

# Pressure Sensor Air PS-AL



- ▶ Application: 0.4 to 4.0 bar
- ▶ Response time: 1 ms
- ▶ Pressure reference type: Absolute
- ▶ Power supply: 5 V
- ▶ Weight: 15 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	0.4 to 4 bar
Pressure reference type	absolute
Max. pressure	6 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	12.95 ± 0.8 mm
Weight w/o wire	15 g
Sealing	O-ring 9.25x1.78 mm

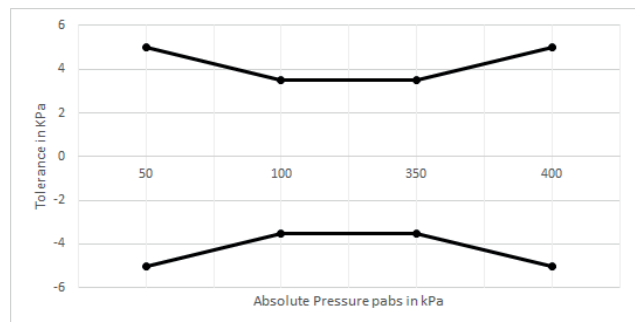
### Electrical Data

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 4.50 V
Current $I_s$	9 mA

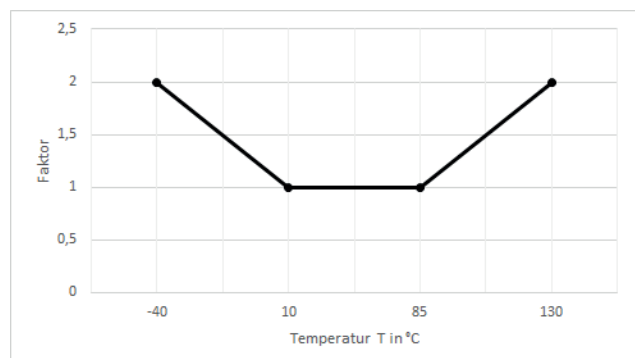
## Characteristic

Response time T10/90	1 ms
Compensated range	10 to 85°C
Tolerance (FS) at $U_s = 5 V$	± 0.035 bar / ± 0.050 bar
Tolerance (FS)	± 1.00 % / ± 1.43 %
Sensitivity	1,142.86 mV/bar
Offset	-71.43 mV

## Tolerance



## Expansion of Tolerance



**Connectors and Wires**

Connector	Hirschmann872-975- ...AK, Code A, Variant 1
Mating connector	F 02U B00 555-01
Pin 1	Sig
Pin 2	Gnd
Pin 3	U <sub>s</sub>

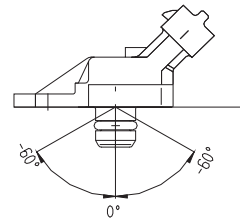
Various motorsport and automotive connectors are available on request.

**Installation Notes**

- The PS-AL 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°.



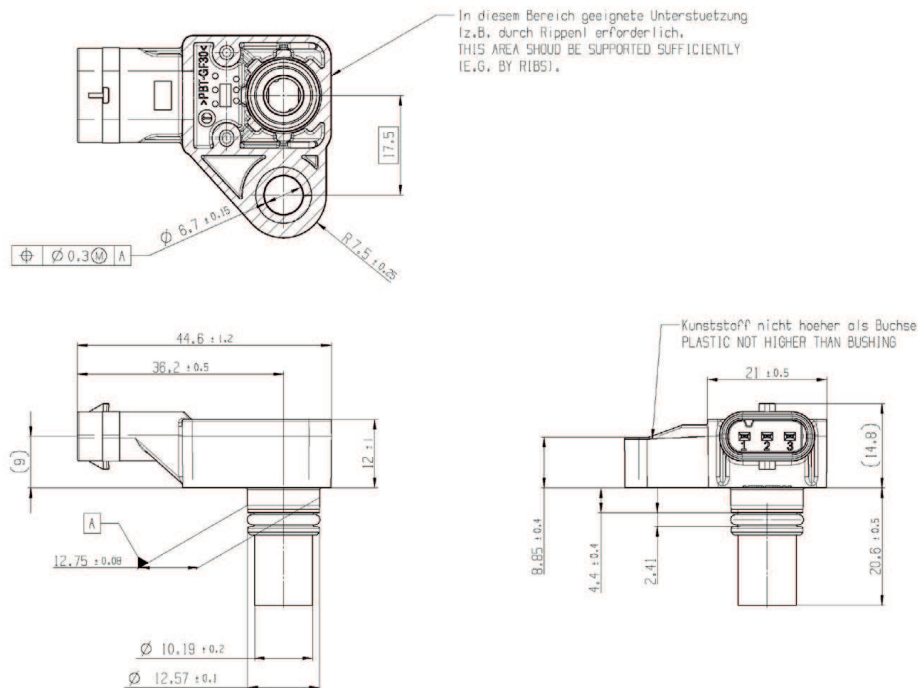
**Safety Note**

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

**Ordering Information**

**Pressure Sensor Air PS-AL**  
Order number **0 261 230 441**

**Dimensions**



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