



AiM Infotech

AiM pressure sensor 0-2000 PSI Race Studio 2 configuration

Release 1.00





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Introduction

Once AiM pressure sensor 0-2000 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, or creating a custom sensor.

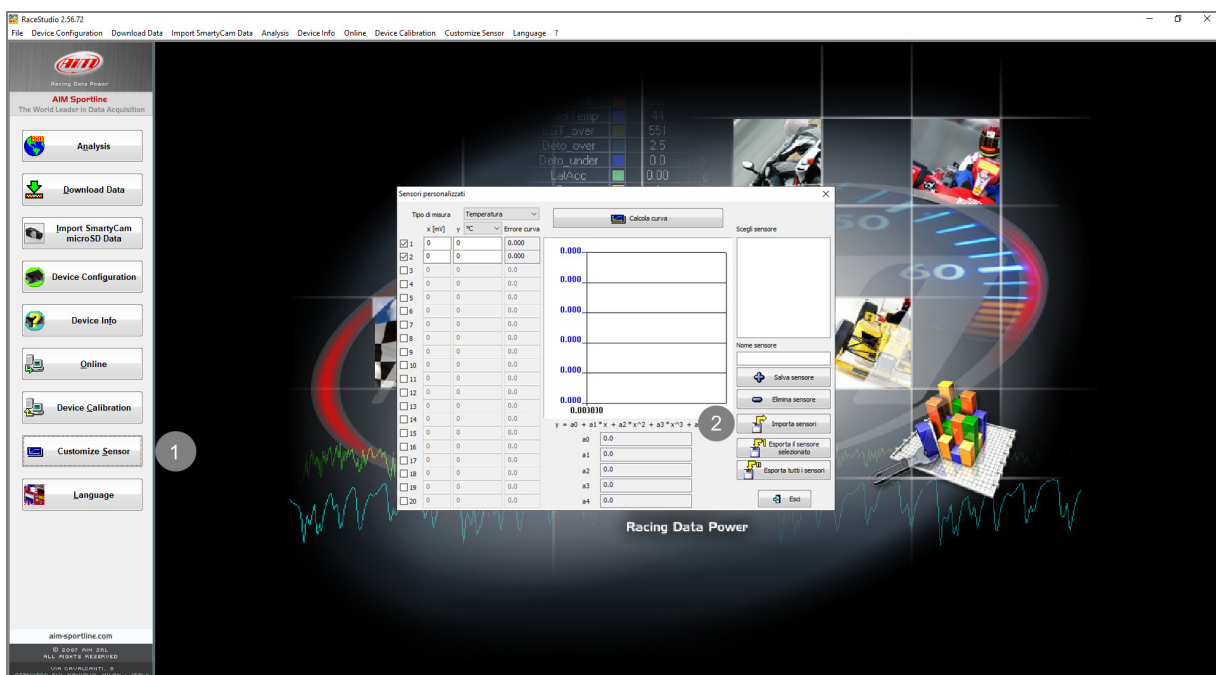
2 SCF* file import

To obtain the sensor configuration file, enter the Products – Sensors (cars/bikes) section of the AiM website www.aim-sportline.com, 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 3/8 24	X05PSA00010B10 X05PSA00010B38		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-100 bar	M10 3/8 24	X05PSA00100B10 X05PSA00100B38		Datasheet	RS3 conf	RS2 conf	SCF*
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		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	2000

- press "Compute curve" (4), fill in sensor name - in the example "AiM 0-2000 PSI (X05PSA02000P18)" – 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:

- Type of measure:** A dropdown menu set to 'Pressure'.
- Unit:** A dropdown menu set to 'PSI'.
- Table:** A table with columns 'x [mV]', 'y', and 'Curve Error'. The first two rows are filled with '500 0 0.000' and '4500 2000 0.000'.
- Graph:** A graph showing a linear curve from (500, 0) to (4500, 2000).
- Sensor name:** A text field containing '0-2000 PSI (X05PSA02000P18)'. Below it are buttons for 'Save sensor', 'Delete sensor', 'Import sensors', 'Export selected sensor', and 'Export all sensor'.
- Equation:** A text field containing the equation $y = a0 + a1 * x + a2 * x^2 + a3 * x^3 + a4 * x^4$ with coefficients: a0: -2.500000e+002, a1: 0.500000, a2: 0.000000e+000, a3: 0.000000e+000, a4: 0.000000e+000.
- Buttons:** 'Compute Curve', 'Save sensor', 'Delete sensor', 'Import sensors', 'Export selected sensor', 'Export all sensor', and 'Exit'.

4 Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-2000 PSI (X05PSA02000P18)" in sensor type column of the desired channel and transmit the configuration to the device.

