

# Pressure Sensor Air PS-AS



- ▶ Application: 0.2 to 3.0 bar
- ▶ Response time: 1 ms
- ▶ Pressure reference type: Absolute
- ▶ Power supply: 5 V
- ▶ Weight: 21 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 an electronic for signal-amplification and temperature compensation. The output of the sensor is an analog, ratio metric signal.

## Application

Application	0.2 to 3 bar (a)
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

### Mechanical Data

Mounting	M6
Fitting	12.05 ± 0.8 mm
Weight w/o wire	21 g
Sealing	O-ring 7.59 x 2.62 mm

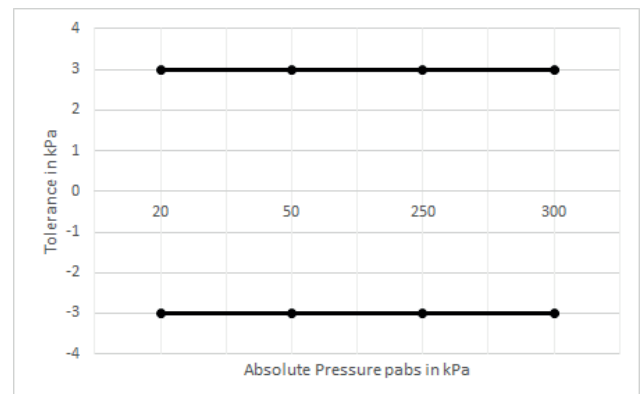
### Electrical Data

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	0.4 to 4.65 V
Current $I_s$	9 mA

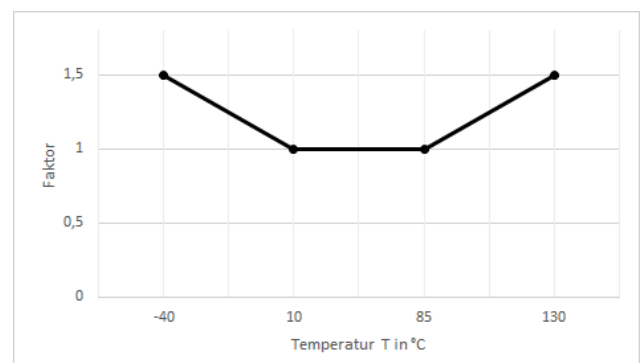
## Characteristic

Response time T10/90	1 ms
Compensated range	10 to 85°C
Tolerance (FS) at $U_s = 5$ V	± 0.030 bar
Tolerance (FS)	± 1.07 %
Sensitivity	1,518 mV/bar
Offset	96 mV

## Tolerance



## Expansion of Tolerance



## Connectors and Wires

Connector	RB-COMP 1.1a/3P/Kod.1
Mating connector	D261.205.366-01
Pin 1	U <sub>s</sub>
Pin 2	Gnd
Pin 3	Sig

Various motorsport and automotive connectors are available on request.

## Installation Notes

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

The sensor can be connected directly to most control units.

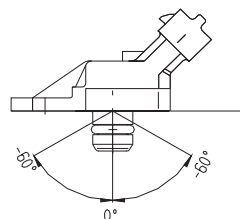
To avoid noise, an ECU-input circuit with a RC-low pass filter ( $\tau = 2 \text{ ms}$ ) is recommended.

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

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

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  $+60^\circ$ .



## Safety Note

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

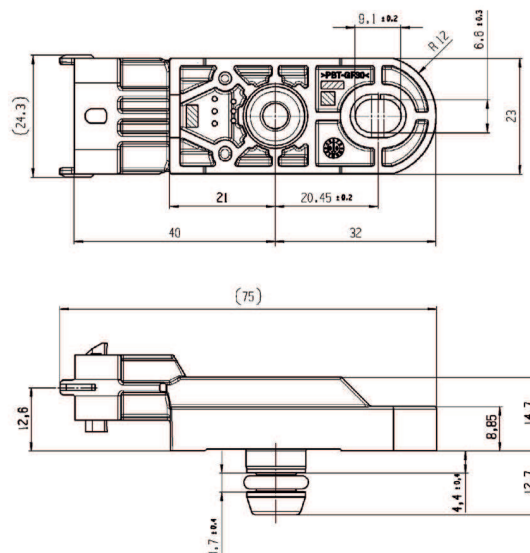
## Legal Restrictions

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

## Ordering Information

**Pressure Sensor Air PS-AS**  
Order number **0281.002.996**

## Dimensions



### Represented by:

**Europe:**  
Bosch Engineering GmbH  
Motorsport  
Robert-Bosch-Allee 1  
74232 Abstatt  
Germany  
motorsport@bosch.com  
www.bosch-motorsport.de

**North America:**  
Bosch Engineering North America  
Motorsport  
38000 Hills Tech Drive  
Farmington Hills, MI 48331-3417  
United States of America  
motorsport@bosch.com  
www.bosch-motorsport.com

**Asia-Pacific:**  
Bosch Engineering Japan K.K.  
Motorsports Department  
1-9-32 Nakagawachuo, Tsuzuki-ku  
Yokohama-shi  
Kanagawa, 224-8601  
Japan  
motorsport@jp.bosch.com  
www.bosch-motorsport.jp

**Australia, New Zealand and South Africa:**  
Robert Bosch Pty. Ltd  
Motorsport  
1555 Centre Road  
Clayton, Victoria, 3168  
Australia  
motor.sport@au.bosch.com  
www.bosch-motorsport.com.au