

AiM InfoTech

AiM pressure sensor 0-300 PSI
Race Studio 2 configuration

Release 1.01



1

Introduction

Once AiM pressure sensor 0-300 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

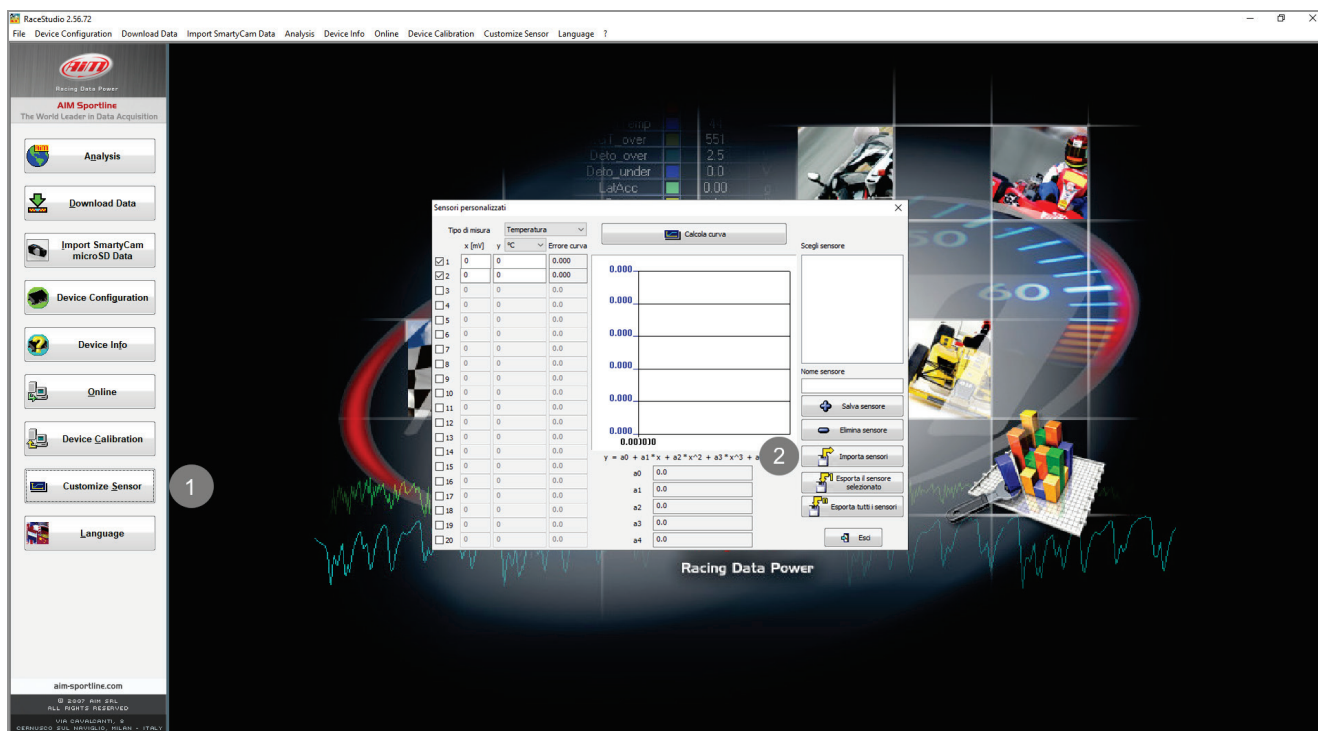
To obtain the sensor configuration file, enter the Products – Sensors (auto/moto) section of the AiM website www.aim-sportline.com, and click the link referred to the sensor you own (following image). Once the download is finished, save the file in a PC folder.

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	300

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-300 PSI (X05PSA00300P18K)" – and press "Save sensor" **(5)**; press "Exit" **(6)**

The screenshot shows the RaceStudio 2.56.72 software interface. The 'Customize sensor' dialog box is open, displaying a table for sensor data, a graph, and a list of sensor parameters. The table has columns for X [mV], Y [PSI], and Curve Error. The graph shows a linear relationship between X and Y. The sensor name is 'AiM 0-300 PSI (X05PSA00300P18K)'. The 'Compute Curve' button is highlighted with a red circle. The 'Save sensor' button is highlighted with a red circle. The 'Exit' button is highlighted with a red circle. The 'Customize sensor' button in the main menu is highlighted with a red circle.

Type of measure	Pressure	Unit	Curve Error
1	500	0	0.000
2	4500	300	0.000
3	0	0	0.0
4	0	0	0.0
5	0	0	0.0
6	0	0	0.0
7	0	0	0.0
8	0	0	0.0
9	0	0	0.0
10	0	0	0.0
11	0	0	0.0
12	0	0	0.0
13	0	0	0.0
14	0	0	0.0
15	0	0	0.0
16	0	0	0.0
17	0	0	0.0
18	0	0	0.0
19	0	0	0.0
20	0	0	0.0

Graph: Y = 0.0667X - 0.3333

Sensor name: AiM 0-300 PSI (X05PSA00300P18K)

Save sensor

Exit

4 Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-300 PSI (X05PSA00300P18K)" 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. The 'CH_4' channel is selected, and the sensor type 'AiM 0-300 PSI (X05PSA00300P18K)' is highlighted in the dropdown menu.

Channel identifier	Enabled/disabled	Channel name	Sampling frequency	Sensor type	Measure unit	Low scale	High scale
RPM	☒	Engine	10 Hz	Engine revolution speed	rpm	0	20000
SPD_1	☒	Speed_1	10 Hz	Speed	km/h -1	0.0	250.0
CH_1	☒	Channel_1	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_2	☒	Channel_2	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_3	☒	Channel_3	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_4	☒	Channel_4	10 Hz	Generic linear 0-5 V	V -1	0.0	5.0
CH_5	☒	Channel_5	10 Hz	AiM Lambda LCU-ONE (0.65 - 1.6 (lambda)	V -1	0.0	5.0
CH_6	☒	Channel_6	10 Hz	MSI 0-2000 PSI sensor	V -1	0.0	5.0
CH_7	☒	Channel_7	10 Hz	Fuel level	V -1	0.0	5.0
CH_8	☒	Channel_8	10 Hz	AVICORACE SP35 Pressure sensor	V -1	0.0	5.0
CALC_GEAR	☒	Calculated_Gear	10 Hz	AEM 30 PSI INHg/PSI Press sensor	#	0	9
ACC_1	☒	LatAcc	10 Hz	Kavlico 50 PSI Press sensor	g .01	-3.00	3.00
LOG_TMP	☒	Datalogger_Temp	10 Hz	GM 3 Bar Map sensor	°C	0	50
BATT	☒	Battery	1 Hz	Delphi IAT #2558751 Temp sensor	V -1	5.0	15.0

The dropdown menu for the 'CH_4' channel shows the following options:

- AiM 0-10 bar (X05PSA00010B10)
- AiM 0-5 bar (X05PSA0005B30)
- AiM 0-10 bar (X05PSA00010B38)
- AiM 0-50 PSI (X05PSA00050P18)
- AiM 0-100 bar (X05PSA00100B10)
- AiM 0-100 bar (X05PSA00100B38)
- AiM 0-150 PSI (X05PSA00150P18)
- AiM 0-160 bar (X05PSA00160B10)
- AiM 0-300 PSI (X05PSA00300P18K)**