THERMOSTICK

Universal free programmable USB thermocouple measuring device

Description

The MELTEC THERMOSTICK is operated directly on the USB port of a PC. This measuring system is freely programmable over the entire temperature range from -270°C to 1820°C and is accurate up to ±1°C (typical).

In connection with most thermocouples and the measurement data acquisition and evaluation software supplied free of charge, this electronic system forms a high-precision, network-compatible measurement system.

Specifications

- Smallest construction and high-precision
- Can be calibrated using a tool with cold junction compensation from -270°C to 1820°C
- Freely parameterizable from -270°C to 1820°C (scales adapt automatically)
- Integrated USB 2.0 interface, electronics completely integrated in the USB connector
- The number of devices that can be connected is only limited by the USB system
- No external power supply required*
- Measurement data acquisition, monitoring and logging software, line recorders, data loggers
- Transfer measurements to an Excel table in real time

* If many sensors are connected at the same time, a Power HUB with its own power supply may be required.

Applications

- Measurement, recording and monitoring of temperature
- Laboratory applications
- Air conditioning and ventilation technology
- food industry
- Furnaces/blast furnaces

Safety instructions

The THERMOSTICK must not be used in applications where people can be endangered or injured. It must also not be used as an emergency stop switch on systems and machines or in other safety-relevant areas!

The cable connection from the USB stick to the thermal cable connection of the THERMOSTICK must not be exposed to temperatures below –20 ° C or above +70 ° C, otherwise it can be damaged!

This sensor has protection class IP40 and is NOT waterproof.

THERMOSTICK

Universal free programmable USB thermocouple measuring device

Technical data, temperature measurement

Measuring range	-270 ... +1820 °C (depending on the sensor type)
Accuracy (typical)	± 0,3 °C (at 25 °C)
Resolution (typical)	0.01 °C
Repeatability (typical)	±0.1 °C
Response time (typical)	about 100 ms
Supported types	B, E, J, K, N, R, S, T

Cable from USB stick to thermal cable

Cable type	PVC (schwarz)
Protection class	IP40
Temperature range	-20 °C bis +70 °C
Length	Standard 2m (can be assembled)

Power supply

Power supply	from USB
Power consumption	< 20 mA

Outputs

Communication	USB 2.0 standard-CDC (Communications Device Class) interface

THERMOSTICK

Universal free programmable USB thermocouple measuring device

Complies with the following directives and standards

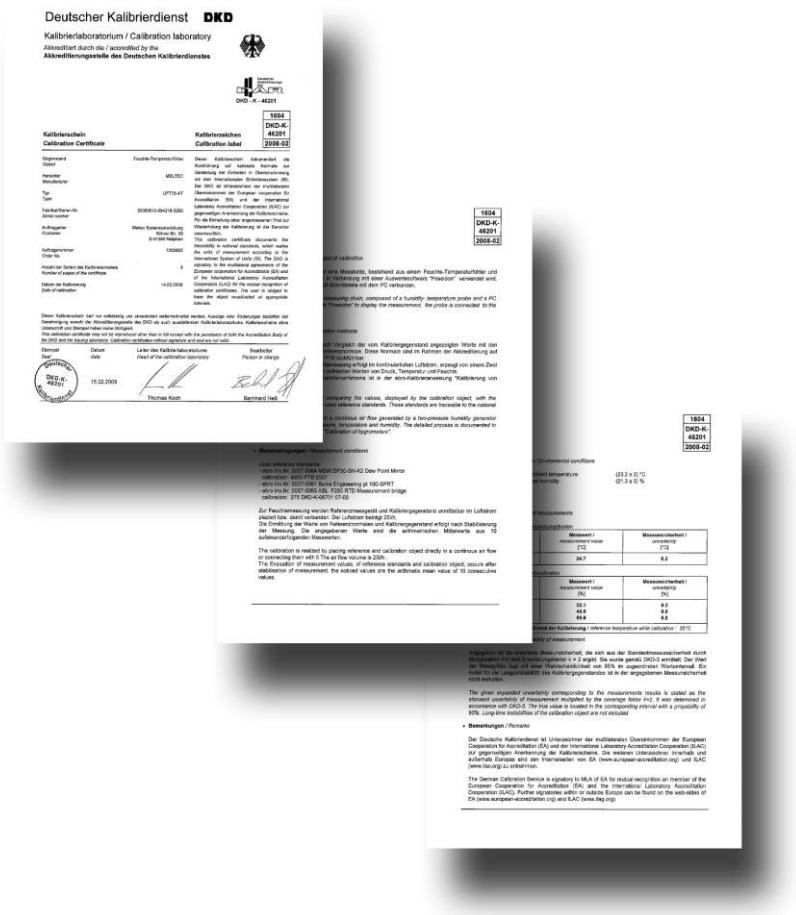
Emission:		
Basis:	product standard	EN 55022:1998 + A1: 2000 + A2: 2003
electrical interference field		
Immunity:		
Basis:	product standard	EN55024: 1998 + A1: 2001
Static discharge. Electricity according to		EN 61000-4-2
Electromagnetic fields in accordance with		EN 61000-4-3

Declaration of conformity

Supplier declaration for the ROHS directive 2011/65/EU

We hereby confirm that the amount of restricted substances in the assemblies supplied by us does not exceed the maximum concentration values in accordance with RoHS Directive 2011/65/EU of the European Parliament and the Council of June 8, 2011. This means that the assemblies we deliver are EU RoHS-compliant.

Optionally with DAkkS calibration certificate



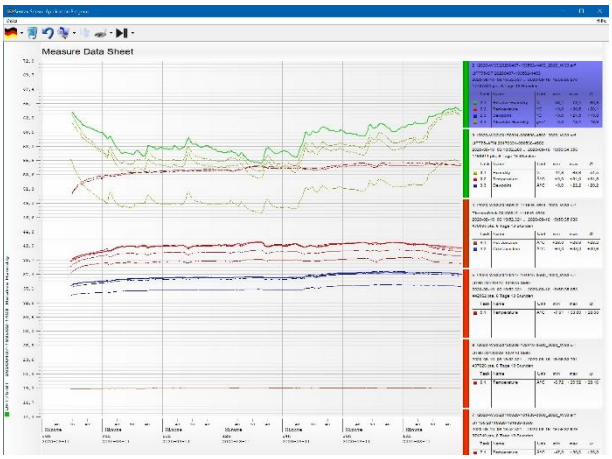
THERMOSTICK

Universal free programmable USB thermocouple measuring device

The Sentax, a Windows application software, is supplied free of charge with the sensor. This is a universal tool for recording, processing and evaluating measurement data from all MELTEC USB sensors.

Measuring points with line recorder

- The measurement of each measuring point is recorded in real time and displayed as a separate curve in the recorder window. Depending on the type of sensor connected, up to several hundred measurements per second can be read out (usually 20 to 200 per second).
- In parallel to the display in the line recorder window, all measurement data can also be recorded in files with an exact time stamp. The time resolution can be up to one millisecond.
- The measurement data recorded over a long (or short) period of time can be evaluated and displayed as curves on a measurement sheet.

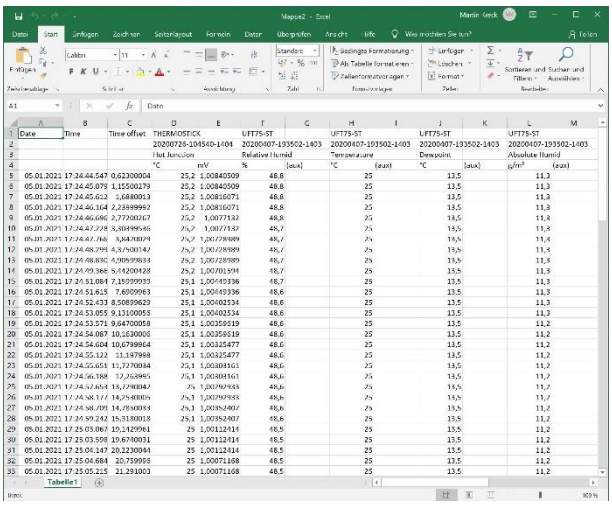


Datalogger

- The Sentax data logger records the measurement data with a precise time stamp over long periods of time with high resolution.
- The representation can be scaled from a whole year down to the millisecond level. Simply zoom into the desired section with the mouse.
- The measurement data are saved in a clear folder structure, sorted by sensor and calendar week.

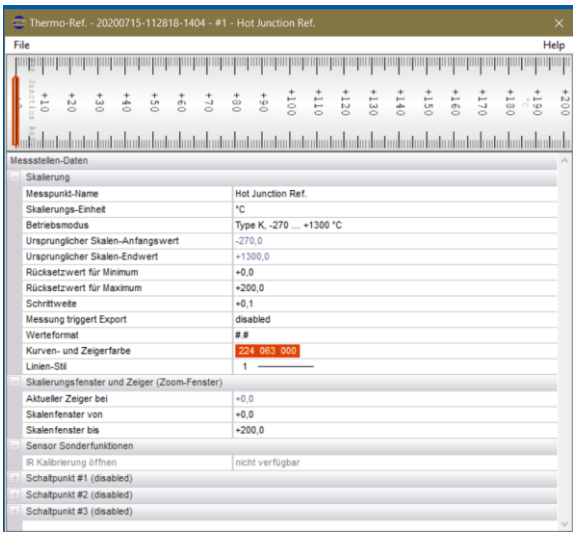
THERMOSTICK

Universal free programmable USB thermocouple measuring device



Automatically export measurement data to Excel

- The recorded data can be automated exported to Excel and further are processed.
- All measurements or only data in the event of changes can be exported in real time to an MS Excel™ table.
- All measurements or only changed measured values can be output in real time into a text file.
- Each measuring point of each sensor is exported to a table column. A precise time code is available for each line, consisting of the calendar date and the exact time with a resolution of 1 millisecond.

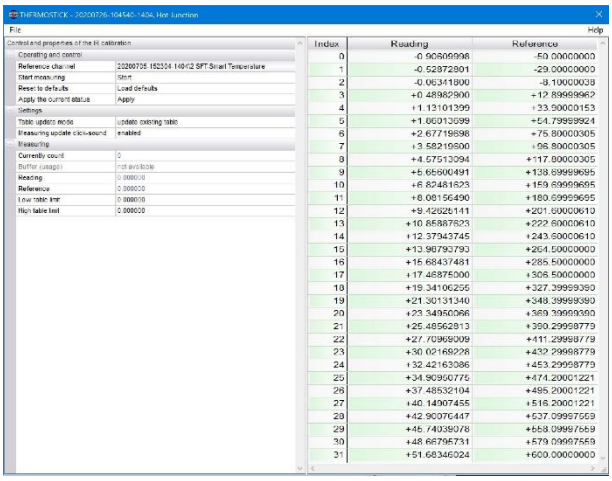


Parameterization of sensors

- The Sentax application software also enables the advanced parameterization of each connected sensor device.
- Each measuring point can be comprehensively configured and adapted.
- The scaling of the measuring range can be set as required.
- Measuring points can be specifically designated by the user.
- The graphical display with color and line width can be set in a wide range by the user as required.

THERMOSTICK

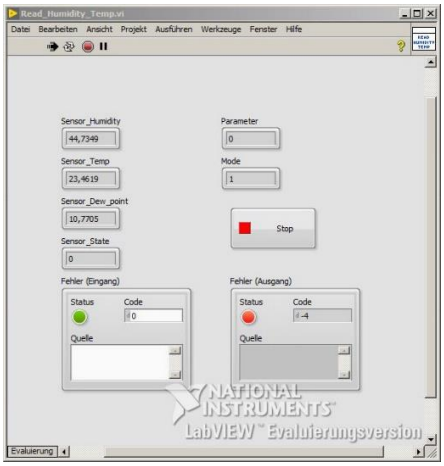
Universal free programmable USB thermocouple measuring device



Calibrations

- Some sensor devices also support calibration functions. The Sentax application software offers all the functions required to carry out a qualified calibration of the sensor devices. In special cases, this can significantly increase the accuracy of the sensors as a whole or for a specific measuring range.
- The calibration of sensor inputs and sensor outputs is supported.
- The outputs of sensors with analog output can be specially adapted to many applications.

Read measured values into LabView



- Of course, the data can also be can be adopted in LabView. One included sample application makes this task easier.

System integration using dll or protocol essentials

- A simple communication protocol for the sensors is available to developers if required. Integrate the sensors directly into your own development, or access the measurement data directly with LabView™ or other systems.
- An interface DLL is also available. Integrate the DLL into your developments and use simple functions for querying measurement data.