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AiM Infotech

AiM pressure sensor 0-5 bar

Release 1.00





AiM Manuale Utente

Car/Bike Tire temperature sensor Race Studio3 configuration

Release 1.00







1 Introduction

Once the tire temperature sensor in 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 3** software.

2 Setup with Race Studio 3

- With the device switched on and connected to the PC run the software and select the device the sensor is connected to;
- select the configuration the sensor is to be loaded on or create a new one pressing "NEW" and select "Channels" layer as here below;
- select the channel where to set the sensor (in the example below channel01) and click on the related cell of "Sensor" column:

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M	(S 02 ×				_							
Sa	re	Save As	Close	Transmit								
hann	els EC	U Stream	CAN2 Stream	am Math Channels Parameters Shift Lights and Alarms Display SmartyCam Stream CAN Expansions CAN Output								
				ID		Name	Function	Sensor	Unit	Freq		
				RPM		RPM	RPM	RPM Sensor	rpm	20 Hz		
				Spd1	\checkmark	Speed1	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz	ĺ	
				Spd2	\checkmark	Speed2	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz		
				Spd3		Speed3	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz		
				Spd4		Speed4	Vehicle Spd	Speed Sensor	km/h 0.1	20 Hz		
				Ch01		Channel01	Voltage	Generic 0-5 V	Wm	20 Hz		
				Ch02		Channel02	Voltage	Generic 0-5 V	vm	20 Hz		
				Ch03	\checkmark	Channel03	Voltage	Generic 0-5 V	mV	20 Hz		
				Ch04	$\mathbf{\mathbf{\nabla}}$	Channel04	Voltage	Generic 0-5 V	m¥	20 Hz		
				Ch05		Channel05	Voltage	Generic 0-5 V	Wm	20 Hz		
				Ch05		Channel06	Voltage	Generic 0-5 V	mV	1000 Hz		
				Ch07		Channel07	Voltage	Generic 0-5 V	mV	1000 Hz		
				Ch08	\checkmark	Channel08	Voltage	Generic 0-5 V	۳V	1000 Hz		
				AccX	\checkmark	AccelerometerX	Inline Accel	AiM Internal Accelerometer	g 0.01	50 Hz		
				AccY	\checkmark	AccelerometerY	Lateral Accel	AiM Internal Accelerometer	g 0.01	50 Hz.		
				AccZ		AccelerometerZ	Vertical Accel	AiM Internal Accelerometer	g 0.01	50 Hz		
				GyrX	\checkmark	GyroX	Roll Rate	AiM Internal Gyro	deg/s 0.1	50 Hz		
				GyrY	\checkmark	GyroY	Pitch Rate	AiM Internal Gyro	deg/s 0.1	50 Hz		
				GyrZ	\checkmark	GyroZ	Yaw Rate	AiM Internal Gyro	deg/s 0.1	50 Hz	11	
				Accu	☑	GPS Accuracy	GPS Accuracy	AM GPS	mm	10 Hz		
				Spd	\checkmark	GPS Speed	Vehicle Spd	AIM GPS	km/h 0.1	10 Hz		
				Alt	\checkmark	Altitude	Altitude	AIM GPS	m	10 Hz		
				OdD.		Odometer	Odometer Total	AM ODO	km 0 1	1 H7		





- a configuration panel shows up
- select: "Temperature" function as well as the kind of temperature to sample (1) among:
 - o Water Temp
 - o Exhaust Temp
 - o Oil Temp
 - o Head Temp
 - Temperature (generic temperature as in the example)
- select the sensor "AiM INFKL -20+120 C (X05TTS01B0)" (2)
- press "Save" (3)
- press "Transmit" (4)

RaceStudio3 3.13.00								
* 1 * * 3	HB 6	53						?
All MXS ×	4							
Save Save As Close	Transmit							
Channels ECU Stream CAN2 Stream	Math Channe	Is Parameters Shift Light	ts and Alarms Display Smar	tyCam Stream CAN Expe	ansions CAN	Output		
	iD	Name Name	Function	Sensor	Unit	Freq	Parameters	
	RPM	RPM	RPM	RPM Sensor	rpm	20 Hz	max: 16000 ; factor: /1 ;	ń
	Spd1	Speed1	Vehicle Spd	Speed Sensor	mph 0.1	20 Hz	wheel: 40; pulses: 1;	
	Spd2	Speed2	V Channel Settings			Hz.	wheel: 40; pulses: 1;	
	Spd3	Speed3	V Name	Channel01		-12	wheel: 40 ; pulses: 1 ;	
	Spd4	Speed4	V Function	Temperature		+IZ	wheel: 40; pulses: 1;	
	Ch01	Channel01		free contractions and a second		L.		
	Ch02	Channel02	v Sensor (2	AM INFKL -20+120 C (X		÷ +z		
	Ch03	Channel03	V Sampling Frequency	20 Hz	C.	+z		
	Ch04	Channel04	y, Unit of Measure	F		÷ 12		
	Ch05	Channel05	v. Display Precision	1 decimal place	1	¢ 42		
	Ch06	Channel06	V.			-12		至
	Ch07	Channel07	v			-12		
	Ch08	Channel08	v			-tz		
	AccX	AccelerometerX	In		2	-12		
	AccY	AccelerometerY	L	3 Save	Cancel	+12		
	AccZ	AccelerometerZ	Vertical Accel	AM Internal Accelerometer	9 0.01	50 Hz		
	GyrX	GyroX	Roll Rate	AIM Internal Gyro	deg/s 0.1	50 Hz		
	Gyr¥	GyroY	Pitch Rate	AiM Internal Gyro	deg/s 0.1	50 Hz		
	GyrZ	GyroZ	Yaw Rate	AiM Internal Gyro	deg/s 0.1	50 Hz		
	Асси	GPS Accuracy	GPS Accuracy	AM GPS	mm	10 Hz		
	Spd	GPS Speed	Vehicle Spd	AIM GPS	mph 0.1	10 Hz		
	a discontraction of the local discontraction of the	Altitude	Altitude	AIM GPS	m	10 Hz		
	OdD.	Odometer 0	Odometer Total	AM ODO	km 0 1	1 H7		•

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Introduction

This datasheet explains how to use AiM 0-5 bar pressure sensor. The sensor **part number** is:

Pressure sensor •

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0-5 bar M10 Pressure sensor 0-5 bar 3/8 24 X05PSA00005B10 X05PSA00005B38

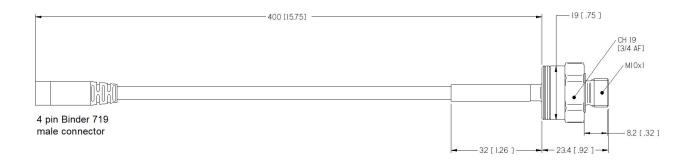
This sensor fits the measurement of oil and fuel pressure and needs a careful installation. This is why AiM suggest to address to a specialized workshop.



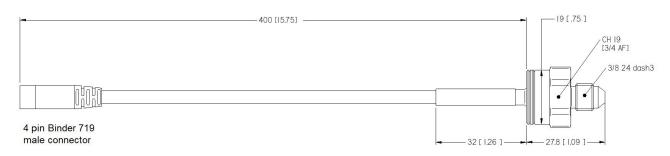
2 Dimensions, pinout and technical characteristics

The drawing here below shows sensors dimensions in millimetres [inches].

0-5 bar M10

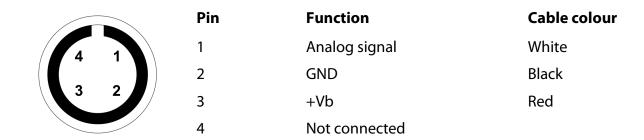


0-5 bar 3/8 24





The sensor ends with a 4 pins Binder 719 male connector. The image below shows the connector pinout from solder termination side.



The table here below shows the sensor electrical characteristics.

Technical characteristics	Value
Supply	8-16 V
Accuracy	< +/- 0.5% FS (CLNH – combined non-linearity and hysteresis)
Output signal	from 0.5 V to 4.5 V
Characterisation	500 mV/ 0 bar 4500 mV/ 5 bar
Consumption	< 10 mA
Temperature working range	from -20°C to 135°C
Sealing	IP66
Housing	316 stainless steel
Weight	30 g
Cable length	400 mm
Thread	M10 – 3/8 24

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3 Extension cables

The sensor is sold with a 40 cm cable. Standard length extension cables are available, whose part number changes according to their length and to the product the sensor is to be connected to.

Extension cable for connection to:

- MXG/MXG 1.2/MXG 1.2 Strada
- MXS/MXS 1.2/MXS Strada/MXS 1.2 Strada
- MXP/MXP Strada
- MXL2
- MXm
- EVO5
- MXL Strada/Pista/Pro05

Part numbers:

V02PCB05B - cable length: 500mm V02PCB10B - cable length: 1000mm V02PCB15B - cable length: 1500mm V02PCB20B - cable length: 2000mm V02PCB25B - cable length: 2500mm V02PCB30B - cable length: 3000mm

Extension cable for connection to:

- Channel Expansion
- EVO4
- EVO4S

Part numbers:

V02PCB05BTXG - cable length: 500mm V02PCB10BTXG - cable length: 1000mm V02PCB15BTXG - cable length: 1500mm V02PCB20BTXG - cable length: 2000mm V02PCB25BTXG - cable length: 2500mm V02PCB30BTXG - cable length: 3000mm



