

AiM InfoTech

AiM pressure sensor
0-50 PSI absolute
Race Studio 2 configuration

Release 1.01



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Introduction

Once AiM pressure sensor 0-50 PSI absolute 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.

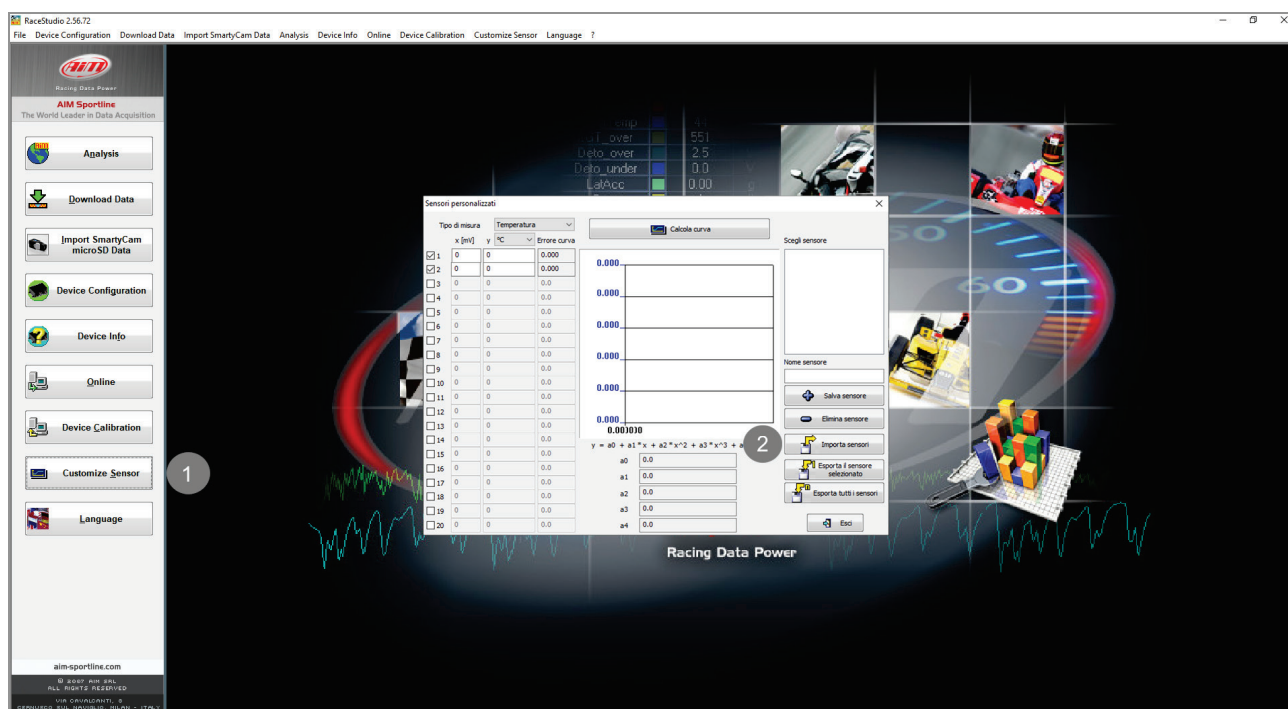
2 SCF* file import

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.



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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	-14.5
4500	35.5

- press "Compute curve" **(4)**, fill in sensor name - in the example "AiM 0-50 PSI abs (X05PSA00050P18AK)" – and press "Save sensor" **(5)**; press "Exit" **(6)**

The screenshot shows the 'Sensors personalizzati' window in RaceStudio 2.56.78. The window is divided into several sections:

- Table:** A table with columns 'Tipo di misura', 'x [mV]', 'y [PSI]', and 'Errore curva'. The first two rows are filled with data: (500, -14.5) and (4500, 35.5).
- Graph:** A graph showing the calibration curve. The x-axis ranges from 500 to 4500 mV, and the y-axis ranges from -14.5 to 35.5 PSI. A red line represents the curve.
- Sidebar:** A sidebar on the left contains buttons for 'Analisi', 'Scarico dati', 'Importa dati da microSD SmartyCam', 'Configurazione dispositivo', 'Informazioni Dispositivo', 'Online', 'Calibrazione dispositivo', 'Sensori personalizzati', and 'Lingua'. The 'Sensori personalizzati' button is highlighted with a red circle and the number 1.
- Buttons:** The 'Calcola curva' button is highlighted with a red circle and the number 4. The 'Salva sensore' button is highlighted with a red circle and the number 5. The 'Esci' button is highlighted with a red circle and the number 6.

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Analog channel configuration

To set the sensor in the device configuration:

- enter "Channels" tab
- set the sensor on a channel selecting "AiM 0-50 PSI abs (X05PSA00050P18AK)" in sensor type column of the desired channel and transmit the configuration to the device.

System manager

Configurazione selezionata

Nome installazione	Tipo centralina	Ecu	Lap Timer	Nome veicolo	Tempo disponibile	Tempo con GPS	Frequenza totale	Frequenza master	Frequenza espansioni	Tot. Espansioni
DEFAULT	MXL PISTA	None - None	Optico	DEFAULT	5.44.43 (h.m.s)	3.11.56 (h.m.s)	201 (Hz)	121 (Hz)	80 (Hz)	2

Scegli configurazione: Caruli | Configurazione sistema | Configurazione espansioni via CAN

Speed_1

Oriconferenza ruota (mm) 1666

Impulsi per giro ruota 1

ID	Abil.	Nome canale	Freq.	Sensore usato	Unità	Inizioscala	Fondoscala
RPM	☒	Engine	10 Hz	Giri motore	rpm	0	20000
SPD_1	☒	Speed_1	10 Hz	Velocità	km/h	0.0	250.0
CH_1	☒	Channel_1	10 Hz	Generico lineare 0-5 V	V	0.0	5.0
CH_2	☒	Channel_2	10 Hz	Generico lineare 0-5 V	V	0.0	5.0
CH_3	☒	Channel_3	10 Hz	Generico lineare 0-5 V	V	0.0	5.0
CH_4	☒	Channel_4	10 Hz	Generico lineare 0-5 V	V	0.0	5.0
CH_5	☒	Channel_5	10 Hz	Fork	V	0.0	5.0
CH_6	☒	Channel_6	10 Hz	pressione freno ant	V	0.0	5.0
CH_7	☒	Channel_7	10 Hz	pressione freno 0-100	V	0.0	5.0
CH_8	☒	Channel_8	10 Hz	pressione freno 0-150	V	0.0	5.0
CALC_GEAR	☐	Calculated_Gear	10 Hz	pressione freno 0-200	V	0.0	5.0
ACC_1	☒	LatAcc	10 Hz	pressione freno 0-50	#	0	9
LOG_TMP	☒	Datalogger_Temp	10 Hz	AiM 0-100 bar (X05SNP31100R)	g	-3.00	3.00
BATT	☒	Battery	1 Hz	AiM 0-5 bar abs (X05PSA00050P18AK)	°C	0	50
				Damper_F	V	5.0	15.0
				Damper_R			
				PRS-839 2K			
				Porsche VDO 0-5 Bar			
				Delco 3 Bar MAP			
				Bosch High Speed Air Temp			
				MM 594 LF RH			
				MM 594 RF RH			
				MM 594 LR RH			
				MM 594 RR RH			
				Black Diamond 2K Brake Pressure			
				RG Airbox 1 Bar			
				IM AERO 4			
				RG Ultrasonic			
				RG Ultrasonic Right			
				RG Ultrasonic Left			
				Boost1			
				Unknown_D11			
				AiM 0-5 bar abs (X05PSA00050P18AK)			
				AiM 0-5 bar abs (X05PSA00050P18AK)			
				AiM 0-50 PSI abs (X05PSA00050P18AK)			