

# 0003-TDS ~ Temperature Sensor

## Description

The module **0003-TDS** is specially designed for measuring temperatures in the range  $-55^{\circ}\text{C} \sim 125^{\circ}\text{C}$ , especially suitable for temperature monitoring in low temperature ovens and preservation processes.

It is based on a monolithic [chip](#) that offers a resolution of  $0,07^{\circ}\text{C}$  with an error in the range of  $-10^{\circ}\text{C}$  to  $85^{\circ}\text{C} \pm 0,5^{\circ}\text{C}$ .

## Parameters

| Parameter                                       | Minimum | Typical | Maximum   | Unit               |
|---|---------|---------|-----------|--------------------|
| Temperature Range                               | -55     |         | 125       | $^{\circ}\text{C}$ |
| Measurement Error (-10~85 $^{\circ}\text{C}$ )  |         |         | $\pm 0,5$ | $^{\circ}\text{C}$ |
| Measurement Error (-55~125 $^{\circ}\text{C}$ ) |         |         | $\pm 2,0$ | $^{\circ}\text{C}$ |

## Connections



The measuring probes of this device are of the [DS18B20](#) type, its power is 3.3V and communicate with the equipment through a single cable, in the image you can see one of the probes that we supplied with the device.



The auxiliary terminals has the power supply terminals, gnd and positive, and terminal communications with the probe.

Particular attention must be paid to the connection, it must be as stable as possible, the connection cable will be less than 3 meters and the measuring element, the chip, must be protected from weather agents.

## Startup

## Configuration

## Use

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Last update: **07/10/2017 18:55**

