB-COMP 1.1a/3P/Kod.1
Mating connector	D261.205.366-01
Pin 1	U_S
Pin 2	Gnd
Pin 3	Sig

Various motorsport and automotive connectors are available on request.

Installation Notes

The PS-AA is designed for engines using ROZ95, ROZ98, M15, E22 and Diesel.

The sensor can be connected directly to most control units.

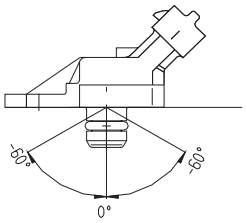
To avoid noise, an ECU-input circuit with a RC-low pass filter (tau = 2 ms) is recommended.

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

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 +-60°.



Safety Note

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

Legal Restrictions

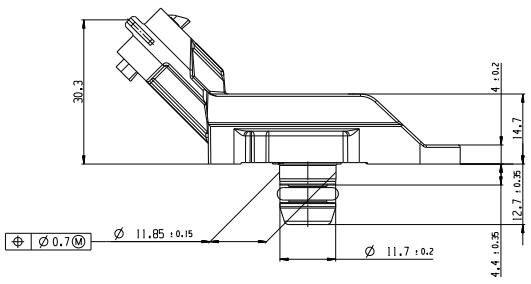
Due to embargo restrictions, sale of this product in Russia, Belarus, Iran, Syria, and North Korea is prohibited.

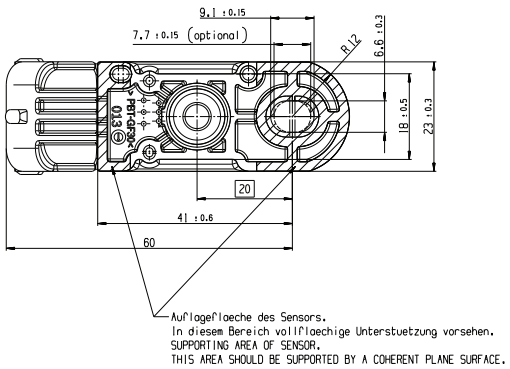
Ordering Information

Pressure Sensor Air PS-AA
0.1 to 1.15 bar
Order number **0261.230.216**

Pressure Sensor Air PS-AA
0.2 to 2.5 bar
Order number **0261.230.284**

Dimensions





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