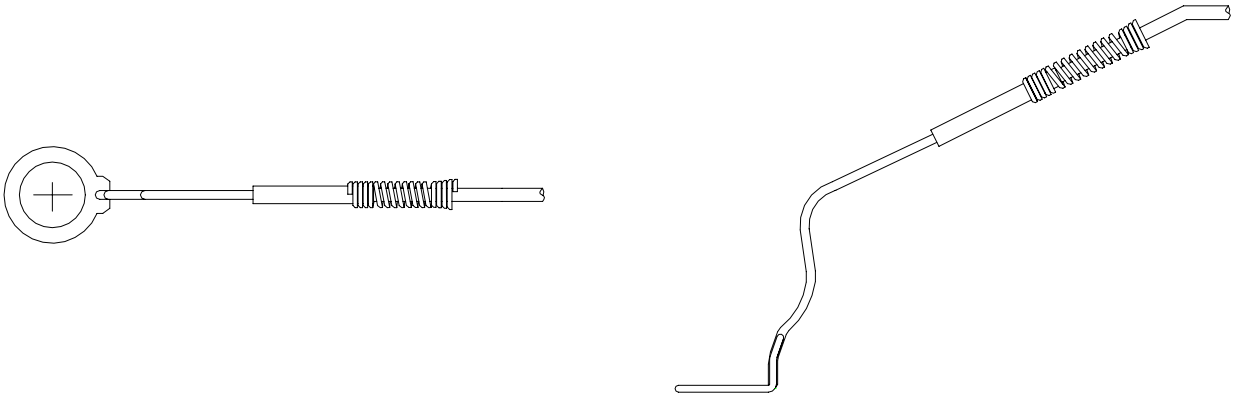


Figure 1: Cylinder head thermocouple (top and side view)

Introduction

Aim instruments can measure and record cylinder head temperature using a sensor (thermocouple) positioned under the spark plug. The thermocouple presents a turn in the lower part to make installation and disinstallation easier.
All Aim thermocouples are **K-type** sensors.

Installation notes

The head temperature sensor sits between the spark plug and the cylinder head. To keep the sensor in contact with the cylinder head, it is necessary to remove the washer from the plug when installing the thermocouple.
While running the thermocouple cable along the chassis, be careful to keep it as far as possible from other cables (such as RPM or lap receiver cables) in order to minimize interferences between the cables.

ATTENTION: Before screwing back the spark plug inside the cylinder head, ensure that the sensor is firmly mated with the cylinder head and, when tightening and loosening the spark plug, minimize movement of the sensor. Failure to observe this precaution may result in damage to the sensor

For a correct installation, please watch **Figure 2**:

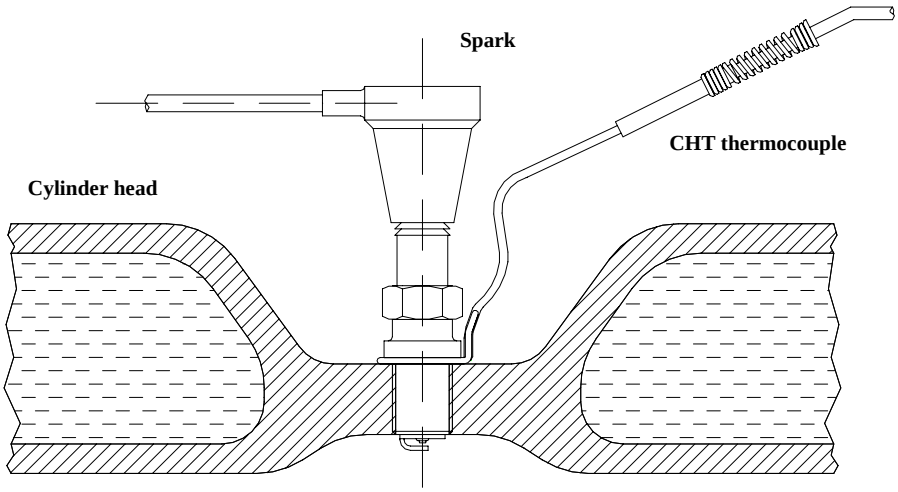


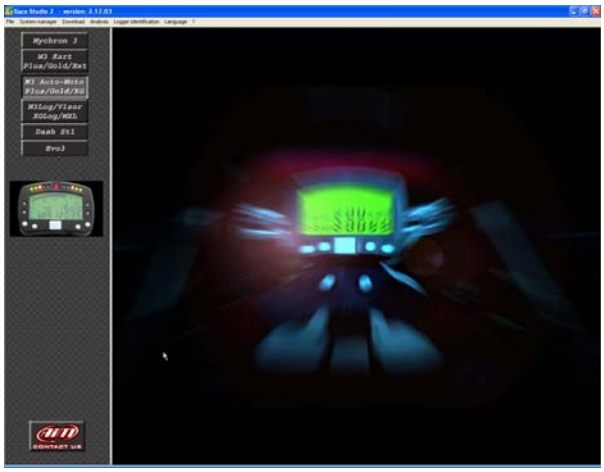
Figure 2: Cylinder head thermocouple installation

Software

Once the thermocouple has been installed, it is necessary to configurate it. In order to correctly configurate the sensor, please use **Race Studio 2**, the software properly developed by Aim to configure your data logger and to analyze stored data.

Race Studio 2

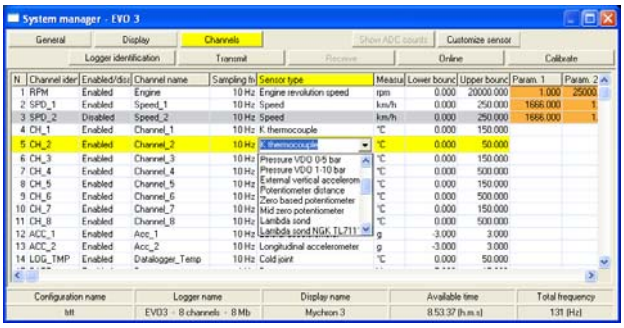
In **Race Studio 2** main window, reported here above, is possible to choose your Aim instrument. Once selected your gauge, please press *"System manager"* button.



Please note: **MyChron 3 Basic** automatically recognizes the sensor and needs no temperature sensor configuration.

Sensor configuration

Once reached *"System manager"* main window, please press "Channels" button to configure the sensor you have installed on your vehicle. The following screenshot appears.



To configure the sensor is necessary to double-click in the box corresponding to "Sensor type" column and to "Ch_x" row (where x represents the channel number where you wish to install the sensor): a menu like the one reported in the previous screenshot appears.

Please, select "K Thermocouple" sensor.

Once selected the correct thermocouple type, is necessary to configure the visualization's lower and upper boundary values.

In order to set these values, please double-click in the row corresponding to the channel where you have installed the thermocouple and in the columns corresponding to lower and upper boundary and fill the boxes with the correct temperature value.

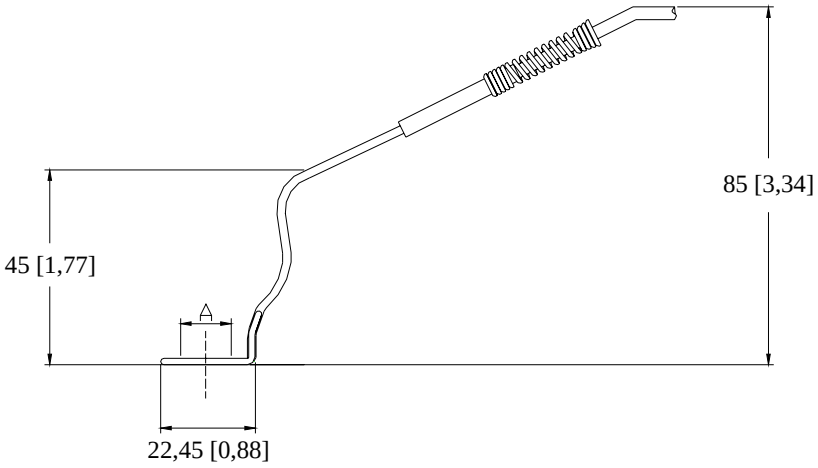
K-type thermocouples do not need to be calibrated.

Transmitting the configuration

Once the sensor has been correctly configured, please transmit the configuration to your gauge pressing "Transmit" button.

During transmission, please do not to switch the gauge off.

Dimensions



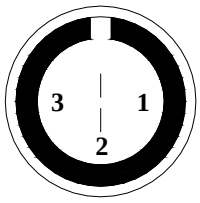
Dimensions in millimeters [inches]

Dimensions table – "A"

Applications	Internal Diameter
Air cooled Kart	12 mm
Air cooled Kart /Bike	10 mm

Connector details

Pin	Function
1	Temperature signal 0-50 mV
2	GND
3	Not connected



3 pins male Binder 712 connectors pinout: solder termination view

Technical characteristics

Description	Value
Temperature range	From 0° to 300°C [32° to 572°F]
Cable length	1400 mm [55"]
Cable type	Compensated

Note 1: CHT thermocouple is supplied with a 1400 mm long compensated cable