

AiM InfoTech

AiM pressure sensor 0-2000 PSI
Race Studio 2 configuration

Release 1.01



1

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

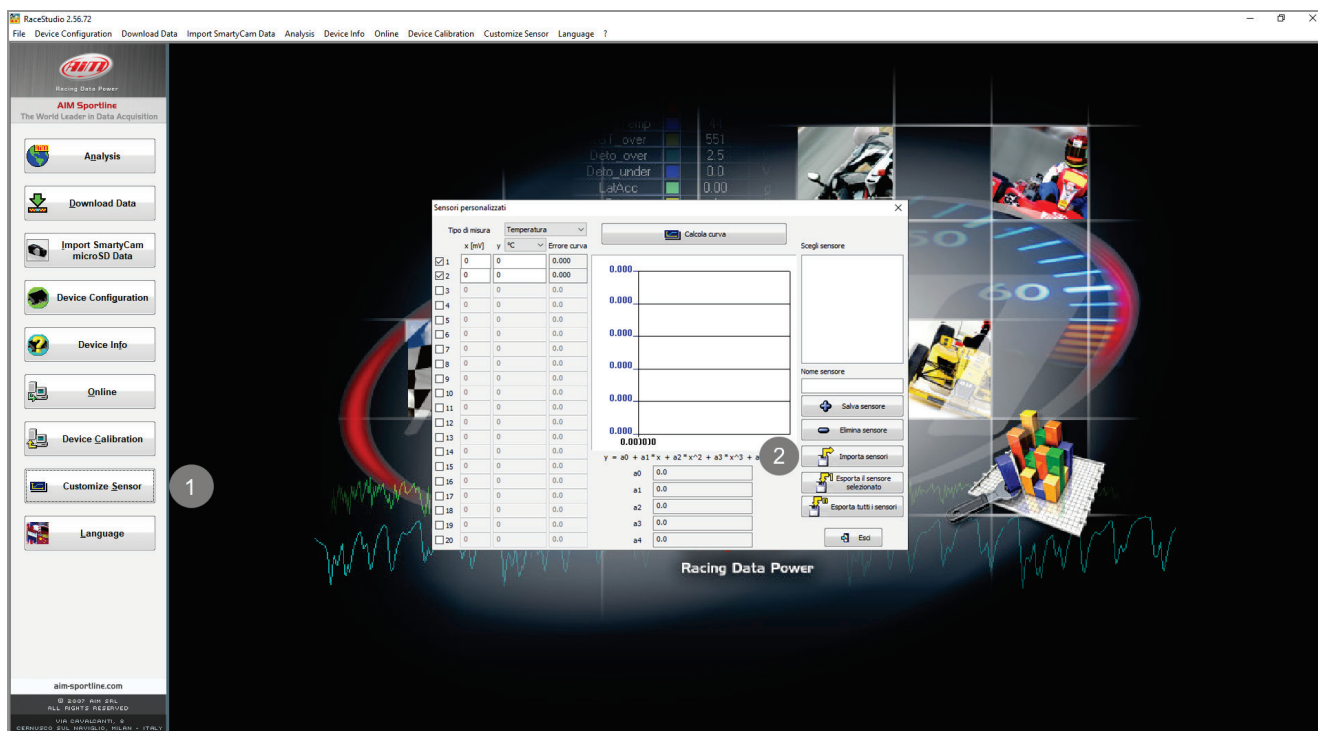
To obtain the sensor configuration file, enter the Products – Sensors (auto/moto) section of the AiM website www.aim-sportline.com, and click the link referred to the sensor you own (following image). Once the download is finished, save the file in a PC folder.

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	2000

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-2000 PSI (X05PSA02000P18K)" – 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 buttons for various functions: Analysis, Download Data, Import SmartyCam microSD Data, Device Configuration, Device Info, Online, Device Calibration, **Customize Sensor** (marked with a red circle 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, 2000 (marked with a red circle 3).
- Graph:** A line graph showing the relationship between x and y. The x-axis ranges from 500 to 4500, and the y-axis ranges from 0 to 2000. A red line is plotted through the two data points (marked with a red circle 5).
- Buttons:** 'Compute Curve' (marked with a red circle 4), 'Save sensor' (marked with a red circle 5), 'Delete sensor', 'Import sensors', 'Export selected sensor', 'Export all sensor', and 'Exit' (marked with a red circle 6).
- Sensor Name:** A text field containing the name 'AiM 0-2000 PSI (X05PSA02000P18K)'.

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 (X05PSA02000P18K)" 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 'Channels' tab is active, displaying a table of channel configurations. Channel 4 is selected, and its sensor type dropdown is open, showing a list of sensors. The sensor 'AiM 0-2000 PSI (X05PSA02000P18K)' is highlighted at the bottom of the list.

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	LatAcc	10 Hz	LatAcc	g .01	-3.00	3.00
LOG_TEMP	☒ Enabled	Datalogger_Temp	10 Hz	Datalogger_Temp	°C	0	50
BATT	☒ Enabled	Battery	1 Hz	Battery	V .1	5.0	15.0

The sensor type dropdown for Channel 4 is open, showing a list of sensors. The sensor 'AiM 0-2000 PSI (X05PSA02000P18K)' is highlighted at the bottom of the list.