

SENSOR DOCUMENTATION	6/07/2004	TEMPERATURE	Water thermoresistor M10 thread
Notes: Water thermoresistor – M10 thread technical documentation, dimensions and pinout. Version 1.01			

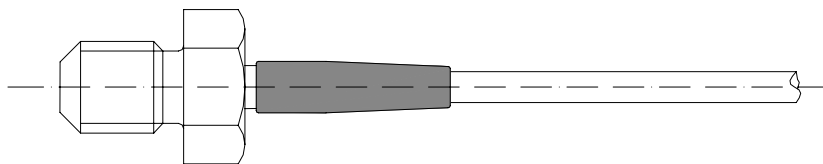


Figure 1: water thermoresistor – M10 thread – Rotax engines (side view)

Introduction

Aim instruments can measure and record the water temperature using a sensor (thermoresistor) positioned in the pipe that goes from the radiator to the cylinder.

Installation notes

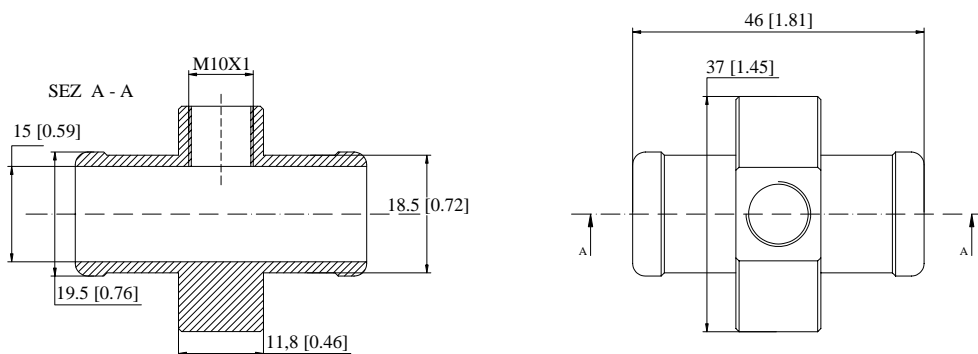
The water temperature sensor should be positioned inside the cylinder head: this sensor may be used only with engines which accommodate the thermoresistor.
To install the water thermoresistor You just need to place it inside the screwed M10 hole located in the cylinder head.

ATTENTION: While running the thermoresistor cable along the chassis, be careful to keep it as far as possible from other cables (such as RPM or lap receiver cables) so to minimize interference between them.

Aim suggests employment of our connection in sensor's installation.

Inline water fitting (optional)

In the following drawing is represented the inline water fitting (optional), which is used to place the water thermo resistor inside the pipe that goes from the radiator to the cylinder.
In order to firmly connect the fitting to the water pipe, Aim suggests You to use two wiring wraps.



Dimensions in millimetres [inches]

Figure 2: Inline water fitting

Software

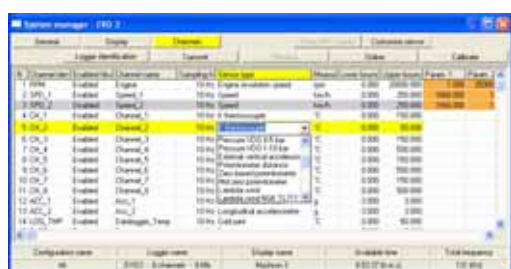
Once the thermoresistor has been installed, it needs to be configured. To correctly configure the sensor, please use **Race Studio 2**, a software properly developed by Aim to configure your data logger and analyze stored data.

In **Race Studio 2** main window You can 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 that you have installed on your vehicle. The following screenshot appears.



To configure the sensor, please double-click in the box corresponding to the “Sensor type” column and to the “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 “PT100 Thermoresistor” sensor.

Once selected the correct thermoresistor type, You need to configure the visualization’s lower and upper boundary values.

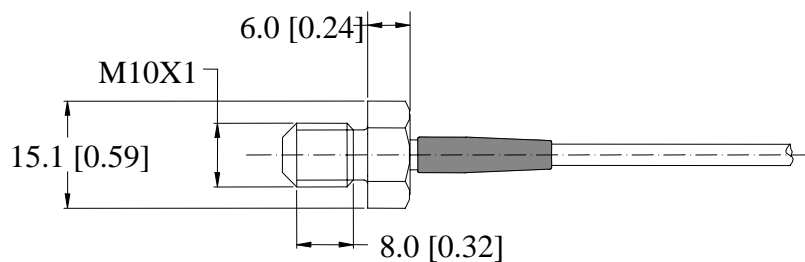
To set these values, please double-click in the row corresponding to the channel where you have installed the thermoresistor and in the columns corresponding to the lower and upper boundary and fill the boxes with the correct temperature value.

Please note: PT100 thermo resistors do not need calibration.

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 SWITCH OFF the gauge.**

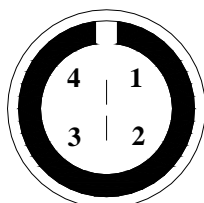
Dimensions



Dimensions in millimeters [inches]

Pinout PT100 – MyChron 3 Kart

Pin	Function	Pin	Function
1	+ Temp. signal	3	Not connected
2	GND	4	Not connected



4 pins Binder 719 male connector: solder termination view

Technical characteristics

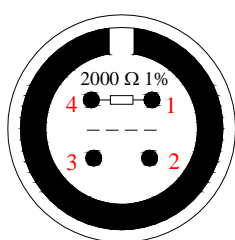
Description	Value
Temperature range	From 0° to 150°C [32° to 302°F]
Cable length	250 mm [9.8"]

Note 1: the water thermocouple is supplied with a 250 mm long cable terminated with a 4 pins male Binder 719 connector.

Note 2: extension cables are available in standard lengths and, on request, as specified dimensions.

Pinout PT100 – MyChron 3 Car/Bike & Dash ST1

Pin	Function	Pin	Function
1	+ Temp. signal	3	Not connected
2	GND	4	Not connected



4 pins Binder 719 male connector: solder termination view

Note: the PT100 thermoresistor for MyChron 3 Car/Bike/XG and Dash ST1 is equipped with a 2 kΩ 1% resistor between pins number 1 and 4.