

AiM InfoTech

AiM pressure sensor
0-5 bar
Race Studio 2 configuration

Release 1.00



1

Introduction

Once AiM pressure sensor 0-5 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, or creating a custom sensor.

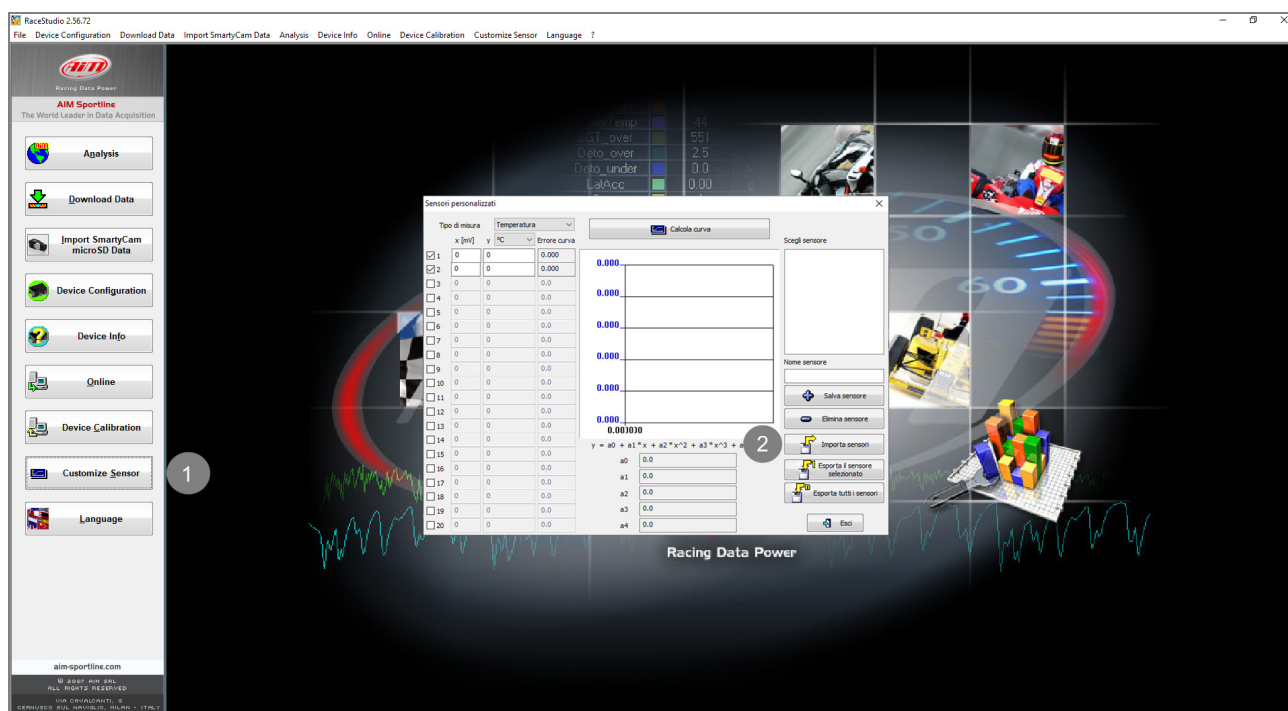
2 SCF* file import

To obtain the sensor configuration file, enter the Products – Sensors (car/bike) 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						
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.



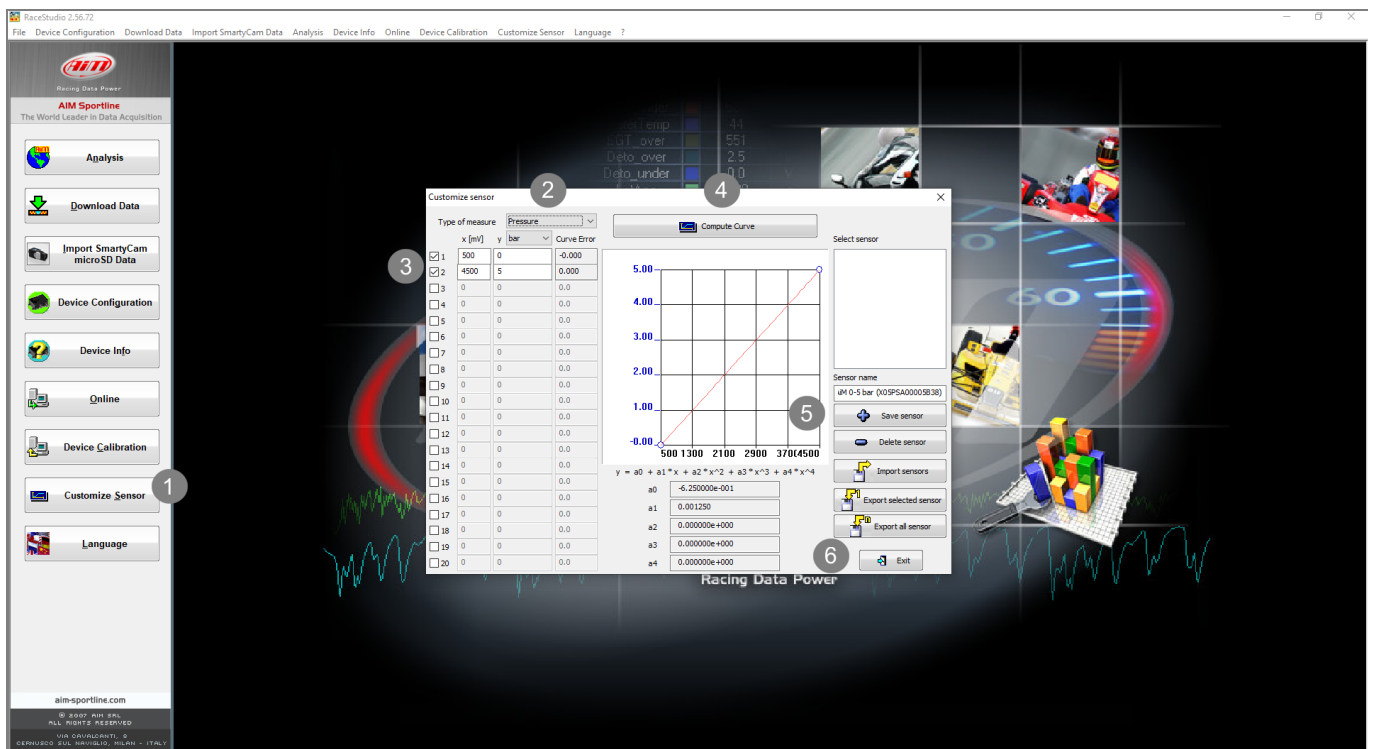
3

Custom sensor creation

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

X [mV]	Y [bar]
500	0
4500	5

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-5 bar (X05PSA00005B38)" – and press "Save sensor" **(5)**; press "Exit" **(6)**



The screenshot shows the AIM Sportline software interface. The 'Customize sensor' dialog box is open, displaying a table for sensor data points, a graph for the computed curve, and fields for sensor name and coefficients. The steps are numbered as follows:

- 1: Click on the 'Customize sensor' button in the main menu.
- 2: Select the 'Type of measure' (Pressure) and the 'Unit' (bar).
- 3: Complete the first two rows of the table on the left as follows:

X [mV]	Y [bar]
500	0
4500	5
- 4: Press the 'Compute Curve' button.
- 5: Fill in the sensor name (e.g., 'AiM 0-5 bar (X05PSA00005B38)') and press the 'Save sensor' button.
- 6: Press 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 0-5 bar (X05PSA00005B38)" in sensor type column of the desired channel and transmit the configuration to the device.

The screenshot shows the RaceStudio 2.56.72 software interface. The left sidebar contains navigation buttons: Analysis, Download Data, Import SmartyCam microSD Data, Device Configuration, Device Info, Online, Device Calibration, Customize Sensor, and Language. The main window is titled 'System manager' and has tabs for 'Select configuration', 'Channels', 'System configuration', and 'CAN-Expansions configurator'. The 'Channels' tab is active, displaying a table of channel configurations.

Channel identifier	Enabled/disabled	Channel name	Sampling frequency	Sensor type	Measure unit	Low scale	High scale
RPM	<input checked="" type="checkbox"/>	Engine	10 Hz	Engine revolution speed	rpm	0	20000
SPD_1	<input checked="" type="checkbox"/>	Speed_1	10 Hz	Speed	km/h .1	0.0	250.0
CH_1	<input checked="" type="checkbox"/>	Channel_1	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_2	<input checked="" type="checkbox"/>	Channel_2	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_3	<input checked="" type="checkbox"/>	Channel_3	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_4	<input checked="" type="checkbox"/>	Channel_4	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_5	<input checked="" type="checkbox"/>	Channel_5	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_6	<input checked="" type="checkbox"/>	Channel_6	10 Hz	AIM Lambda LCU-ONE (0.55 - 1.6 lambda)	V .1	0.0	5.0
CH_7	<input checked="" type="checkbox"/>	Channel_7	10 Hz	MSI 0-2000 PSI sensor	V .1	0.0	5.0
CH_8	<input checked="" type="checkbox"/>	Channel_8	10 Hz	AVTORACE SP35 Pressure sensor	V .1	0.0	5.0
CALC_GEAR	<input checked="" type="checkbox"/>	Calculated_Gear	10 Hz	AEM 30 PSI Press sensor	#	0	9
ACC_1	<input checked="" type="checkbox"/>	LataAcc	10 Hz	AEM 30 PSI (Nhg) PSI Press sensor	g .01	-3.00	3.00
LOG_TMP	<input checked="" type="checkbox"/>	Datalogger_Temp	10 Hz	Kanefico 50 PSI Press sensor	°C	0	50
BATT	<input checked="" type="checkbox"/>	Battery	1 Hz	GM 3 Bar Map sensor	V .1	5.0	15.0

A dropdown menu is open for the 'Sensor type' of Channel_4, showing a list of sensors. The sensor 'AiM 0-5 bar (X05PSA00005B38)' is highlighted in red.