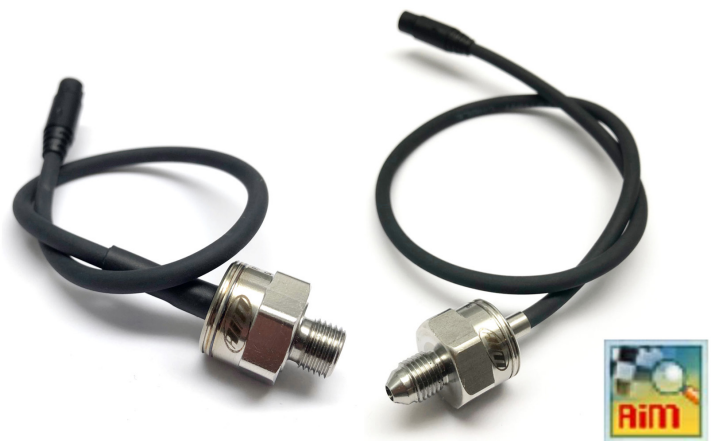


AiM Infotech

AiM pressure sensor 0-100 bar  
Race Studio 2 configuration

Release 1.01

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# 1

## Introduction

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Once AiM pressure sensor 0-100 bar 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.

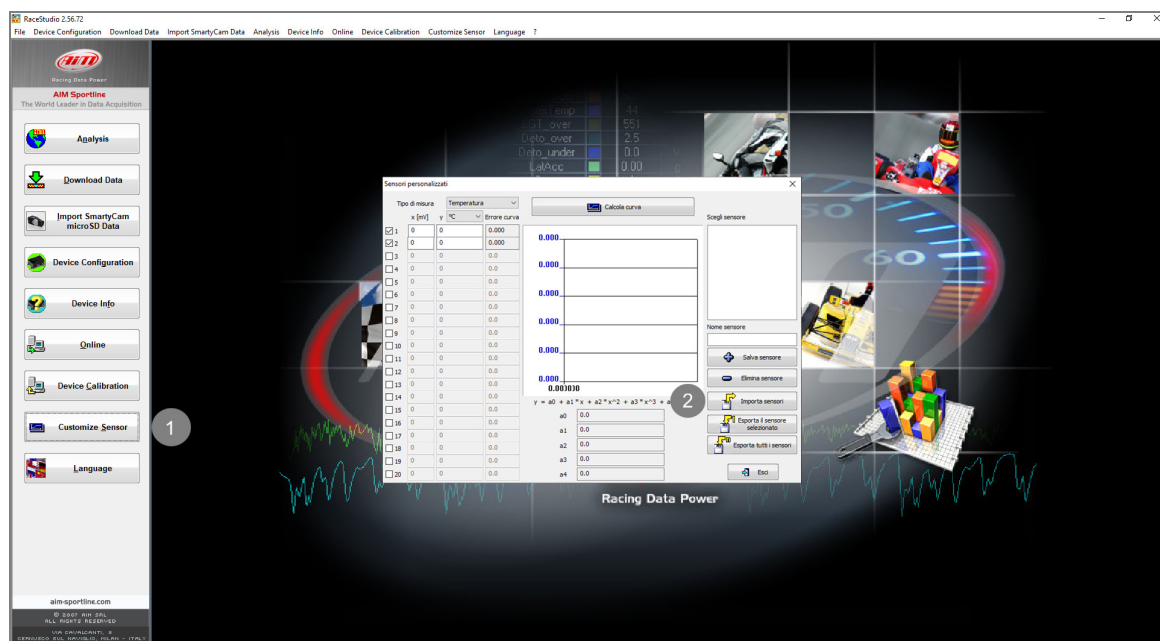
## 2

# SCF\* file import

To obtain the sensor configuration file, enter the Products – Sensors (cars/bikes) 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							
Pressure sensor 0-5 bar	3/8 24	X05PSA00005B38		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-10 bar	M10	X05PSA00010B10		Datasheet	RS3 conf	RS2 conf	SCF*
	3/8 24	X05PSA00010B38					
Pressure sensor 0-100 bar	M10	X05PSA00100B10		Datasheet	RS3 conf	RS2 conf	SCF*
	3/8 24	X05PSA00100B38					
Pressure sensor 0-160 bar	M10	X05PSA00160B10		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-50 PSI	1/8 NPT	X05PSA00050P18		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-150 PSI	1/8 NPT	X05PSA00150P18		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-300 PSI	1/8 NPT	X05PSA00300P18		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-2000 PSI	1/8 NPT	X05PSA02000P18		Datasheet	RS3 conf	RS2 conf	SCF*
VDO pressure sensor 0-5 Bar		X05SNB005		Datasheet	RS3 conf	RS2 conf	
VDO pressure sensor 0-10 Bar		X05SNB000		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 (bar) **(2)**
- complete the first two rows of the table on the left as follows **(3)**:

X [mV]	Y [bar]
500	0
4500	100

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-100 bar (X05PSA00100B10)" – 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:

- Table:** A table with columns 'x [mV]', 'y [bar]', and 'Curve Error'. The first two rows are filled with the values 500, 0 and 4500, 100 respectively.
- Graph:** A graph showing the computed curve, which is a straight line passing through the points (500, 0) and (4500, 100).
- Sensor name:** A text field containing the name 'AiM 0-100 bar (X05PSA00100B10)'.
- Buttons:** Buttons for 'Compute Curve', 'Save sensor', 'Delete sensor', 'Import sensors', 'Export selected sensor', 'Export all sensor', and 'Exit'.

Numbered callouts indicate the steps for creating a custom sensor:

- 1: Clicking the 'Customize sensor' button in the main menu.
- 2: Selecting the type of measure (Pressure) and the measure unit (bar).
- 3: Completing the first two rows of the table.
- 4: Pressing the 'Compute Curve' button.
- 5: Pressing the 'Save sensor' button.
- 6: Pressing the 'Exit' button.

# 4

## Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-100 bar (X05PSA00100B10)" or "AiM 0-100 bar (X05PSA00100B38)" in sensor type column of the desired channel and transmit the configuration to the device.

The screenshot shows the RaceStudio 2.56.72 interface. The 'System manager' window is open, and the 'Channels' tab is selected. The table below shows the current configuration for various channels. Channel 4 is highlighted, and the sensor type dropdown menu is open, showing the selection of 'AiM 0-100 bar (X05PSA00100B10)'.

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	0.0	250.0
CH_1	<input checked="" type="checkbox"/> Enabled	Channel_1	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_2	<input checked="" type="checkbox"/> Enabled	Channel_2	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_3	<input checked="" type="checkbox"/> Enabled	Channel_3	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_4	<input checked="" type="checkbox"/> Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_5	<input checked="" type="checkbox"/> Enabled	Channel_5	10 Hz	Oil pressure Nagano KM10	V	0.0	5.0
CH_6	<input checked="" type="checkbox"/> Enabled	Channel_6	10 Hz	AIM Lambda LCU-ONE (0.65 - 1.6 lambda)	V	0.0	5.0
CH_7	<input checked="" type="checkbox"/> Enabled	Channel_7	10 Hz	Fuel level	V	0.0	5.0
CH_8	<input checked="" type="checkbox"/> Enabled	Channel_8	10 Hz	AVORACE SP35 Pressure sensor	V	0.0	5.0
CALC_GEAR	<input checked="" type="checkbox"/> Enabled	Calculated_Gear	10 Hz	AIM 30 PSI Press sensor	#	0	9
ACC_1	<input checked="" type="checkbox"/> Enabled	LataAcc	10 Hz	Kavlico 50 PSI Press sensor	g	-3.00	3.00
LOG_TMP	<input checked="" type="checkbox"/> Enabled	Datalogger_Temp	10 Hz	GM 3 Bar Map sensor	°C	0	50
BATT	<input checked="" type="checkbox"/> Enabled	Battery	1 Hz	KA 0-150 PSI Press sensor	V	5.0	15.0

The sensor type dropdown menu for Channel 4 is open, showing the following options:

- AIM 0-10 bar (X05PSA00010B10)
- AIM 0-10 bar (X05PSA00010B38)
- AIM 0-100 bar (X05PSA00100B10)
- AIM 0-100 bar (X05PSA00100B38)
- AIM 0-160 bar (X05PSA00160B10)
- AIM 0-2000 PSI (X05PSA002000P10)