

AiM Infotech

Pressure sensor  
0-100 bar/0-1450 PSI  
Race Studio 2 configuration

Release 1.00

---



# 1 Introduction

Once pressure sensor 0-100 bar is physically connected to one of the channels of AiM device it has to be loaded in the related configuration using AiM configuration software. In this datasheet it is loaded using **Race Studio 2** software.

## 2 Setup with Race Studio 2

- with the device switched on and connected to the PC run the software and select the logger the sensor is connected to; create a custom sensor pressing "Customize sensor" (1)
- select the type of measure (Pressure) and the unit of measure (bar) (2)
- complete the first two rows of the table on the left as follows (3):

X [Mv]	Y [Bar]
1000	0
5000	100

- press "Compute curve" (4), fill in sensor name – in the example AiM 0-100 bar (X05SNP31100R) – and press "Save sensor" (5); press "Exit" (6)

The screenshot shows the 'Customize sensor' dialog box in RaceStudio 2.55.34. The dialog box contains a table for sensor calibration points, a graph showing a linear curve, and fields for sensor name and unit. Red boxes and numbers 1-6 highlight key steps:

- 1: 'Customize Sensor' button in the main interface.
- 2: 'Type of measure' (Pressure) and 'Unit' (bar) dropdowns.
- 3: The calibration table with the following data:
 

x (mV)	y (bar)	Curve Error
1000	0	0.000
5000	100	0.000
- 4: 'Compute Curve' button.
- 5: 'Save sensor' button.
- 6: 'Exit' button.

To set the sensor in the logger configuration:

- enter "Channels" layer
- set the sensor on a channel selecting "AiM 0-100 bar (X05SNP31100R)" in sensor type column of the desired channel (in the example CAN channel 3)
- press "Transmit"

The screenshot shows the RaceStudio 2.55.34 interface. The 'Channels' configuration window is open, displaying a list of channels. Channel 3 is highlighted in yellow, and its sensor type is set to 'AiM 0-100 bar (X05SNP31100R)'. The 'Transmit' button in the top navigation bar is highlighted with a red box.

Channel identifier	Enabled/disabled	Channel name	Sampling frequency	Sensor type	Measure unit	Low scale	High scale
RPM	<input type="checkbox"/> Disabled	Engine	10 Hz	Engine revolution speed	rpm	0	20000
SPD_1	<input checked="" type="checkbox"/> Enabled	Speed1	10 Hz	Speed	km/h 1	0.0	250.0
SPD_2	<input checked="" type="checkbox"/> Enabled	Speed2	10 Hz	Speed	km/h 1	0.0	250.0
CH_1	<input checked="" type="checkbox"/> Enabled	Channel_1	10 Hz	Generic linear 0-5 V	V 1	0.0	5.0
CH_2	<input checked="" type="checkbox"/> Enabled	Channel_2	10 Hz	Generic linear 0-5 V	V 1	0.0	5.0
CH_3	<input checked="" type="checkbox"/> Enabled	Channel_3	10 Hz	AiM 0-100 bar (X05SNP31100R)	bar	0	5
CH_4	<input checked="" type="checkbox"/> Enabled	Channel_4	10 Hz	AiM 0-10 bar (X05SNP31010R)	bar	0	5
CH_5	<input checked="" type="checkbox"/> Enabled	Channel_5	10 Hz	AiM 0-4 bar (X05SNP31004A)	bar	0	5
CALC_GEAR	<input type="checkbox"/> Disabled	Calculated_Gear	10 Hz	Calculated Gear	#	0	9
ACC_1	<input checked="" type="checkbox"/> Enabled	Lateral_acc	10 Hz	Lateral accelerometer	g 01	-3.00	3.00
ACC_2	<input type="checkbox"/> Disabled	Longitudinal_acc	10 Hz	Longitudinal accelerometer	g 01	-3.00	3.00
ACC_3	<input checked="" type="checkbox"/> Enabled	Vertical_acc	10 Hz	Vertical internal accelerometer	g 01	-3.00	3.00
LOG_TMP	<input checked="" type="checkbox"/> Enabled	Datalogger_Temp	10 Hz	Cold joint	°C	0	50
BATT	<input checked="" type="checkbox"/> Enabled	Battery	1 Hz	Battery	V 1	5.0	15.0
ECU_1	<input checked="" type="checkbox"/> Enabled	ECU_RPM	10 Hz	Engine speed sensor	rpm	0	10000
ECU_2	<input checked="" type="checkbox"/> Enabled	ECU_MMAN_AIR_PR	10 Hz	Pressure sensor	kPa 1	0.0	200.0
ECU_3	<input checked="" type="checkbox"/> Enabled	ECU_ENG_TMP	10 Hz	Temperature sensor	°C	20	130
ECU_4	<input checked="" type="checkbox"/> Enabled	ECU_ENG_IN_T	10 Hz	Temperature sensor	°C	10	90
ECU_5	<input checked="" type="checkbox"/> Enabled	ECU_THROTTLE1	10 Hz	Percentage sensor	% 1	0.0	100.0
ECU_6	<input checked="" type="checkbox"/> Enabled	ECU_CHARGE_T	10 Hz	Temperature sensor	°C	10	90
ECU_7	<input checked="" type="checkbox"/> Enabled	ECU_GEAR	5 Hz	Gear sensor	#	0	7
ECU_8	<input checked="" type="checkbox"/> Enabled	ECU_V_BATT	10 Hz	Voltmeter	V 1	5.0	20.0
ECU_9	<input checked="" type="checkbox"/> Enabled	ECU_OIL_PR	10 Hz	Pressure sensor	kPa 1	0.0	1000.0
ECU_10	<input checked="" type="checkbox"/> Enabled	ECU_OIL_TMP	10 Hz	Temperature sensor	°C	10	150
ECU_11	<input checked="" type="checkbox"/> Enabled	ECU_FUEL_PR	10 Hz	Pressure sensor	kPa 1	0.0	1000.0
ECU_12	<input checked="" type="checkbox"/> Enabled	ECU_FUEL_TMP	10 Hz	Temperature sensor	°C	10	90
ECU_13	<input checked="" type="checkbox"/> Enabled	ECU_EXH_PRE	10 Hz	Pressure sensor	kPa 1	20.0	100.0
ECU_14	<input checked="" type="checkbox"/> Enabled	ECU_EXH_PRE	10 Hz	Pressure sensor	kPa 1	20.0	100.0