

AiM Infotech

AiM pressure sensor 0-10 bar
Race Studio 2 configuration

Release 1.01



1

Introduction

Once AiM pressure sensor 0-10 bar is physically connected to one of the device 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.

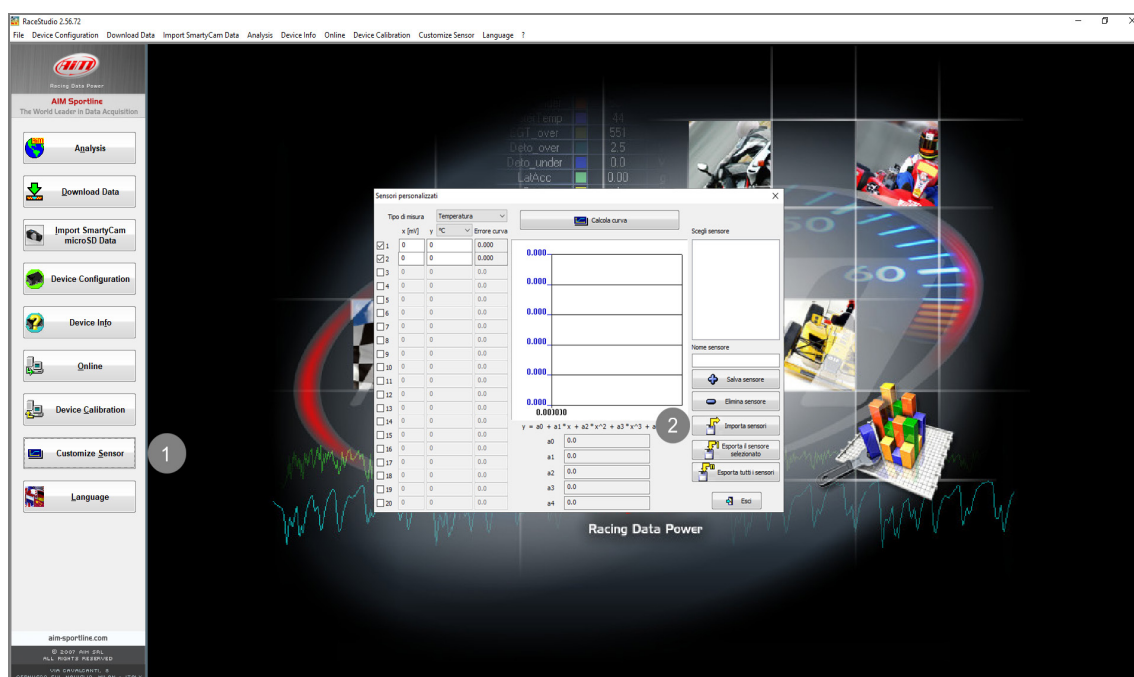
2

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	3/8 24	X05PSA00010B10		Datasheet	RS3 conf	RS2 conf	SCF*
Pressure sensor 0-100 bar	M10	X05PSA00100B10		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 (bar) **(2)**
- complete the first two rows of the table on the left as follows **(3)**:

X [mV]	Y [bar]
500	0
4500	10

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-10 bar (X05PSA00010B10)" – and press "Save sensor" **(5)**; press "Exit" **(6)**

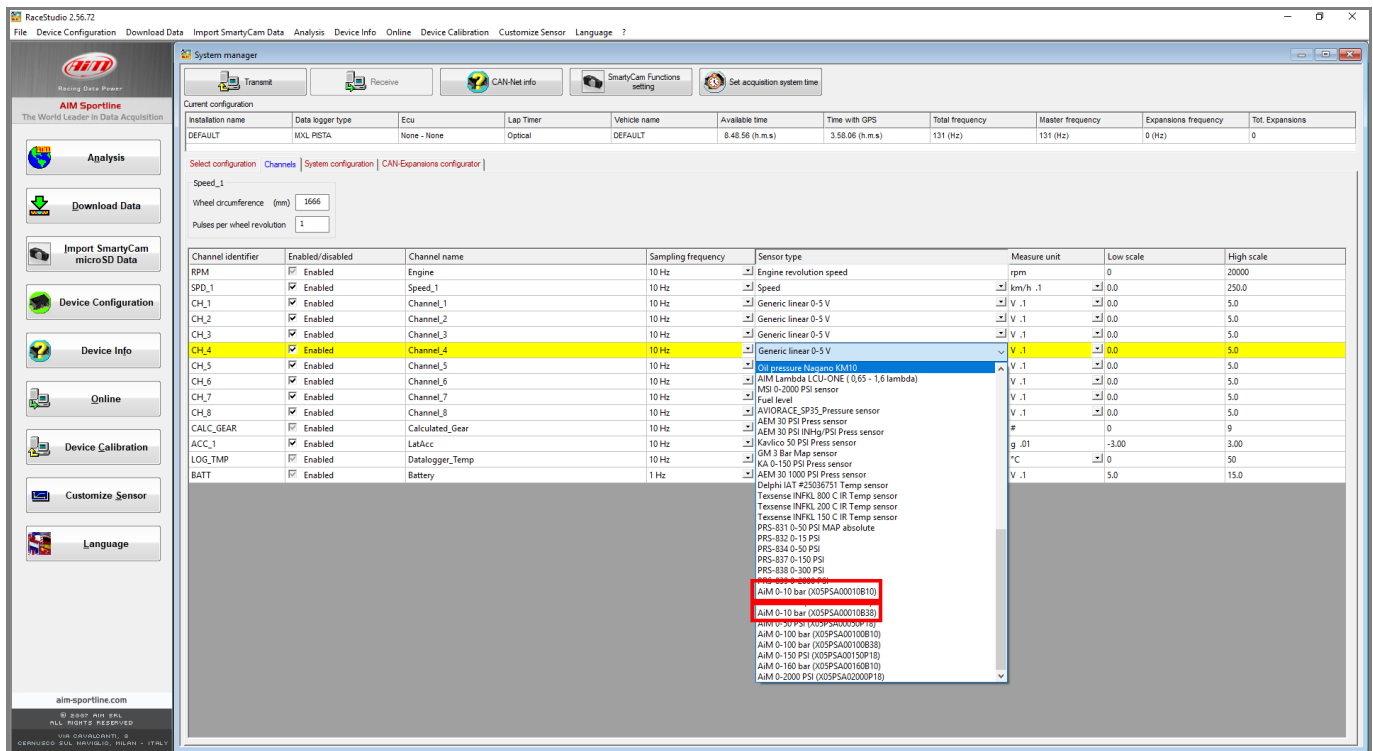
The screenshot shows the 'Customize sensor' dialog box in the RaceStudio 2.56.72 software. The dialog box has a 'Type of measure' dropdown set to 'Pressure' and a 'Unit' dropdown set to 'bar'. Below these, there is a table with two columns: 'X [mV]' and 'Y [bar]'. The first two rows of the table are filled with the values 500, 0 and 4500, 10 respectively. To the right of the table is a 'Compute Curve' button. Below the table, there is a graph showing a linear relationship between X and Y. To the right of the graph is a 'Sensor name' field containing the text 'AiM 0-10 bar (X05PSA00010B10)'. Below the sensor name field are buttons for 'Save sensor', 'Delete sensor', 'Import sensors', 'Export selected sensor', and 'Export all sensor'. At the bottom right of the dialog box is an 'Exit' button. The background of the software interface shows a racing car and a speedometer.

4

Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-10 bar (X05PSA00010B10)", "AiM 0-10 bar (X05PSA00010B18)" or "AiM 0-10 bar (X05PSA00010B38)" 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 'System manager' window is open, and the 'Channels' tab is selected. The table below lists the configured channels:

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	0.0	250.0
CH_1	Enabled	Channel_1	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_2	Enabled	Channel_2	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_3	Enabled	Channel_3	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_4	Enabled	Channel_4	10 Hz	Generic linear 0-5 V	V	0.0	5.0
CH_5	Enabled	Channel_5	10 Hz	Oil pressure Nagano KM10	V	0.0	5.0
CH_6	Enabled	Channel_6	10 Hz	AIM Lambda LCU-ONE (0.65 - 1.6 lambda)	V	0.0	5.0
CH_7	Enabled	Channel_7	10 Hz	MSI 0-2000 PSI sensor	V	0.0	5.0
CH_8	Enabled	Channel_8	10 Hz	Fuel level	V	0.0	5.0
CALC_GEAR	Enabled	Calculated_Gear	10 Hz	AVTORACE_SF35 Pressure sensor	#	0	9
ACC_1	Enabled	LatAcc	10 Hz	AEM 30 PSI Press sensor	g	-3.00	3.00
LOG_TEMP	Enabled	Datalogger_Temp	10 Hz	Kavlico 50 PSI Press sensor	°C	0	50
BATT	Enabled	Battery	1 Hz	GM 3 Bar Map sensor	V	0	15.0

The dropdown menu for Channel 4 shows the following sensor options:

- AiM 0-10 bar (X05PSA00010B10)
- AiM 0-10 bar (X05PSA00010B18)
- AiM 0-10 bar (X05PSA00010B38)
- AiM 0-30 PSI (X05PSA00010B18)
- AiM 0-100 bar (X05PSA00010B10)
- AiM 0-100 bar (X05PSA00010B38)
- AiM 0-150 PSI (X05PSA00010B18)
- AiM 0-160 bar (X05PSA00010B10)
- AiM 0-2000 PSI (X05PSA00010B18)