# PeakTech 5180 Temp. and Humidity- Data Logger Instruction Manual



PeakTech®

**5180 Temp. and Humidity- Data Logger Instruction Manual**

Contents



## Safety precautions

This product complies with the requirements of the European Community Directive 2014/30/EU (Electromagnetic Compatibility).
The following safety precautions must be observed before operation. Damages resulting from failure to observe these safety precautions are exempt from any legal claims whatever:

- Comply with the warning labels and other info on the equipment.
- Do not subject the equipment to direct sunlight or extreme temperatures, humidity or dampness.
- Do not subject the equipment to shocks or strong vibrations.
- Do not operate the equipment near strong magnetic fields (motors, transformers etc.).
- Keep hot soldering irons or guns away from the equipment.
- Allow the equipment to stabilize at room temperature before taking up measurement (important for exact measurements).
- Replace the battery as soon as the battery indicator “  ” appears. With a low battery, the meter might produce false reading.
- Fetch out the battery when the meter will not be used for long period.
- Periodically wipe the cabinet with a damp cloth and mid detergent. Do not use abrasives or solvents.
- Do not operate the meter before the cabinet has been closed and screwed safely as terminal can carry voltage.
- Do not store the meter in a place of explosive, inflammable substances.
- Do not modify the meter in any way.
- Opening the equipment and service- and repair work must only be performed by qualified service personnel.
- Measuring instruments don’t belong to children hands.

### Cleaning the cabinet

Clean only with a damp, soft cloth and a commercially available mild householder cleanser. Ensure that no water gets inside the equipment to prevent possible shorts and damage to the equipment.

### Introduction

This data logger for temperature, humidity and temperature measurements with two K-Type probes convinces with a long recording time and the four simultaneously recorded readings with the exact recording date and time, which can store 67,000 readings per function in the internal memory and then download the recorded data via USB.

## Features

- ► Data logger with internal memory up to 67,000 readings per measurement function
- ► Simultaneous recording of air humidity, air temperature and two additional Type-K temperature sensors
- ► Two-line LCD display with warning LEDs
- ► Sampling rate from 1 second up to 12 hours
- ► Replaceable 3,6 V Li-battery
- ► Recording time up to 3 months

## Specifications

| | |
|---|---|
| Memory | 67584 (for RH%, Air-Temperature and 2 x K-Type inputs) |
| Sampling Rate | adjustable from 1 sec. to 12h |
| Battery | 3.6V Lithium-Battery |
| Battery- Live | Max. 3 Month (Measuring-Rate 5 Sec.) depending on meas. rate and LED flash |
| Operating temperature | 20°C, ± 5°C |
| Dimensions (WxHxD) | 94 × 50 × 32 mm |
| Weight | 91g |

**Relative Humidity (RH%)**

| Range | Accuracy | |
|---|---|---|
| 0 … 100% | 0 … 20% | ±5.0% RH |
| | 20 … 40% | ±3.5% RH |
| | 40 … 60% | ±3.0% RH |
| | 60 … 80% | ±3.5% RH |
| | 80 … 100% | ±5.0% RH |

**Air Temperature (AT)**

| Range | Accuracy | |
|---|---|---|
| -40 …70°C | -40 … -10°C | ±2°C |
| | -10 … 40°C | ±1°C |
| | 40 … 70°C | ±2°C |
| (-40 …158°F) | -40 … 14°F | ±3.6°F |
| | 14 … 104°F | ±1.8°F |
| | 104 … 158°F | ±3.6°F |

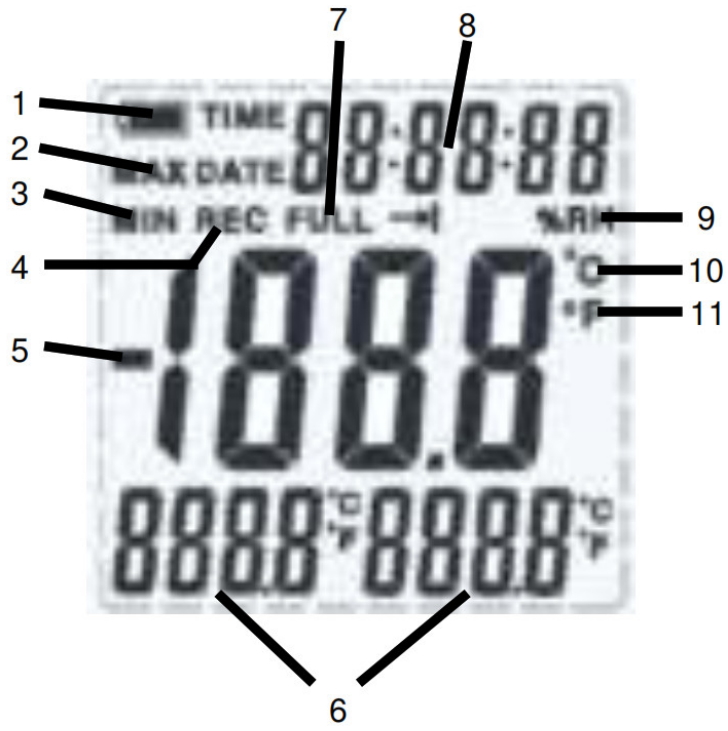
**Temperature Inputs T1 / T2 (Type-K)**

| Range | Accuracy | |
|---|---|---|
| -200 … 1300°C | -200 … -100°C | ± 0.5% rdg.<br>+ 2.0°C |
| | -100 … 1300°C | ± 0.15% rdg.<br>+ 1.0°C |
| -328 … 2372°F | -328 … -148°F | ± 0.5% rdg.<br>+ 3.6°F |
| | -148 … 2372°F | ± 0.15% rdg.<br>+ 1.8°F |

## Panel Description


1. LCD Measurement value display
2. Temp. / RH% Button
3. MAX / MIN Button
4. USB interface
5. REC LED
6. ALARM LED
7. Battery compartment (rear)

### 4.1 Symbols in the display




1. The display changes from , depending on state of charge to . An empty battery should be replaced as soon as possible
2. Displays the activated maximum value function
3. Displays the activated minimum value function
4. The REC icon appears only during recording
5. The negative sign appears in temperature measurements in minus degree range
6. The two lower displays show the readings of additional KType temperature probes
7. Full display appears when the internal data memory is exhausted
8. The display will show the internally saved time and date
9. Displays the activated RH% humidity measurement
10. Displays the activated °C or °F air temperature measurement
11. Displays the activated °C or °F Type-K sensor temperature

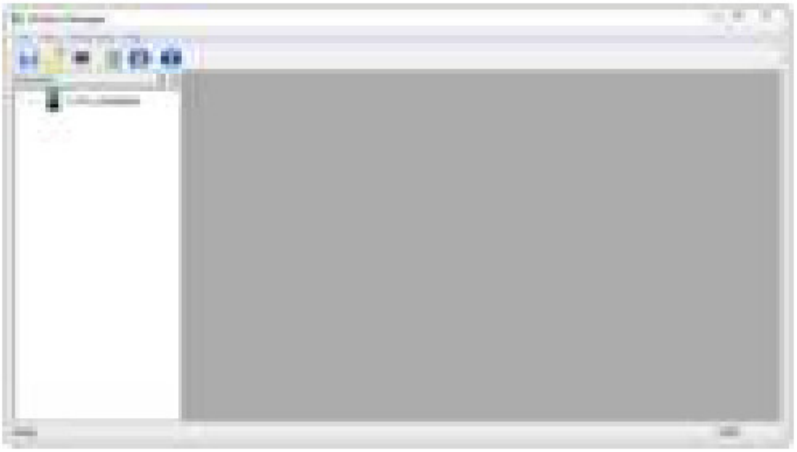
## Installation

To use the data logger, the PC software must be installed from the CD first. Start “setup.exe” from the CD and install the program to any folder on the hard disk.
Connect your PeakTech 5180 with the included USB cable to a Windows PC and Windows will automatically install the driver. This will take a few seconds to complete.
Alternatively, you can install the “CP210x” driver from the CD manually.
**Note:**
The device can only be used in connection with the Software and is not shown as an external disk.

## Application

### 6.1 Settings before use

Start the “MultiDL” Sotware with connected data logger from your desktop. If detected correctly, the data logger with serial number appears under “instrument”:



When several devices are connected, you can identify these by their serial number.
Right-click on the device icon and a window with possible actions:

- “Open”:
  To initiate an USB-connection with the device
- “Data Logger Setting”:
  define the settings and start a recording
- “Read Data Logger”:
  for subsequent analysis of the recorded data


Please make the settings under “Data logger setting” first.

**Time Settings:**

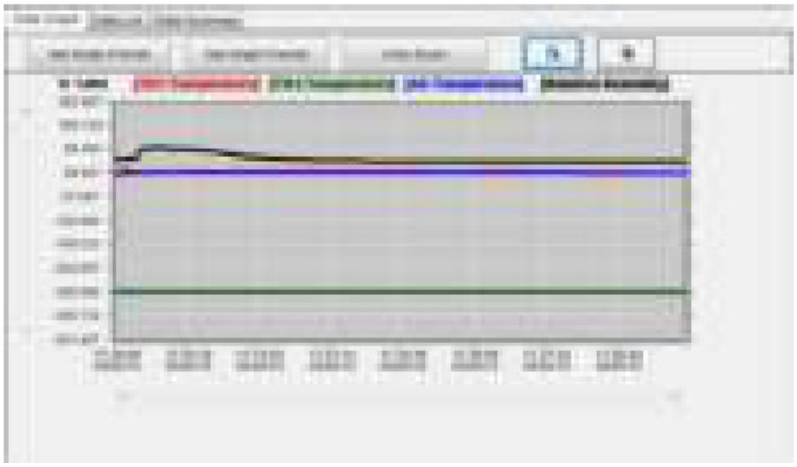
- “Current Time” synchronized the system time of the PC
- “Date Format” settings can be changed in the time and date format.

The “sampling rate” specifies the repetition rate of the data logger. You can change this setting between “1 Second” (one measurement per second) up to “12 hours” (a measurement every twelve hours) in seconds, minutes and hours. Depending on the “sampling rate” the maximum recording time changes.
Under “Alarm Setting” you can select a “high-alarm” for values higher than a specified limit or “low-alarm” when it falls below a freely set limit. This triggered alarm is indicated by a flickering alarm LED, which is located above the LCD-display. In this menu you can adjust the alarm settings for both Type-K probes independently.
With “LED Flash Cycle Setup” you can set the “REC” LED setting, which is lit during recording.
Under “Start Method” you can select when the data logger starts recording. If you select “Automatic”, the data recording starts immediately when you remove the USB cable, and if “Manual” you can start record by pressing any key on the data logger.

**6.2 Evaluating the data logger**
Connect the data logger to your PC with the included USB cable and launch the software.
Under “Instruments” you can choose the data logger by rightclicking and start connecting the device with “Open”.
Then select “Read Data Logger Data” for data transfer to the PC:

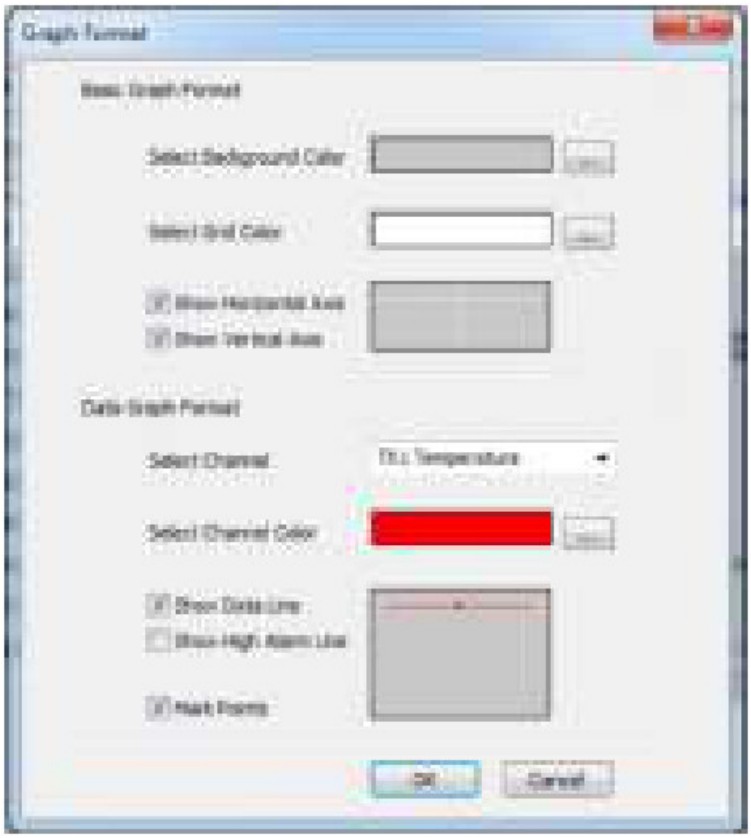

If the data are transferred, these are displayed in a time curve automatically with colored lines and time

information:



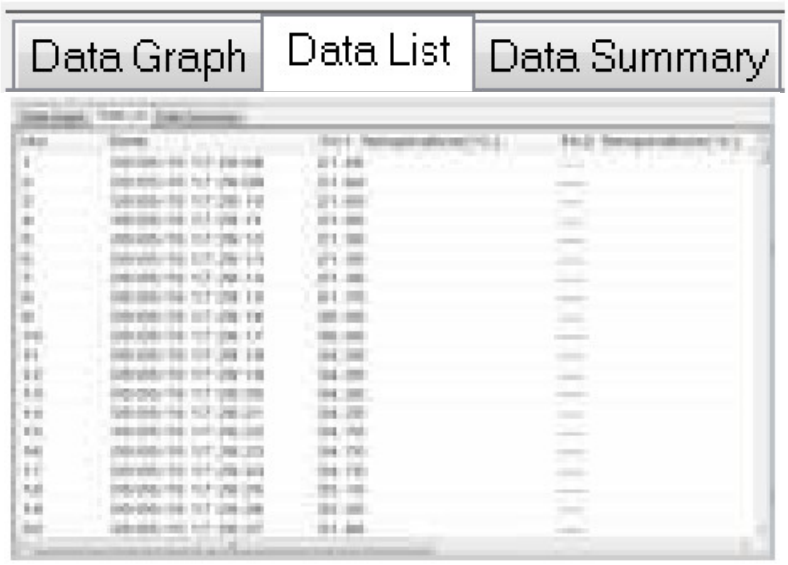
Under “Set Scale Format” you can change the appearance of the scales manually or can choose the settings automatically:

With “Graph Format” you can change the color settings, alarm lines and the X / Y-axis representation:



Under “Undo Zoom” and the two buttons, you can specify different settings for magnified representation of the time curve and undo these settings:


Select the tab “Data List” and a tabular presentation of themeasured values will be displayed:




In this list is a column in the table for each measured value at each “sample”, so that a continuous monitoring of the values is possible. By moving the slider at the bottom to the end of the table, you make more values visible. If a probe is not connected, no values are entered for this.
Under “Data Summary” summarizes the entire data record is displayed, which gives information about the start and end of recording, average values, alarms, minimum and maximum values.


### 6.3 Function Symbols


In the upper display are shown function icons and menus, which are described below:

| | |
|---|---|
| File | **Open:**<br>Opens previously saved data logger files<br>**Close:**<br>Closes the current data log<br>**Save:**<br>Saves current recording as XLS and AsmData file<br>**Print:**<br>Direct printing of the current view<br>**Print Preview:**<br>Preview the print<br>**Print Setup:**<br>Selecting the printer settings<br>**Exit:**<br>Closes the program |
| View | **Toolbar:**<br>Displays the Toolbar<br>**Satus Bar:**<br>Displays the status display<br>**Instrument:**<br>Shows the device window |
| Instrument | Transfers the recording data |
| Window | **New Window:**<br>Opens another window<br>**Cascade:**<br>Selects windowed mode of representation<br>**Tile:**<br>Windows are displayed in full-screen |
| Help | **About:**<br>Shows Software Version<br>**Help:**<br>Opens Help File |
|  | Saves current recording as XLS and AsmData file |
|  | Opens previously saved data logger files |
|  | Direct printing of the current view |
|  | Opens Datalogger settings |
|  | Transfers the recording data |
|  | Opens the Help File |

## Battery Replacement

If the sign “  ” appears on the LCD display, it indicates that the battery should be replaced. Remove screws on the back cover and open the case. Replace the exhausted battery with new battery (3,6V Li-battery).
Batteries, which are used up dispose duly. Used up batteries are hazardous and must be given in the – for this

being supposed – collective container.
**NOTE:**

1. Keep the instrument dry.
2. Keep the probes clean.
3. Keep the instrument and battery out of reach of infant and child.
4. When the symbol "  " appears, the battery is low and should be replaced immediately. When you install battery, ensure the polarity connections are correct. If you will not use the instrument in a long period of time, remove the battery.

**7.1 Notification about the Battery Regulation**
The delivery of many devices includes batteries, which for example serve to operate the remote control. There also could be batteries or accumulators built into the device itself. In connection with the sale of these batteries or accumulators, we are obliged under the Battery Regulations to notify our customers of the following:
Please dispose of old batteries at a council collection point or return them to a local shop at no cost. The disposal in domestic refuse is strictly forbidden according to the Battery Regulations. You can return used batteries obtained from us at no charge at the address on the last side in this manual or by posting with sufficient stamps.
Contaminated batteries shall be marked with a symbol consisting of a crossed-out refuse bin and the chemical symbol (Cd, Hg or Pb) of the heavy metal which is responsible for the classification as pollutant:

1. “Cd” means cadmium.
2. “Hg” means mercury.
3. “Pb” stands for lead.


This manual is according the latest technical knowing. Technical alterations reserved.
We herewith confirm that the unit is calibrated by the factory according to the specifications as per the technical specifications.
We recommend to calibrate the unit again, after one year.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## Documents / Resources

| | |
|---|---|
|  | PeakTech 5180 Temp. and Humidity- Data Logger [pdf] Instruction Manual<br>5180, Temp. and Humidity- Data Logger, Humidity- Data Logger, Temp. Data Logger, Data Logger, Logger |

## References

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