

# Pressure Sensor Air PSA-N



- ▶ Application: 0.1 to 1.15 bar
- ▶ Response time: 0.1 ms
- ▶ Pressure reference type: Absolute
- ▶ Power supply: 11 to 16 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 electronics for signal-amplification and temperature compensation. The output of the sensor is analog.

## Application

Application	0.1 to 1.15 bar
Pressure reference type	absolute
Max. pressure	5 bar
Operating temp. range	-40 to 125°C
Media temp. range	-40 to 125°C
Storage temp. range	-40 to 130°C
Max. vibration	0.19 mm at 100 to 200 Hz 250 m/s <sup>2</sup> at 200 to 500 Hz

## Technical Specifications

### Mechanical Data

Mounting	2 x #4-40 screws
Fitting	Flat O-ring boss
Weight w/o wire	21 g
Sealing	O-ring 4.5 x 1.5 mm

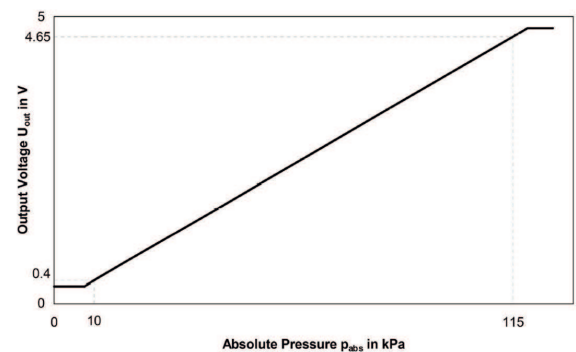
### Electrical Data

Power supply $U_S$	11 to 16 V
Full scale output $U_A$	0.5 to 4.7 V
Typical current $I_S$	9 mA

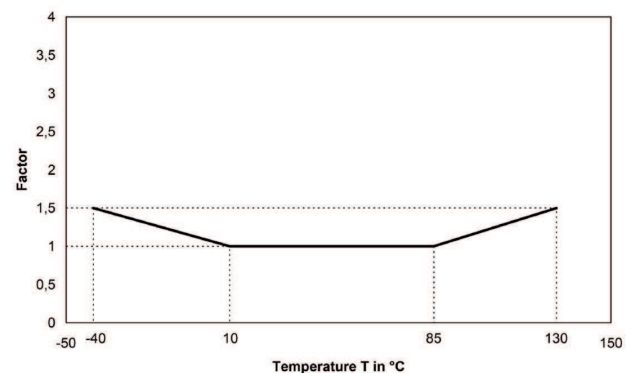
## Characteristic

Response time T10/90	1.0 ms
Compensated range	10 to 85°C
Tolerance (FS)	± 0.016 bar
Tolerance (FS)	± 1.52 %
Sensitivity	4,041.62 mV/bar
Offset	-4.16 mV

## Tolerance



## Expansion of Tolerance



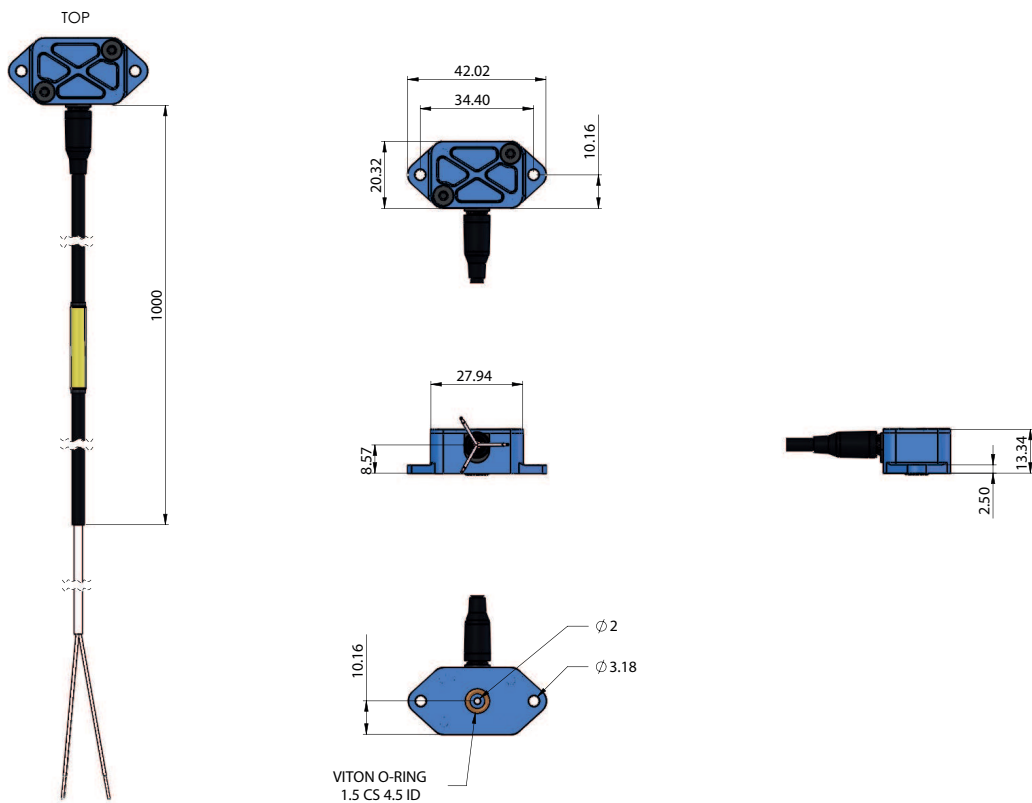
**Connectors and Wires**

Connector	ASL606-05PC-HE	
Mating connector	F02U.000.228-01	
ASL006-05SC-HE		
Pin	Function	Wire color
1	U <sub>s</sub>	WHT/ORG
2	Gnd	WHT/BLU
3	Sig	WHT
4	-	
5	-	
Various motorsport and automotive connectors are available on request.		
Sleeve	DR-25	
Wire size	AWG 24	
Wire length L	64.5 cm	

**Installation Notes**

- The PSA-N 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 0.2 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).

**Dimensions**



Surface finish of the mounting surface should not exceed 0.8 micro meters RMS.

Surface flatness tolerance at sensor mount interface must not exceed +/- 0.025 mm after sensor is torqued in place.

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.

**Safety Note**

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

**Fullfilled Legal Standards/Legal Requirements**

EMC Requirement	UNECE10
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**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 PSA-N**  
AS terminated  
Order number **F02U.V0U.197-03**

**Pressure Sensor Air PSA-N**  
Flying Lead  
Order number **F02U.V0U.197-91**

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