

SENSOR DOCUMENTATION	25/01/2005	PRESSURE	Airbox pressure sensor
Notes: Airbox pressure sensor technical documentation, dimensions and pinout. – Version 1.01			

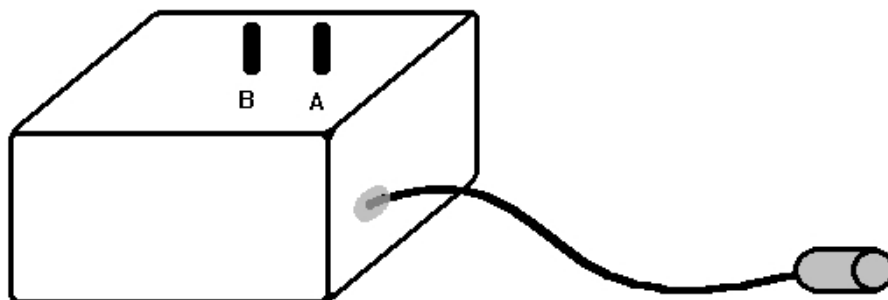


Figure 1: Airbox pressure sensor (3D view)

Introduction

This sensor is a differential sensor and it is used to measure the airbox pressure. It works between -1 and +1 PSI (i.e. ± 69 mBAR).

The output signal is proportional to the pressure applied to input B, relative to input A, e.g. the output signal increases when vacuum is applied to input A relative to input B.

Installation notes

Apply the inlet air pressure to the input B (see Figure 1) and let the input A to the ambient pressure.

It is suggested to install the airbox pressure sensor as near as possible to the airbox.

As shown in Figure 2, there are 2 airbox pressure sensors, labelled as X05SNAB00 (left) and X05SNAB01 (right).

The differences between these two sensors concern the air inlets location (exactly in the middle of the sensor for the X05SNAB01 sensor and off-centered for the X05SNAB00 sensor).

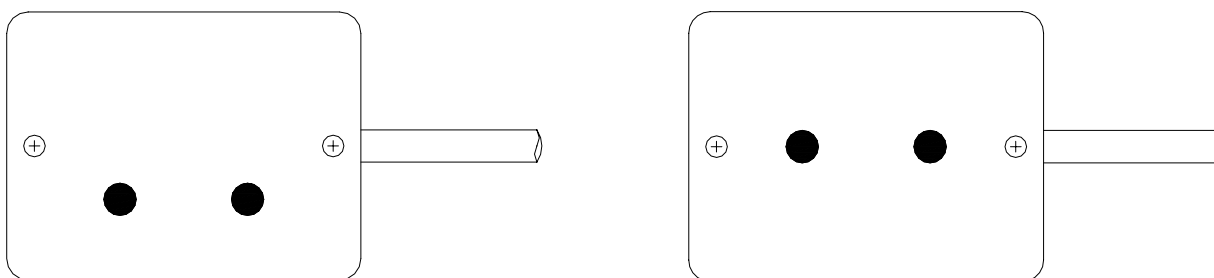


Figure 2: Airbox pressure sensor X05SNAB00 (left) and X05SNAB01 (right)

Software

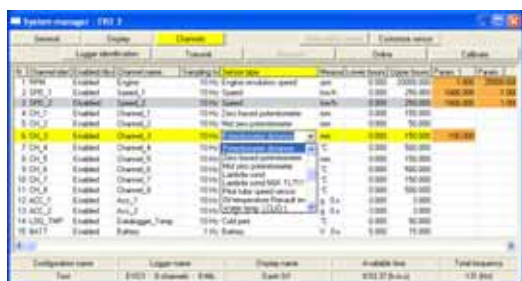
Once the airbox pressure sensor has been installed, it is necessary to configure it. To correctly configure it, please use **Race Studio 2**, the software properly developed by Aim to configure its instruments and analyze stored data.

Race Studio 2

In **Race Studio 2** main window you can choose the instrument where you wish to install the airbox pressure sensor (EVO 3, MyChron 3 Gold CAR, MyChron 3 Gold XG...). Once selected the gauge, please press “*System manager*” button.

Sensor configuration

Once reached “*System manager*” main window, please press “Channels” button to set the sensors you have installed on your vehicle. The following screenshot appears.



To set a sensor, please double-click in the box corresponding to “Sensor type” column and to “Ch_x” row (where x represents the channel number): a pop up menu like the one reported in the figure on the left appears.

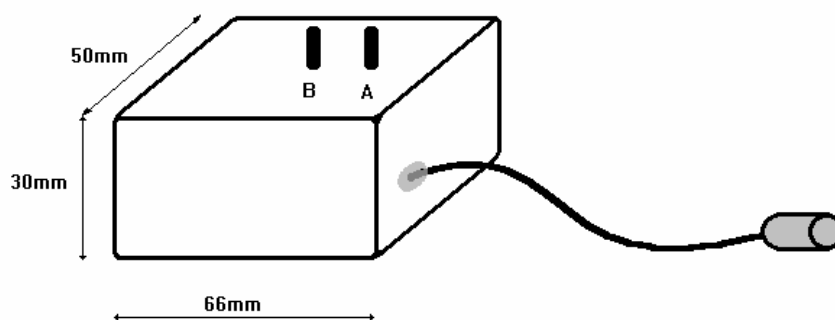
You can choose among 2 different airbox sensors:

- Airbox pressure sensor – X05SNAB00
- Airbox pressure sensor – X05SNAB01

Please set the proper airbox pressure sensor (see Figure 2 for further information)

Once you have set the correct airbox pressure sensor, please transmit the configuration to your gauge pressing “*Transmit*” button.

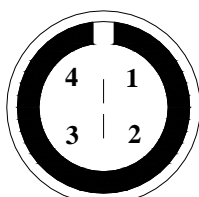
Dimensions



Dimensions in millimeters [inches]

Connector pinout

Pin	Function	Pin	Function
1	Analog signal 0-5 V	3	+V battery
2	GND	4	n.c.



4 pins Binder 719 male connector: solder termination view

Technical characteristics

Electrical characteristics	Value
Power supply	From 10 to 36 V
Operating range	From -1 to +1 PSI (from -69 mBAR to +69 mBAR)
Output signal	Analog 0-5 V
Mechanical characteristics	Value
Operating temperature	From -40 °C to +85 °C
Weight	80 g