

AiM InfoTech

AiM pressure sensor 0-300 PSI  
Race Studio 2 configuration

Release 1.00

---



# 1

## Introduction

---

Once AiM pressure sensor 0-300 PSI is physically connected to one of the device analog channels, it has to be loaded in the related configuration using AiM configuration software. In this datasheet it is loaded using **Race Studio 2** software.

You can proceed in two ways: importing the sensor configuration file, downloading it from the Products – Sensors (car/bike) section of our website [www.aim-sportline.com](http://www.aim-sportline.com), or creating a custom sensor.

## 2

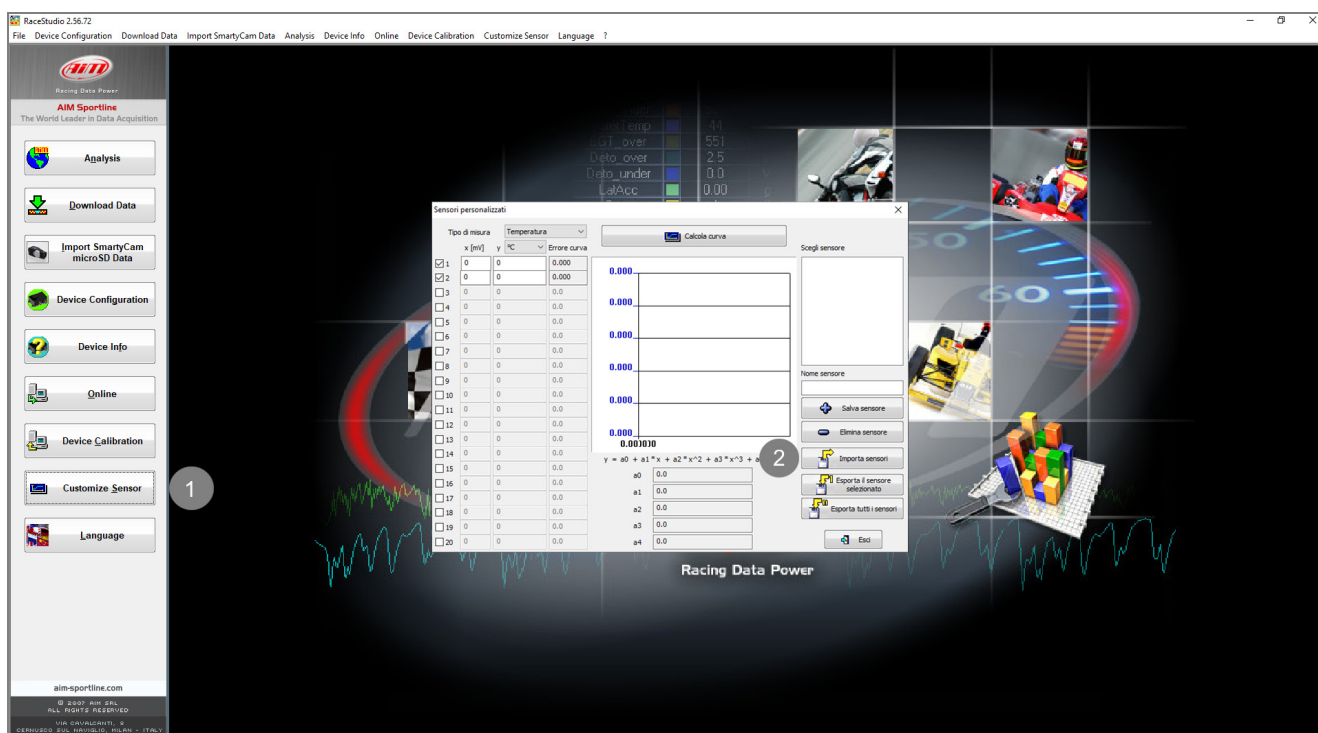
## SCF\* file import

To obtain the sensor configuration file, enter the Products – Sensors (auto/moto) section of the AiM website [www.aim-sportline.com](http://www.aim-sportline.com), and click the link referred to the sensor you own (following image). Once the download is finished, save the file in a PC folder.

PRESSURE SENSORS						
Turbo pressure sensor from -1 to 3 Bar	X05SNP31004A		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-10 bar/0-145 PSI	X05SNP31010R		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-100 bar/0-1450 PSI	X05SNP31100R		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-160 bar/0-2320 PSI	X05SNP31160R		Datasheet	RS3 conf	RS2 conf	SCF*
VDO pressure sensor 0-5 Bar	X05SNBO05		Datasheet	RS3 conf	RS2 conf	
VDO pressure sensor 0-10 Bar	X05SNBO00		Datasheet	RS3 conf	RS2 conf	

\*Download the sensor configuration file ready to import in RS2

To import the file in Race Studio 2, making it available in the pressure sensors list, from the Customize Sensors window **(1)**, click Import Sensors **(2)** and select the saved file.



### 3

## Custom sensor creation

- create a custom sensor pressing "Customize sensor" **(1)**
- select the type of measure (Pressure) and the measure unit (PSI) **(2)**
- complete the first two rows of the table on the left as follows **(3)**:

X [mV]	Y [PSI]
500	0
4500	300

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-300 PSI (X05PSA00300P18)" – and press "Save sensor" **(5)**; press "Exit" **(6)**

The screenshot shows the 'Customize sensor' dialog box in the RaceStudio 2.56.72 software. The dialog box is divided into several sections:

- Left Panel:** A list of menu items including Analysis, Download Data, Import SmartyCam microSD Data, Device Configuration, Device Info, Online, Device Calibration, Customize Sensor (highlighted with a red circle and '1'), and Language.
- Table:** A table with columns 'x [mV]', 'y', and 'Curve Error'. The first two rows are filled with the values 500, 0 and 4500, 300 respectively. A red circle and '3' point to this table.
- Buttons:** 'Compute Curve' (highlighted with a red circle and '4'), 'Save sensor' (highlighted with a red circle and '5'), and 'Exit' (highlighted with a red circle and '6').
- Graph:** A graph showing a linear relationship between x and y, with a red line and a blue curve. A red circle and '5' point to the graph.
- Right Panel:** A section for 'Sensor name' with the text 'AiM 0-300 PSI (X05PSA00300P18)' and buttons for 'Save sensor', 'Delete sensor', 'Import sensors', 'Export selected sensor', and 'Export all sensor'.

## 4 Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-300 PSI (X05PSA00300P18)" in sensor type column of the desired channel and transmit the configuration to the device.

The screenshot shows the RaceStudio 2.56.72 interface with the 'Channels' tab selected. The table below represents the data visible in the 'Channels' configuration window.

Channel identifier	Enabled/disabled	Channel name	Sampling frequency	Sensor type	Measure unit	Low scale	High scale
RPM	<input checked="" type="checkbox"/> Enabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000
SPD_1	<input checked="" type="checkbox"/> Enabled	Speed_1	10 Hz	Speed	km/h -1	0.0	250.0
CH_1	<input checked="" type="checkbox"/> Enabled	Channel_1	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_2	<input checked="" type="checkbox"/> Enabled	Channel_2	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_3	<input checked="" type="checkbox"/> Enabled	Channel_3	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_4	<input checked="" type="checkbox"/> Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_5	<input checked="" type="checkbox"/> Enabled	Channel_5	10 Hz	AiM Lambda LCU-ONE ( 0.65 - 1.6 lambda)	V -1	0.0	5.0
CH_6	<input checked="" type="checkbox"/> Enabled	Channel_6	10 Hz	MSI 0-2000 PSI sensor	V -1	0.0	5.0
CH_7	<input checked="" type="checkbox"/> Enabled	Channel_7	10 Hz	Fuel level	V -1	0.0	5.0
CH_8	<input checked="" type="checkbox"/> Enabled	Channel_8	10 Hz	AVICORACE_SP35 Pressure sensor	V -1	0.0	5.0
CALC_GEAR	<input checked="" type="checkbox"/> Enabled	Calculated_Gear	10 Hz	AEM 30 PSI INHg/PSI Press sensor	#	0	9
ACC_1	<input checked="" type="checkbox"/> Enabled	LatAcc	10 Hz	Kavlico 50 PSI Press sensor	g .01	-3.00	3.00
LOG_TMP	<input checked="" type="checkbox"/> Enabled	Datalogger_Temp	10 Hz	KA 0-150 PSI Press sensor	°C	0	50
BATT	<input checked="" type="checkbox"/> Enabled	Battery	1 Hz	Delphi IAT #2558751 Temp sensor	V -1	5.0	15.0

The dropdown menu for the 'Sensor type' of 'CH\_4' is open, showing a list of sensors. The sensor 'AiM 0-300 PSI (X05PSA00300P18)' is highlighted in red.