

AiM InfoTech

AiM pressure sensor 0-150 PSI
Race Studio 2 configuration

Release 1.01



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Introduction

Once AiM pressure sensor 0-150 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

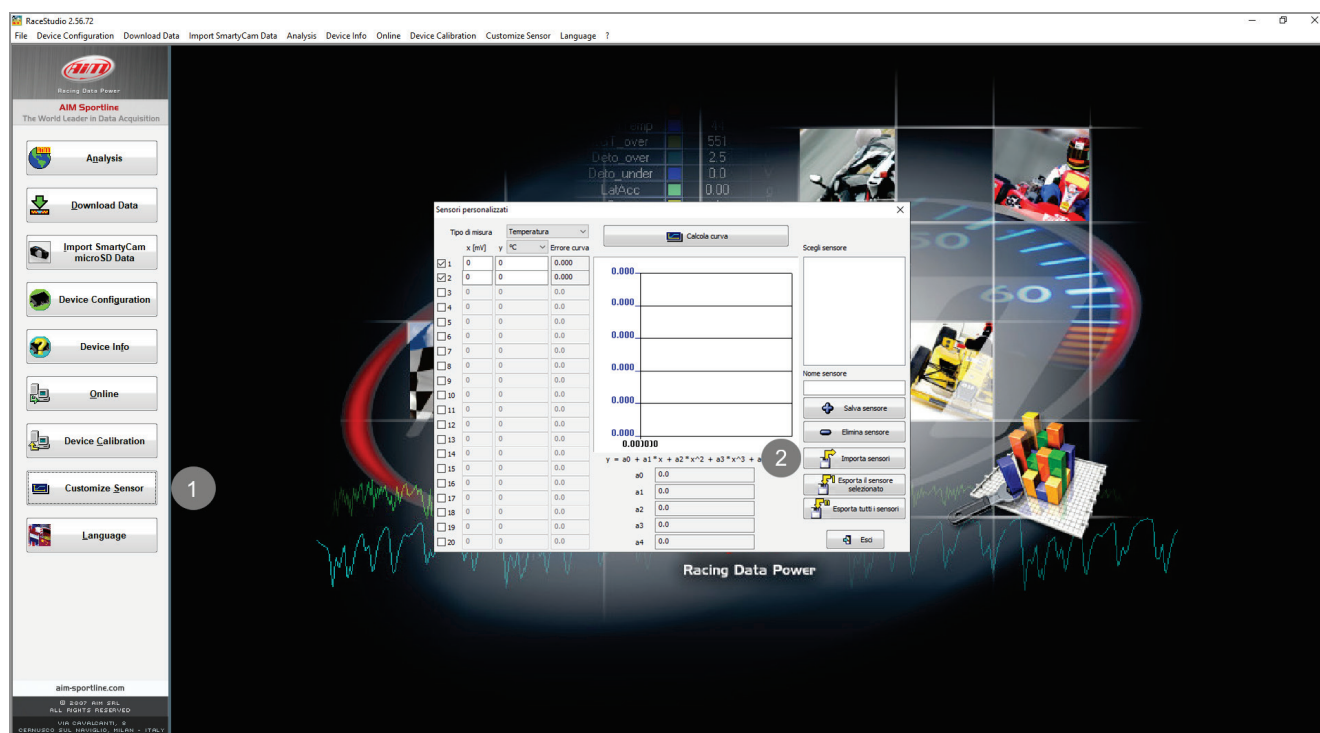
To obtain the sensor configuration file, enter the Products – Sensors (auto/moto) section of the AiM website www.aim-sportline.com, and click the link referred to the sensor you own (following image). Once the download is finished, save the file in a PC folder.

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.



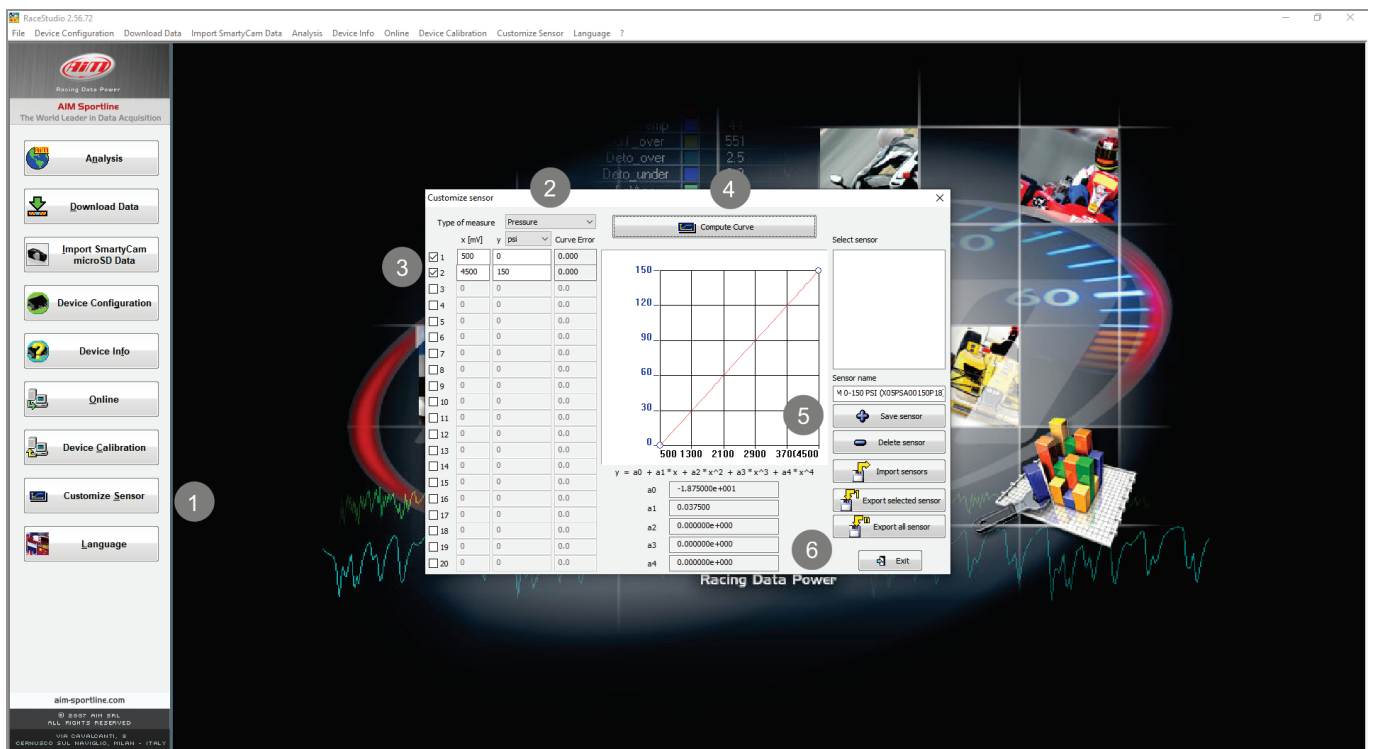
3

Custom sensor creation

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

X [mV]	Y [PSI]
500	0
4500	150

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-150 PSI (X05PSA00150P18K)" – and press "Save sensor" **(5)**; press "Exit" **(6)**



The screenshot shows the RaceStudio 2.56.72 software interface. On the left is a sidebar with various menu items. The main window displays a 'Customize sensor' dialog box. The dialog box contains a table for sensor data points, a graph, and fields for sensor name and coefficients. Numbered callouts 1 through 6 indicate the steps for creating a custom sensor:

- 1: Click on 'Customize Sensor' in the sidebar.
- 2: Select 'Pressure' as the type of measure and 'PSI' as the unit.
- 3: Complete the first two rows of the table on the left as follows:

X [mV]	Y [PSI]
500	0
4500	150
- 4: Press 'Compute Curve'.
- 5: Fill in sensor name - in the example "AiM 0-150 PSI (X05PSA00150P18K)" – and press 'Save sensor'.
- 6: Press 'Exit'.

4

Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-150 PSI (X05PSA00150P18K)" 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	☒ Enabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000
SPD_1	☒ Enabled	Speed_1	10 Hz	Speed	km/h .1	0.0	250.0
CH_1	☒ Enabled	Channel_1	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_2	☒ Enabled	Channel_2	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_3	☒ Enabled	Channel_3	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_4	☒ Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_5	☒ Enabled	Channel_5	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_6	☒ Enabled	Channel_6	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_7	☒ Enabled	Channel_7	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CH_8	☒ Enabled	Channel_8	10 Hz	Generic linear 0-5 V	V .1	0.0	5.0
CALC_GEAR	☒ Enabled	Calculated_Gear	10 Hz	Calculated_Gear	#	0	9
ACC_1	☒ Enabled	LataAcc	10 Hz	GM 3 Bar Map sensor	g .01	-3.00	3.00
LOG_TMP	☒ Enabled	Datalogger_Temp	10 Hz	KA 0-150 PSI Press sensor	°C	0	50
BATT	☒ Enabled	Battery	1 Hz	AIEM 30 1000 PSI Press sensor	V .1	5.0	15.0

A dropdown menu is open for the "Sensor type" column of Channel_4, showing a list of available sensors. The sensor "AiM 0-150 PSI (X05PSA00150P18K)" is highlighted in red.