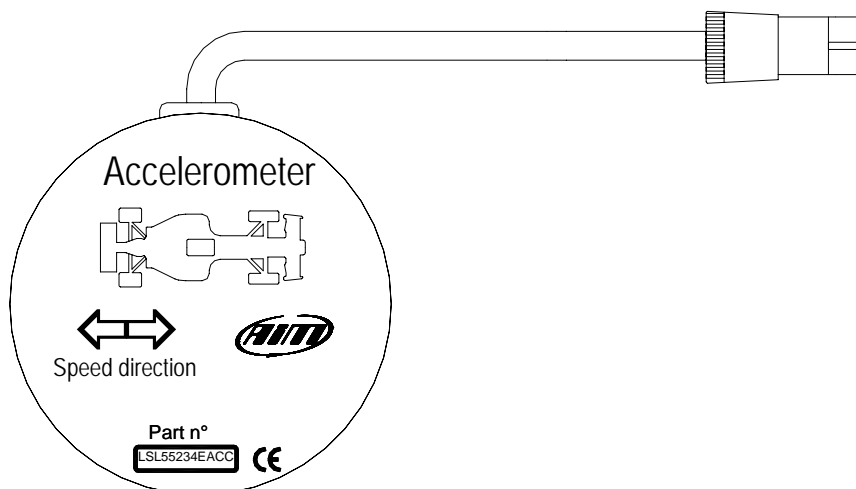**Figure 1: Accelerometer**

Introduction

The external accelerometer sensor measures the acceleration of the vehicle.
This sensor allows generating accurate track maps, it is for car / snow mobile applications and is supported by Evo 3, MyChron 3 Auto, MXL.

Installation notes

- The accelerometer sensor is resistant to shock but can become critical to vibrations. For this reason we suggest You to fix it using a strip of neoprene, slightly pressed between the accelerometer point of installation.
- Make sure that the sensor is not installed too close to heat sources.
- Do not place the sensor near to sources of interference like ignition coils, alternators and plug leads.
- Please install the accelerometer with the sensitive axle perpendicular to vehicle speed as shown in **Figure 2**.
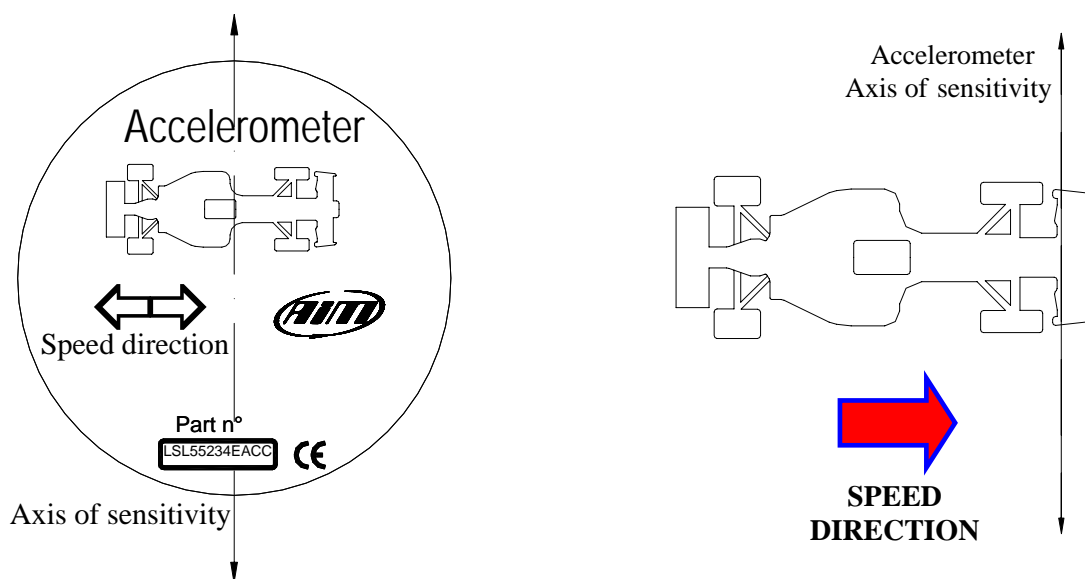
Figure 2: how to install the **External accelerometer**

Once the external accelerometer has been installed it is necessary to calibrate it. To do so, please use **Race Studio 2**, the software properly developed by Aim to configure your data logger and analyze stored data.

Race Studio 2

In **Race Studio 2** main window, shown here below, You can choose the instrument where you wish to install the sensor. Once selected the gauge, please press "System manager" button.
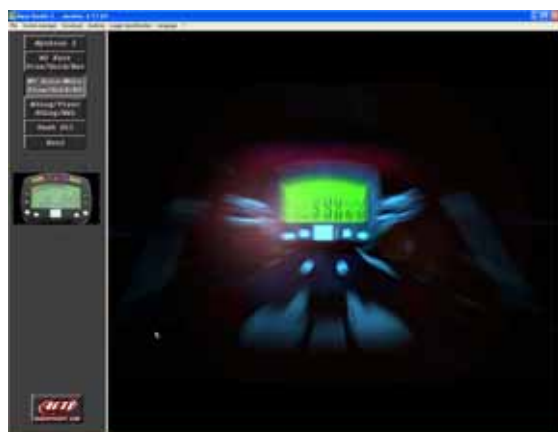
Sensor configuration

To set the sensors you have installed on your vehicle, please press "Channels" button in "System manager" main window. The following screenshot appears.

To set a sensor it is necessary to double-click in the box corresponding to the "Sensor type" column and to the "Ch_x" (where x represents the channel number) row: a menu like the one reported in the previous figure appears. You can choose between 3 different kind of sensors:

- Lateral Accelerometer
- Longitudinal accelerometer
- Vertical external accelerometer

If you have installed the sensor on a car / snow mobile and you wish to create the track map:

select Lateral accelerometer

Once set the correct sensor type, please transmit the configuration to your gauge pressing "Transmit" button.

Calibration

Once the configuration has been correctly transmitted to your gauge, it is absolutely necessary to auto-calibrate the sensor. Please click on "Calibrate" button: the following screenshot appears.
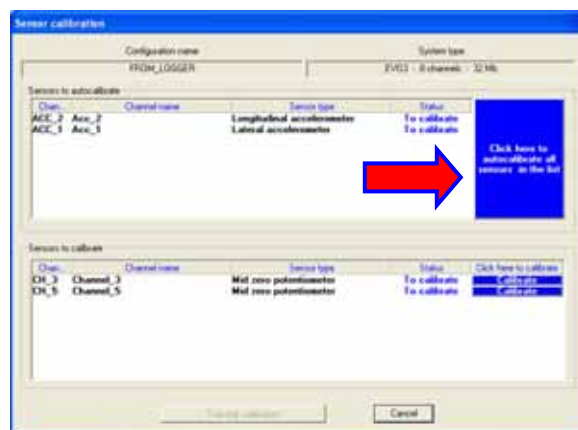

Press "Click here to auto-calibrate all sensors in the list" button (highlighted with a red /blue arrow in the above figure): the software auto-calibrates automatically all sensors reported in the "to be auto-calibrated" box.

Please note: when auto-calibrating the sensor, the car / snowmobile must be in a position parallel to ground

Note: once the sensor has been auto-calibrated, it is necessary to re-transmit the configuration to the data logger, pressing the proper button.
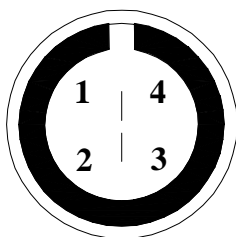
Dimensions

400 [15.7]

Accelerometer

Speed direction

Part n°
LSL55234EACC CE

35.5 [1.4]
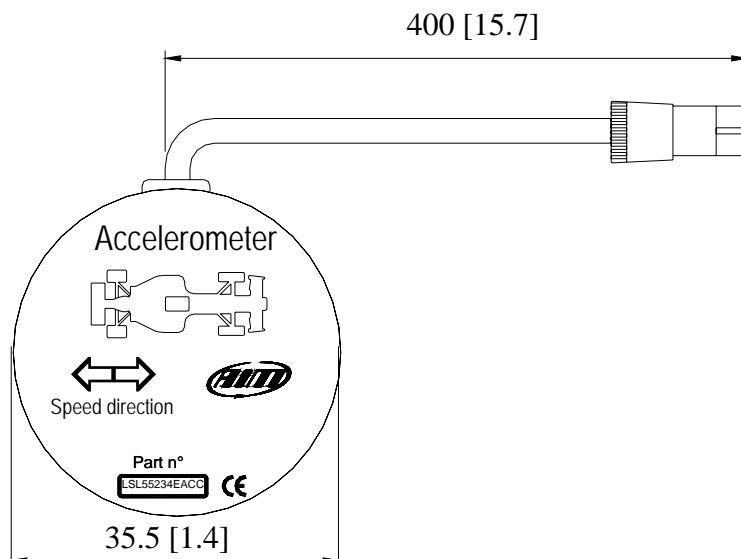
Connector details

Pin	Function	Pin	Function
1	Accelerometer	3	Supply voltage
2	GND	4	Non connected

1 4

2 3

Male binder connector pinout; external view

Specifications

Electrical characteristics	Value
Vertical acc. measure range	± 5 g
Vertical accelerometer linearity	1 % of full scale
Accelerometer type	Analogical Mono-axial

Mechanical characteristics	Value
Operating temperature range	From 0°C to +70°C
Weight	60 g with cable
Housing	Anodised aluminium
Cable length	400 mm