AiM User manual

Kart tire temperature sensors kit

Release 1.01

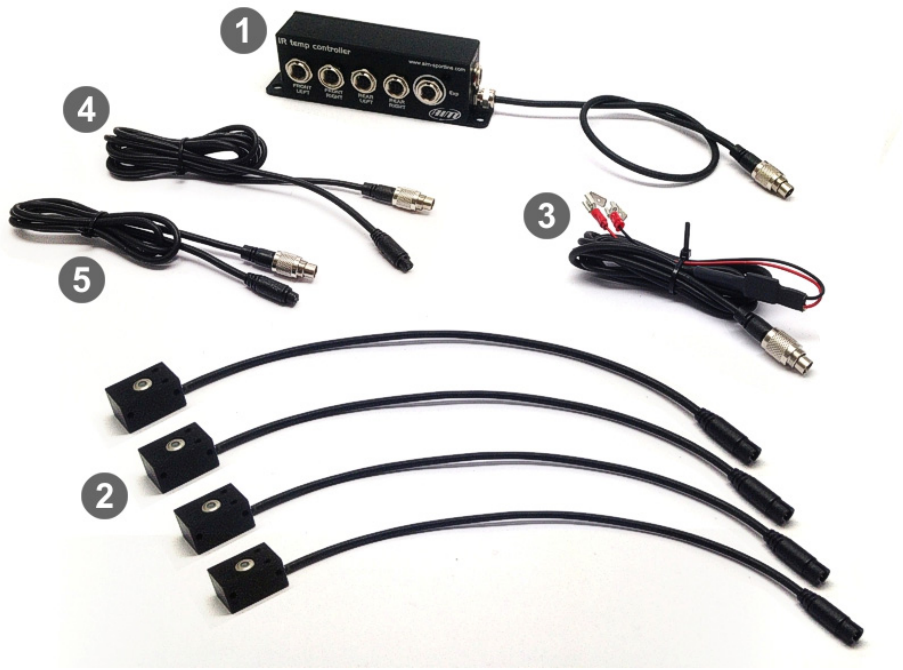
KIT

1 Introduction

This user guide explains how to install the Tire temperature sensors kit for karts and view sampled data on MyChron5 display (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



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**)

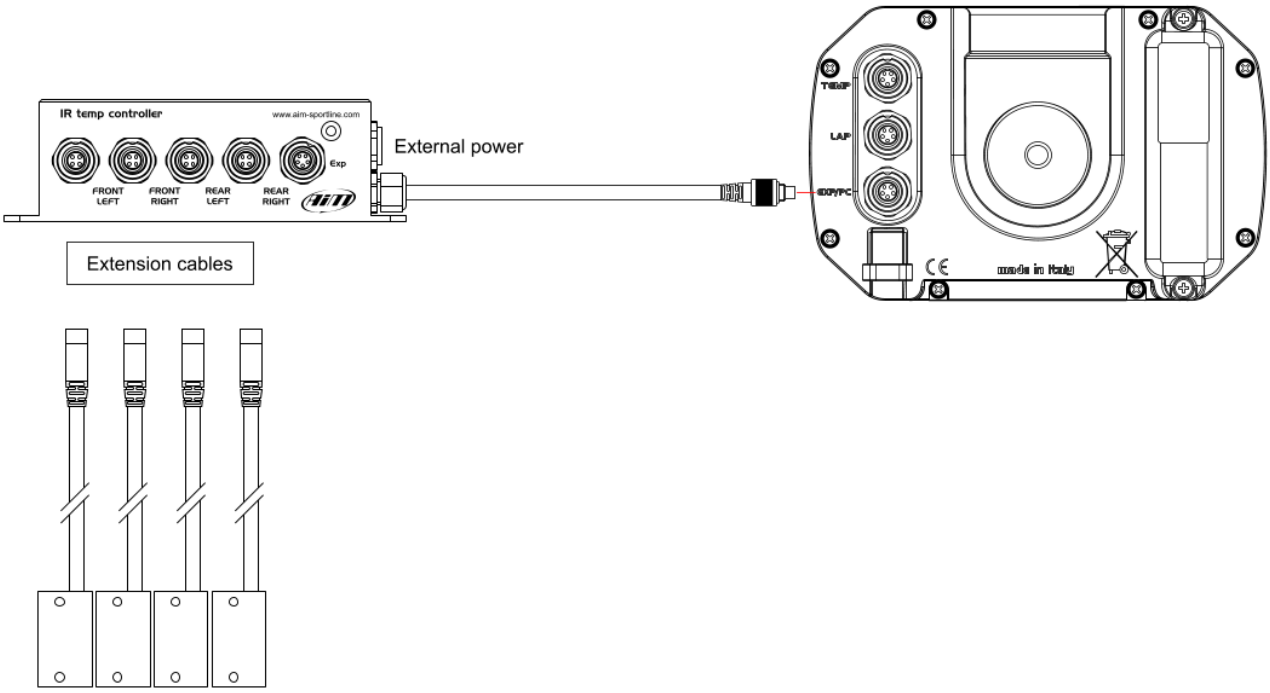
Each item can be bought separately as spare part with these part numbers:

• Tire temperature sensor	**X05TTS01B0**
• IR (infrared) temperature controller	**XSMIRTEMP0**
• external power cable	**V02551200**
• 1m extension cable	**V02PCB10BTXG**
• 2 m extension cable	**V02PCB20BTXG**

3
Installation and connection

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

Tire temperature sensors kit - MyChron5 connection scheme.

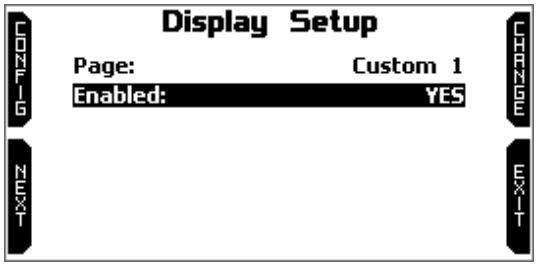


4
Data visualization

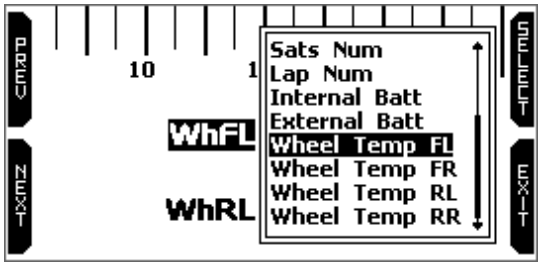
Tire temperature sensors kit needs no configuration. Once connected to MyChron5 it is automatically recognized by the system and data will be downloaded with Race Studio 3. To view data on MyChron5 display you need to create a custom page and set the visualization on it.
Follow this procedure:

- press: "MENÙ" –> "Config Params" –> "Display Setup"
- press "ENTER" until "Custom" page appears

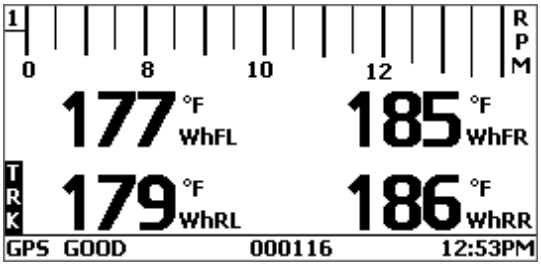
- press "NEXT"
- press "CHANGE" to read "Enabled YES"
- press "CONFIG" to select the position where to view the data and press "SELECT"



- select the desired sensor from the drop down menu
- repeat the operations to view more than one sensor and then press "EXIT"

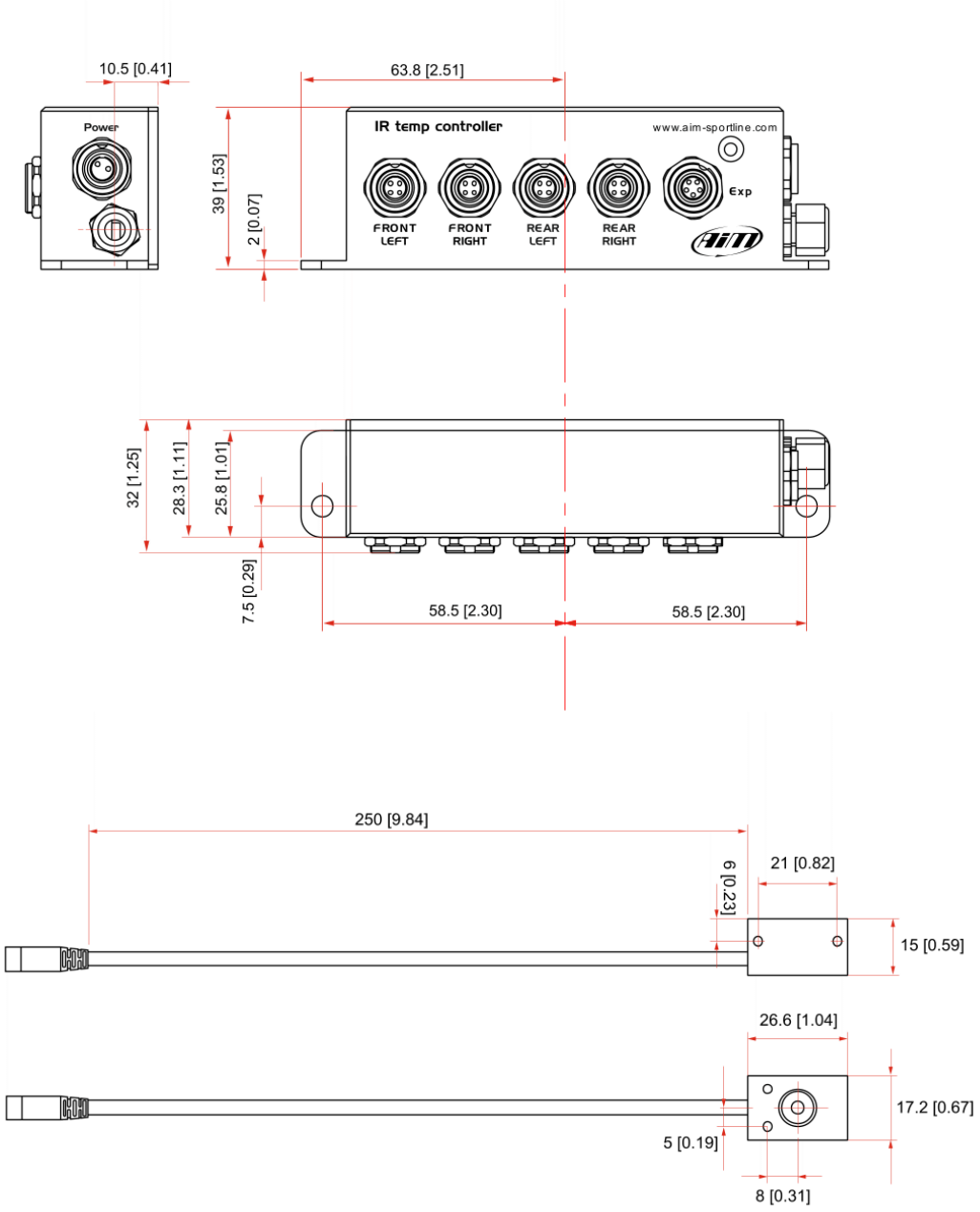


The temperatures of the selected tires will be displayed as shown here on the right:

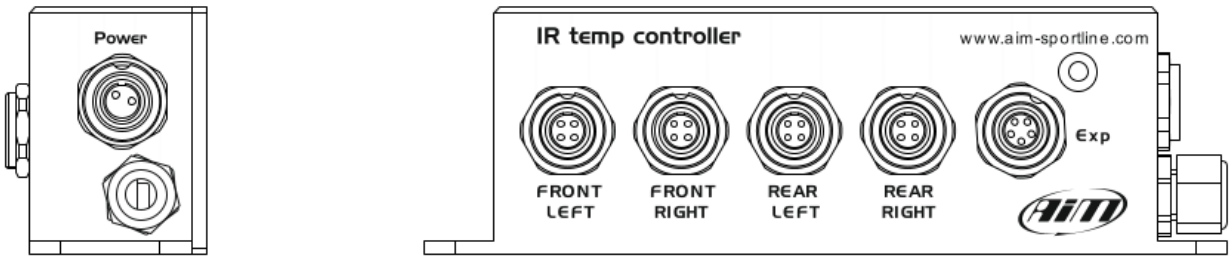


5
Dimensions, pinout and technical characteristics

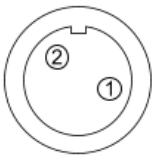
The drawing here below shows IR temperature controller and sensors dimensions in millimetres [inches].



The table below shows IR temperature controller pinout.



2 pins Binder 712 female connector (external view)

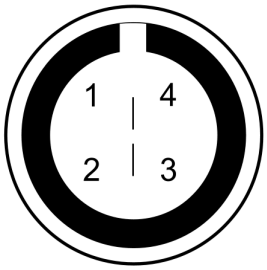


4 pins Binder 712 female connector (external view)

5 pins Binder 712 female connector (external view)

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

The image below shows sensor 4 pins Binder 719 – male connector pinout (front view) and the related table.



Pin	Function	Cable colour
1	Output signal	White
2	GND	Black
3	Not connected	
4	Vreference	Blue

Tire temperature kit technical characteristics:

- 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