

# AiM User manual

## Tire temperature sensors kit for kart

Release 1.04

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KIT





# 1

## Introduction

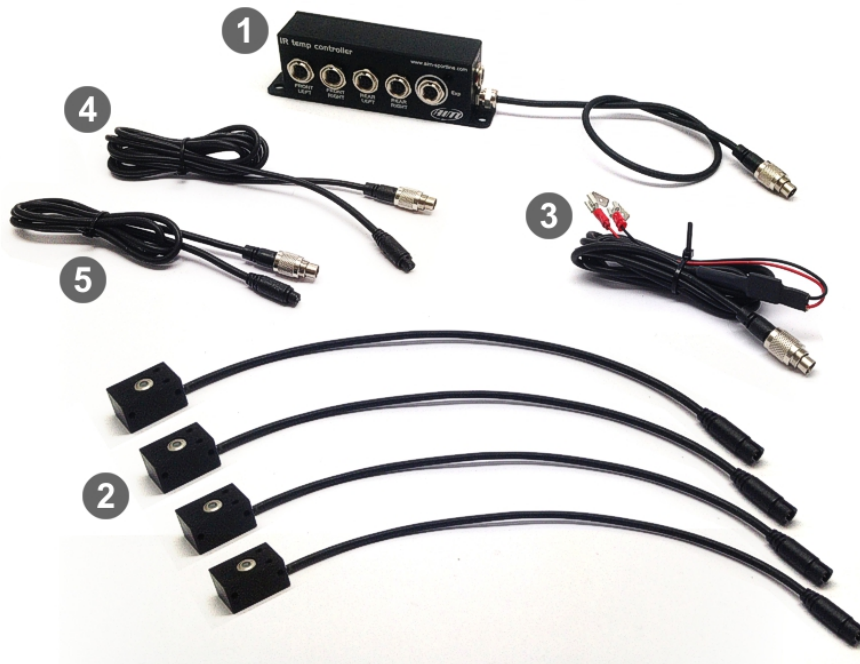
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This user guide explains how to install the Tire temperature sensors kit for kart and view sampled data on the display of MyChron5 (from firmware version 01.22.98).

MyChron5/MyChron5 – 2T can measure the Tire temperature connecting via CAN to the Infrared (IR) temperature controller device properly designed and developed by AiM; it supports up to four temperature sensors directly connected to the measure points.

## 2 Part numbers

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The part number of the Tire temperature sensors kit for kart installations is: **X08TTK014120**. The kit includes:

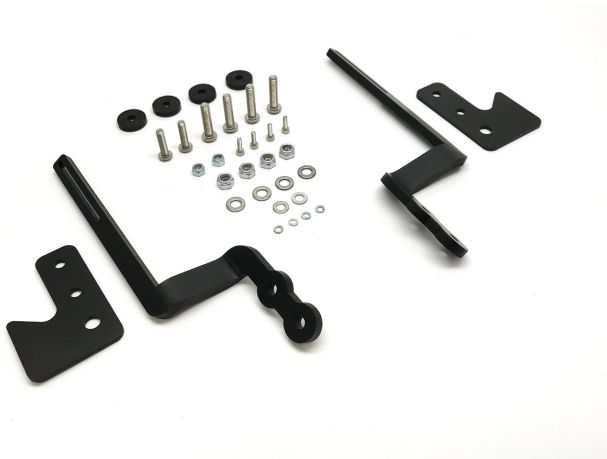
- IR (infrared) temperature controller (1)
- 4 Tire temperature sensors (2)
- external power cable (3)
- 2 – 2m extension cables (4)
- 2 – 1m extension cables (5)

Each item can be bought separately as spare part with these part numbers:

- |  |                     |
|--|---------------------|
| • Tire temperature sensor              | <b>X05TTS01B0</b>   |
| • IR (infrared) temperature controller | <b>XSMIRTEMP00</b>  |
| • external power cable                 | <b>V02551200</b>    |
| • 1m extension cable                   | <b>V02PCB10BTXG</b> |
| • 2 m extension cable                  | <b>V02PCB20BTXG</b> |



Optional brackets are also available. They are shown here below: rear brackets on the left and front brackets on the right. The part number of the all kit is: **X90KSTTS0**



### 3

## Installation and connection

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Install the sensor far from strong heat sources – like the exhaust gas pipe – and from electromagnetic interferences sources as well.

The images below show the temperature sensors correctly installed. In the following pages you see mounting schemes of the four brackets and their sensors.

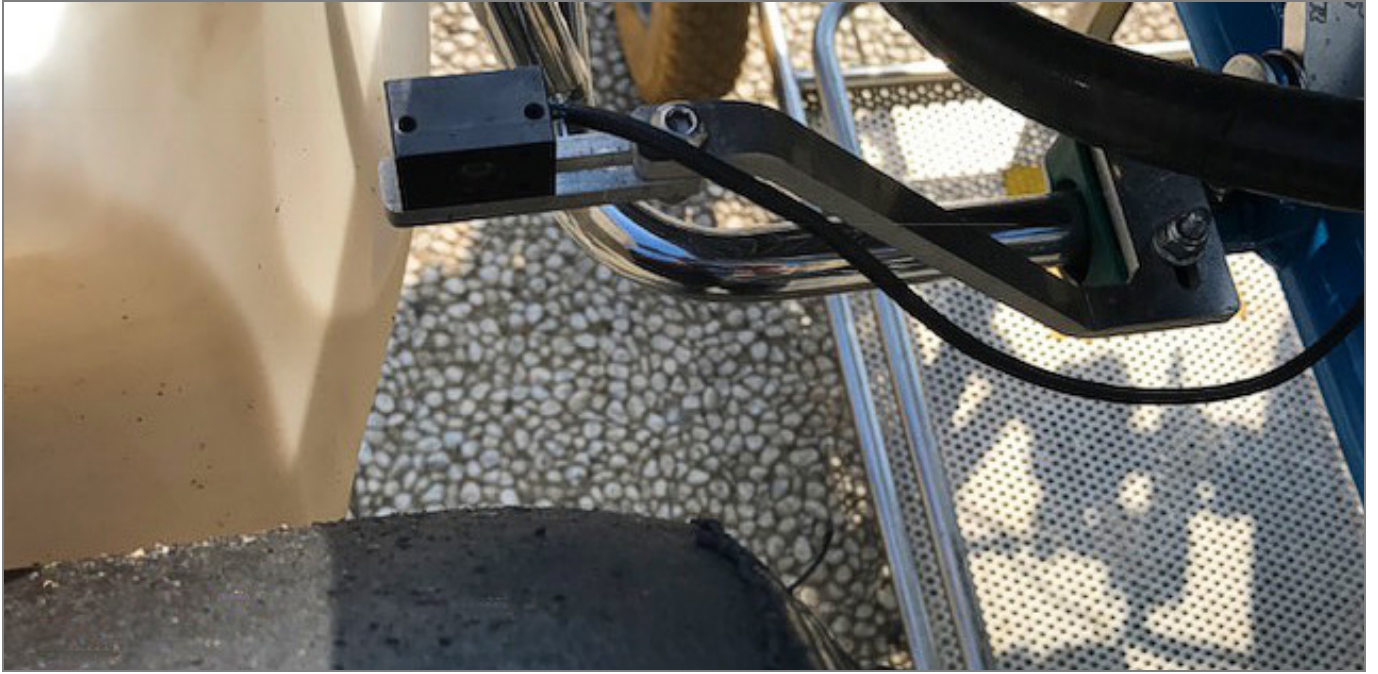
Front right



Front left



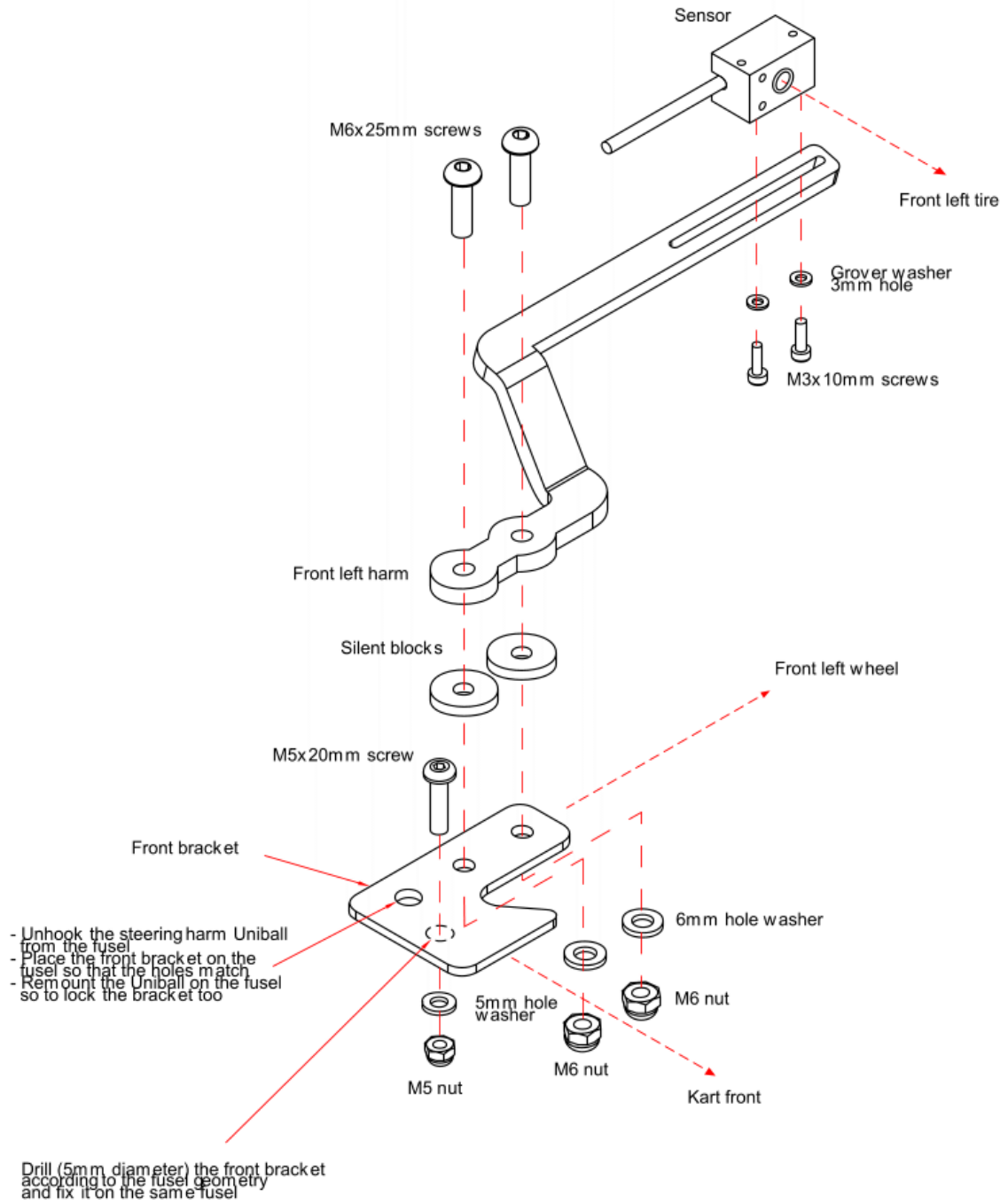
Rear left



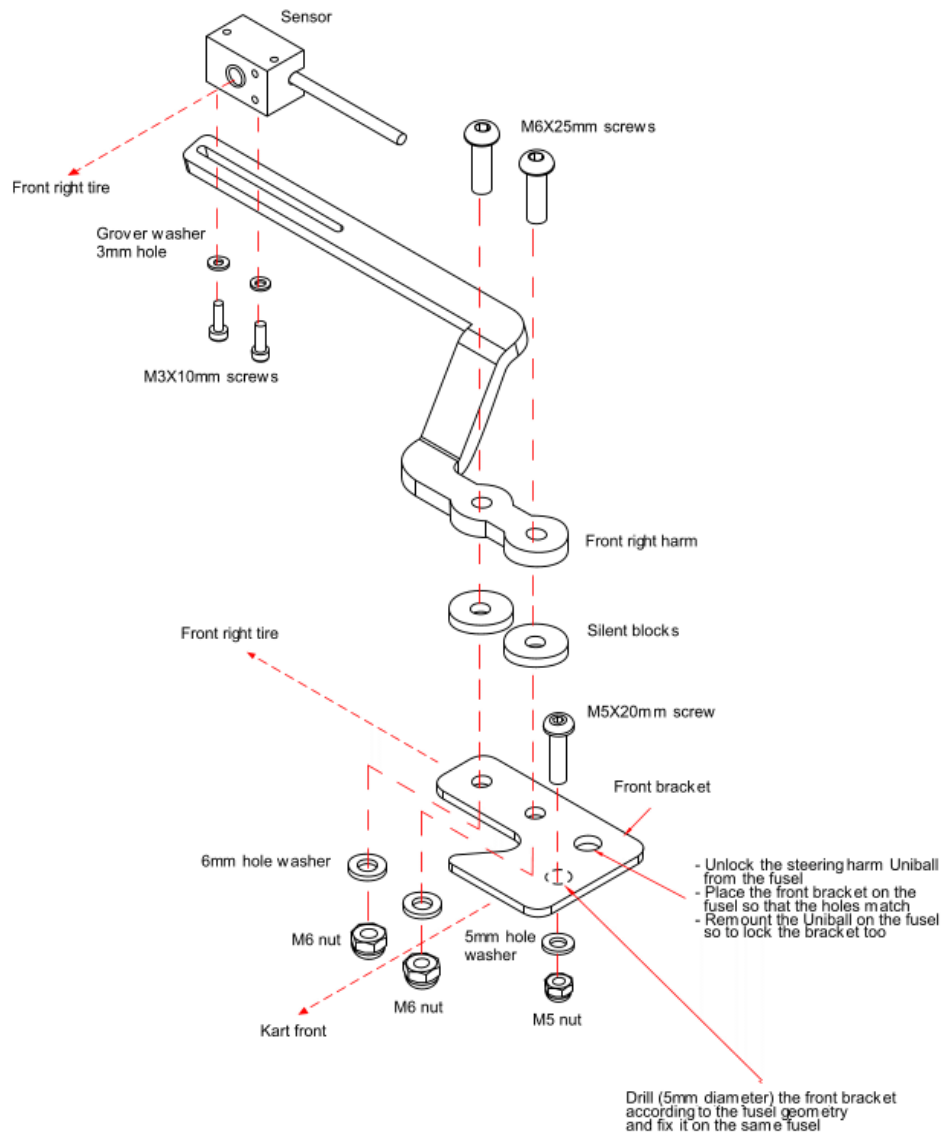
Rear right



Mounting of brackets for infrared tire temperature sensor - front left tire

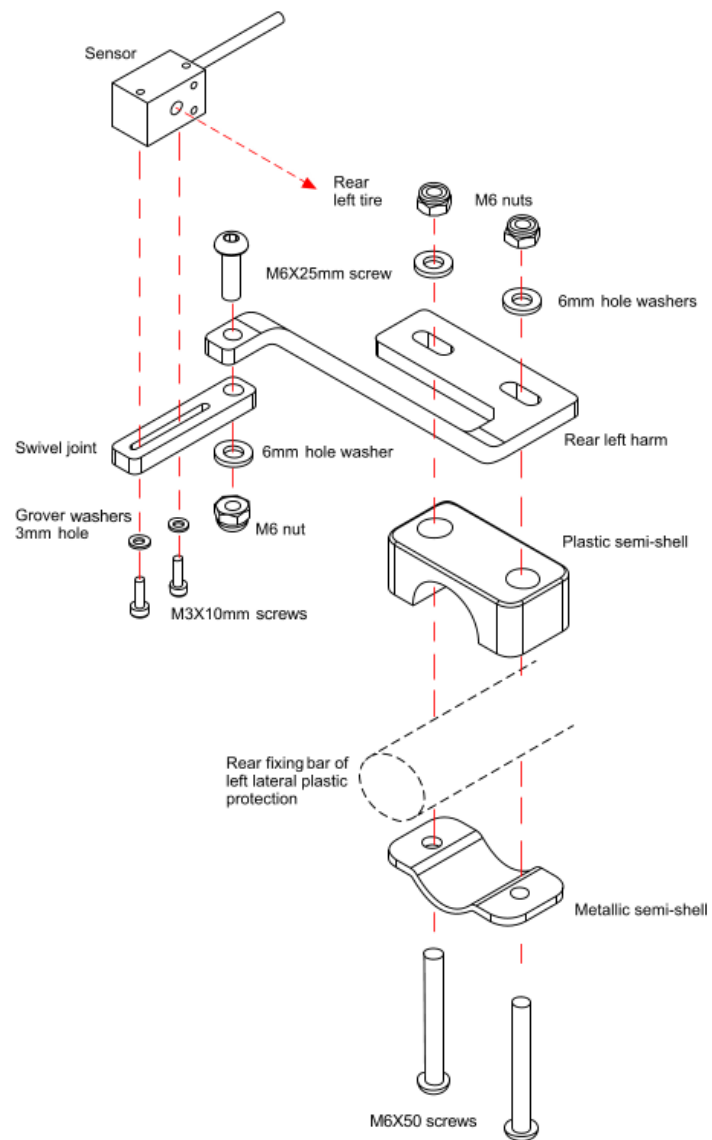


Mounting of bracket for infrared tire temperature sensor - front right tire

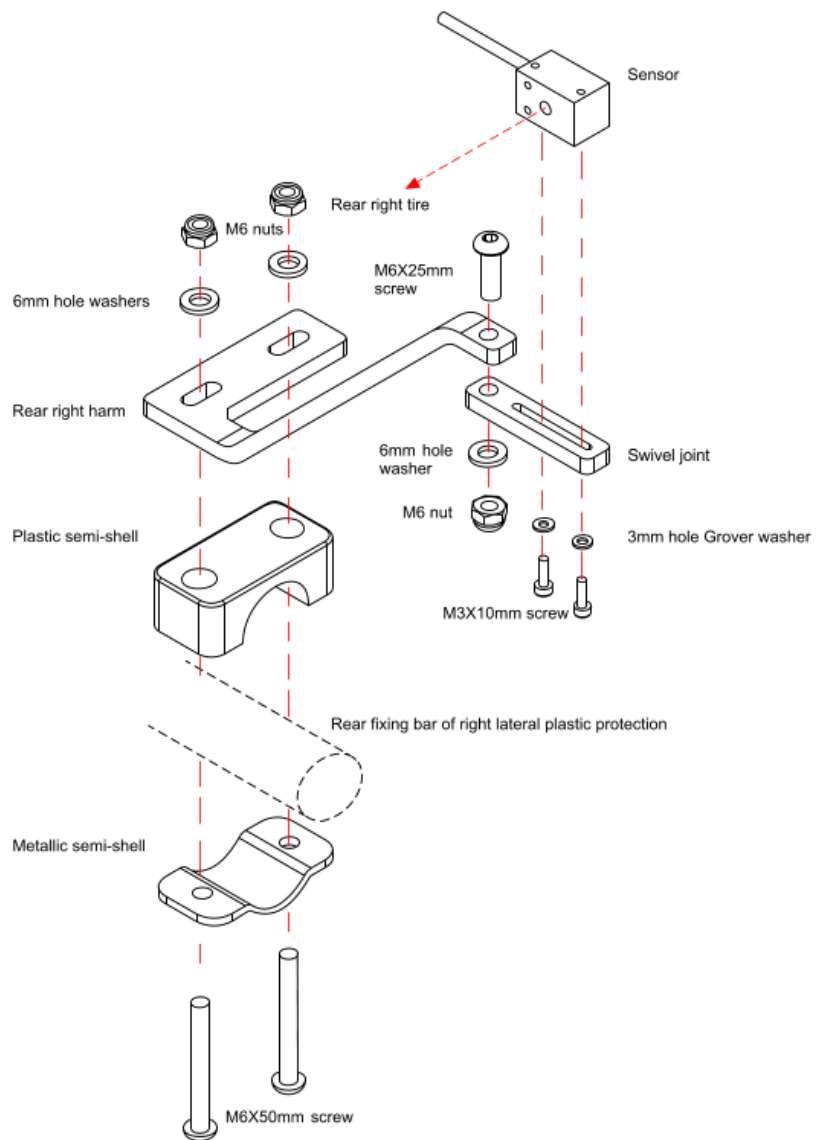




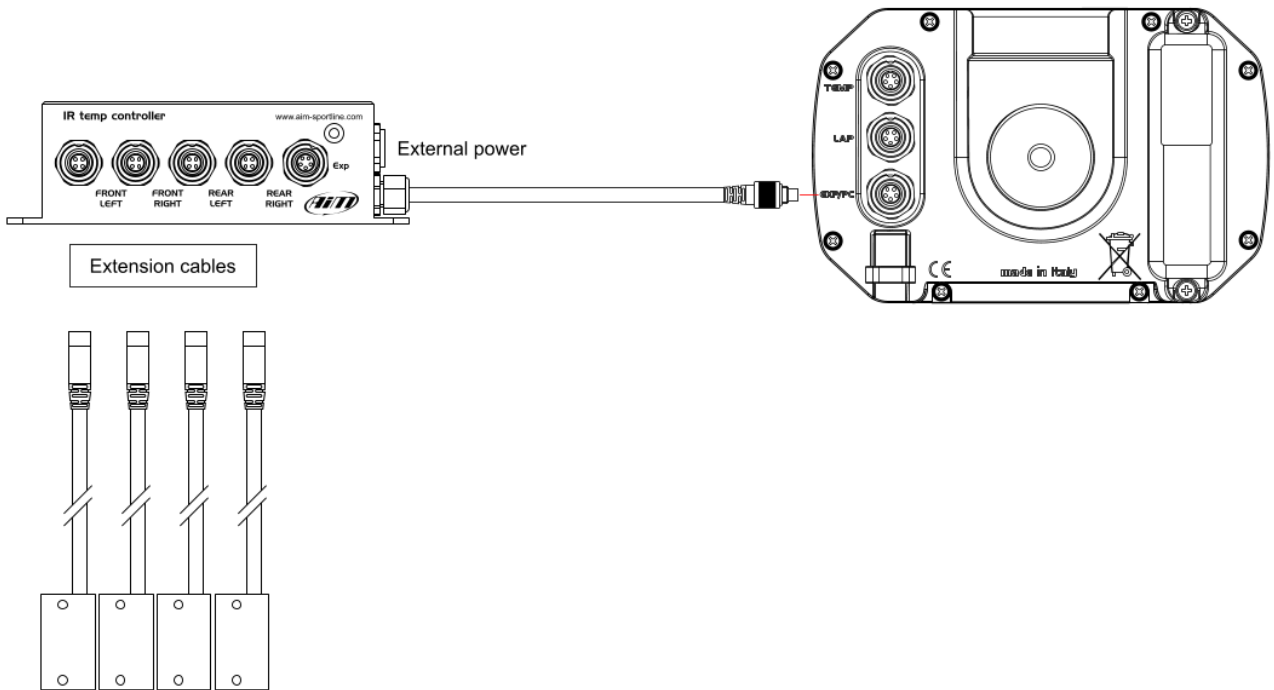
Mounting of brackets for infrared tire temperature sensor - rear left tire



Mounting of brackets for infrared tire temperature sensor - rear right tire



Here below is a scheme of Tire temperature sensors kit and MyChron5.



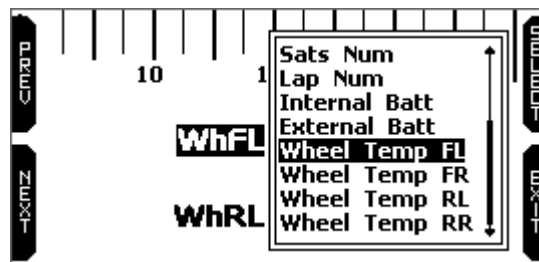
## 4

# Data visualization on MyChron5

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Tire temperature sensors kit needs no configuration. Once connected to MyChron5 it is automatically recognized by the system and data sampled will be downloaded with Race Studio 3. To view sampled data on MyChron5 display you need to create a custom page and set the visualization of sampled data on it. Follow this procedure:

- press: "MENÙ" -> "Config Params" -> "Display Setup"
- press "ENTER" until "Custom" page appears
- press "NEXT" and the system sets on "Enabled NO"
- press "CHANGE" and the row switches to "Enabled YES"
- press "CONFIG"
- select the position where to view the data and press "SELECT"
- select the desired sensor from the drop down menu



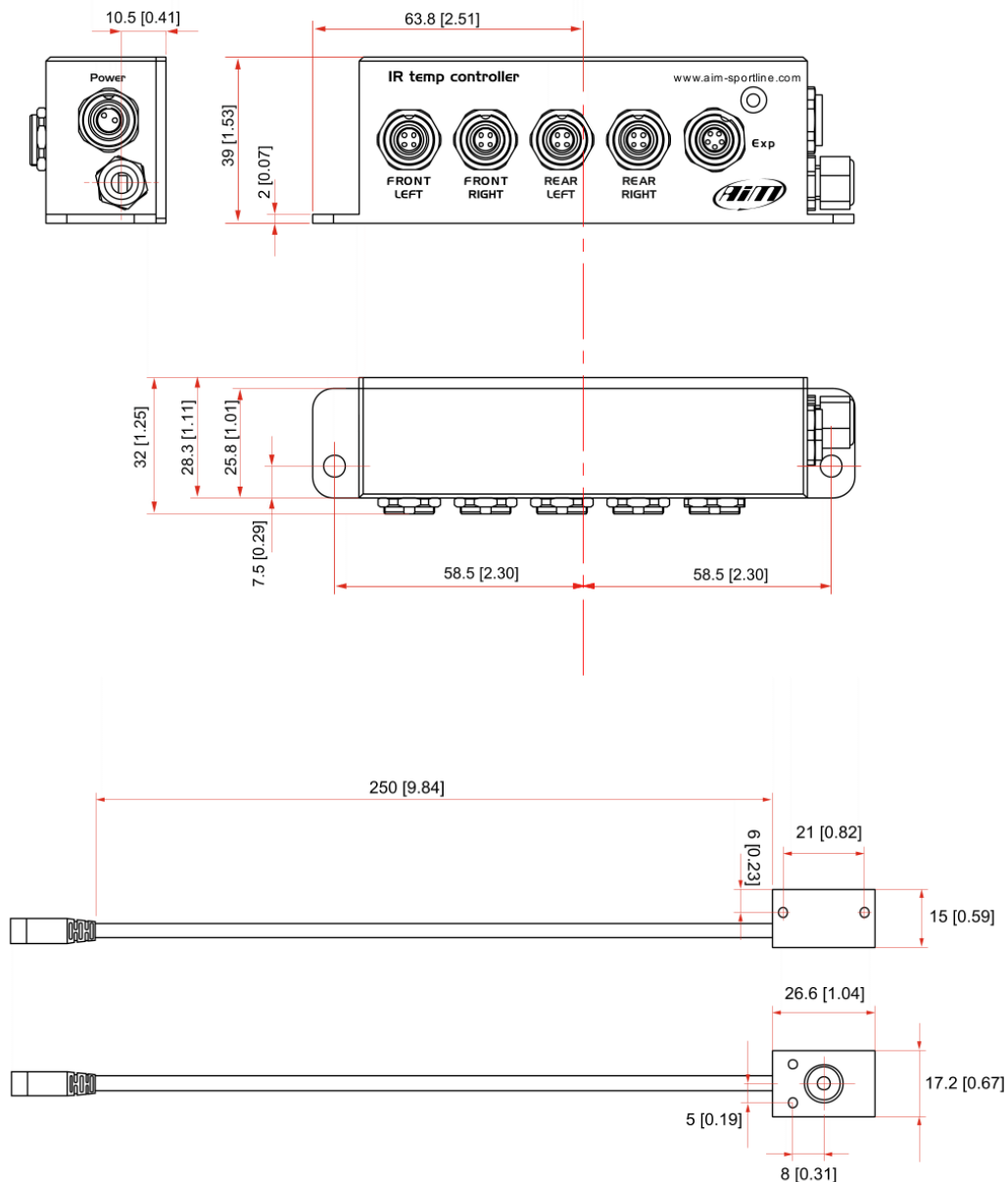
- repeat the operations to view more than one sensor
- press "EXIT"

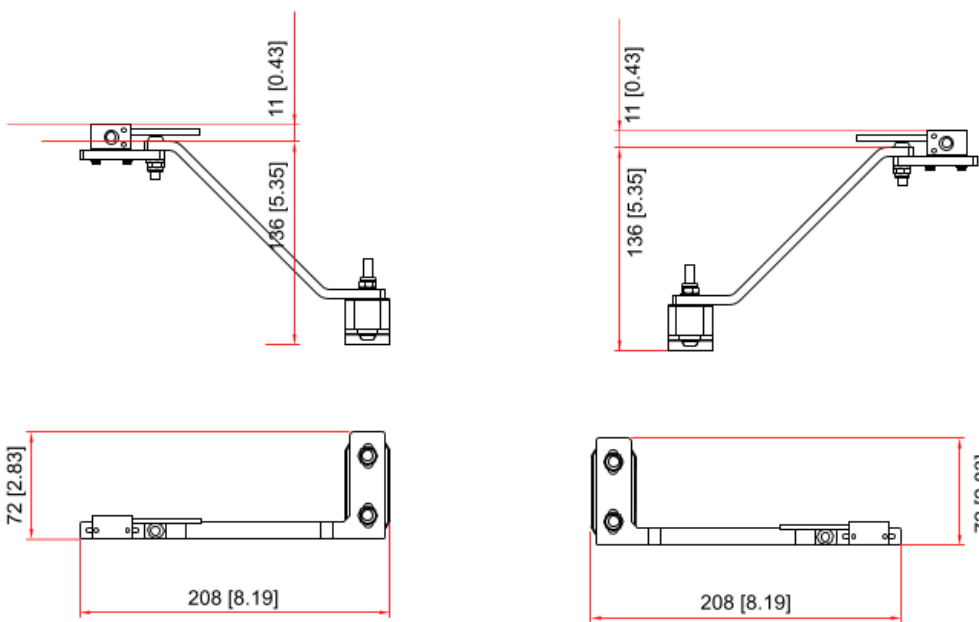
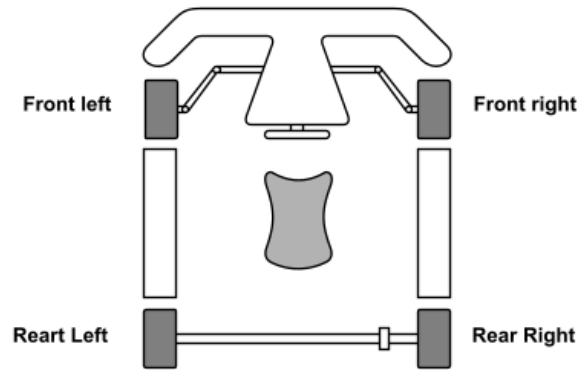
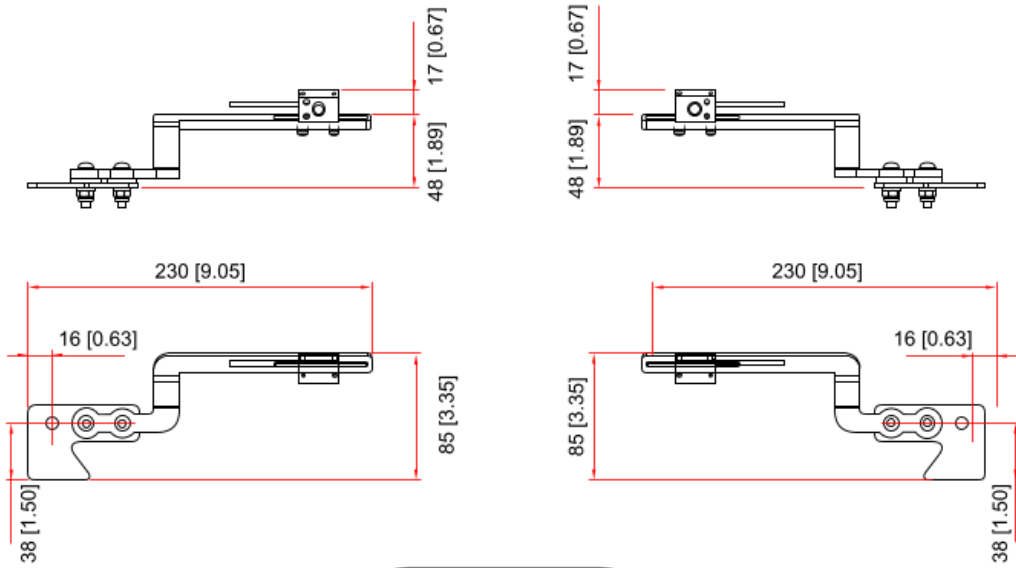
# 5

## Dimensions, pinout and technical characteristics

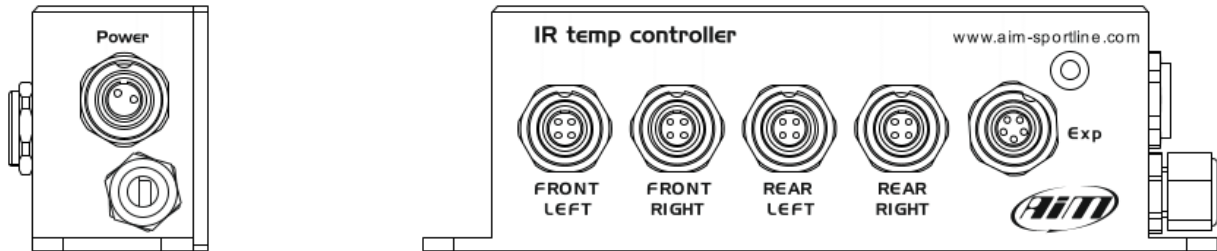
The drawing here below shows in millimetres [inches]:

- IR temperature controller and sensors dimensions
- sensors dimensions
- brackets dimensions

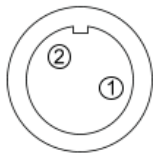




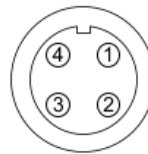
The table below shows IR temperature controller pinout.



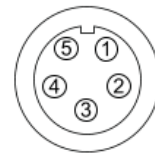
Connettore Binder 712  
2 pin femmina  
(vista frontale)



Connettore Binder 712  
4 pin femmina  
(vista frontale)



Connettore Binder 712  
5 pin femmina  
(vista frontale)



POWER		FRONT LEFT		FRONT RIGHT		REAR LEFT		REAR RIGHT		EXP	
1	+Vbext	1	Analog input 1	1	Analog input 2	1	Analog input 3	1	Analog input 3	1	CAN+
2	GND	2	GND	2	GND	2	GND	2	GND	2	GND
		3	+Vb	3	+Vb	3	+Vb	3	+Vb	3	+Vb
		4	+Vreference	4	+Vreference	4	+Vreference	4	+Vreference	4	CAN-
										5	+VBext

Tire temperature kit technical characteristics are:

- CAN connection with MyChron5 via IR Temperature Controller
- Output signal: 0-5V
- Field of view: 35°
- Working range: -20/120°C
- IR Temperature Controller dimensions: 127.6x32x39 mm
- IR Temperature Controller cable length: 400 mm
- Sensor dimensions: 26.6x17.2 mm
- sensor cable length: 250 mm