

# User Manual MostraLog Software

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## 1 Abstract

MostraLog is software running on Windows® PCs to visualize and evaluate temperature and humidity data collected with a corresponding MostraLog data logger. The logger has been especially designed to monitor climate conditions in museums and showcases. MostraLog offers the possibility to visualize logged temperature and humidity data sets of up to three loggers. Closer analysis of data can be done using various filters and display options. Furthermore the software can be used to configure parameters of connected data loggers, such as alarm limits, logging interval and infrared-interface.

MostraLog data logger can be used to monitor climate conditions in non-dusty environments, e.g. museums or storage rooms. Since humidity values can be re-adjusted by the user himself the device is not suitable to prove humidity values to third parties, even with a calibration certificate. Logged temperature data however can be used for that purpose.

## 2 Technical Data

<b>Measurement range</b>	Int. / ext.	0 – 100% RH, 0 - 60 °C , (32-140 °F)
<b>Resolution</b>		0,1% RH 0,1°C / (0,2°F)
<b>Configuration</b>		Using MostraLog software, buttons of data logger (paper-clip required), or IR remote control
<b>Software</b>	MostraLog	For Windows® PCs (min. Windows® 7) Download link: <a href="http://www.mostralog.com">www.mostralog.com</a> Data visualization in graph or table. Import of CSV files, export to Excel.
<b>Measurement interval</b>		1 min – 120 min
<b>Interfaces</b>		Mini-USB 2.0 interface

### **3 About this manual**

#### **3.1 Note**

Read this manual carefully before using the software. This software manual is part of the product and contains important information about the product, in particular its intended use, safety, installation, commissioning and use. For more information about the product, contact your supplier. This instruction manual is not subject to any change service. Optical and technical changes, errors, misprints and typographical errors remain reserved.

#### **3.2 Declaration of conformity**

Areus Engineering GmbH hereby declares that the product complies with the relevant provisions of the European Union.

#### **3.3 Warranty and manufacturer's warranty**

Our general business and delivery conditions apply in the version of the purchase date. Our terms and conditions can be found here: [www.areus.de](http://www.areus.de).

#### **3.4 Copyright protection**

Content, artwork, and any ideas contained in this software manual are governed by applicable copyright laws. Transmission, transfer or transfer of this content or parts thereof to third parties requires the prior written consent of Areus Engineering GmbH and Datenlogger-store.de Christoph Waller.

### **4 Installation**

The software can be installed using the provided installer package (*Mostralog.msi*). The installer is available in German or English. The language of the MostraLog software itself is the same as the chosen installer by default but can be changed on the fly. Updates of the software can be installed in the same way.

### **5 Uninstallation**

#### **5.1 Windows 7**

To uninstall, navigate to Control Panel -> Programs -> Programs and Features and select MostraLog here. Now select Uninstall.

#### **5.2 Windows 10**

To uninstall, navigate to Control Panel -> Apps -> Apps & Features and select MostraLog here. Now select Uninstall.

## 6 Handling

### 6.1 General settings

General settings of the MostraLog application can be accessed by clicking *Settings* in the title bar of the application window. The user can select language, behavior after data download, temperature unit as well as display of relative humidity and/or dew point temperature.

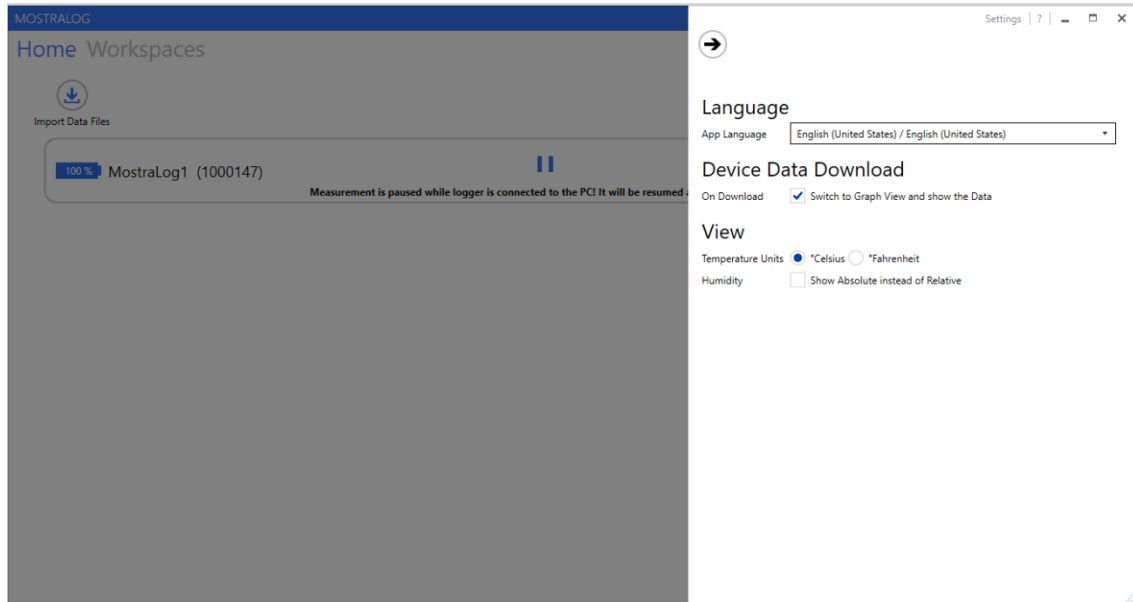


Figure 1: General settings

### 6.2 About

“About” dialog of MostraLog application can be opened by clicking ? in the title bar of the application window. Besides version information of the MostraLog software, the user has the possibility to open the application manual or to write an email to get support.

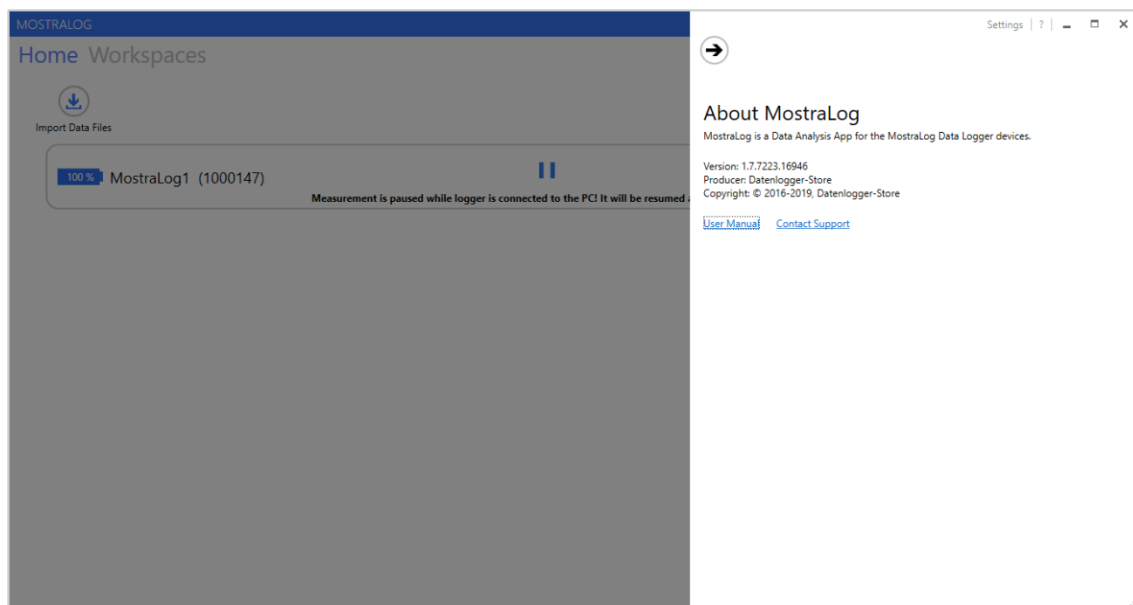


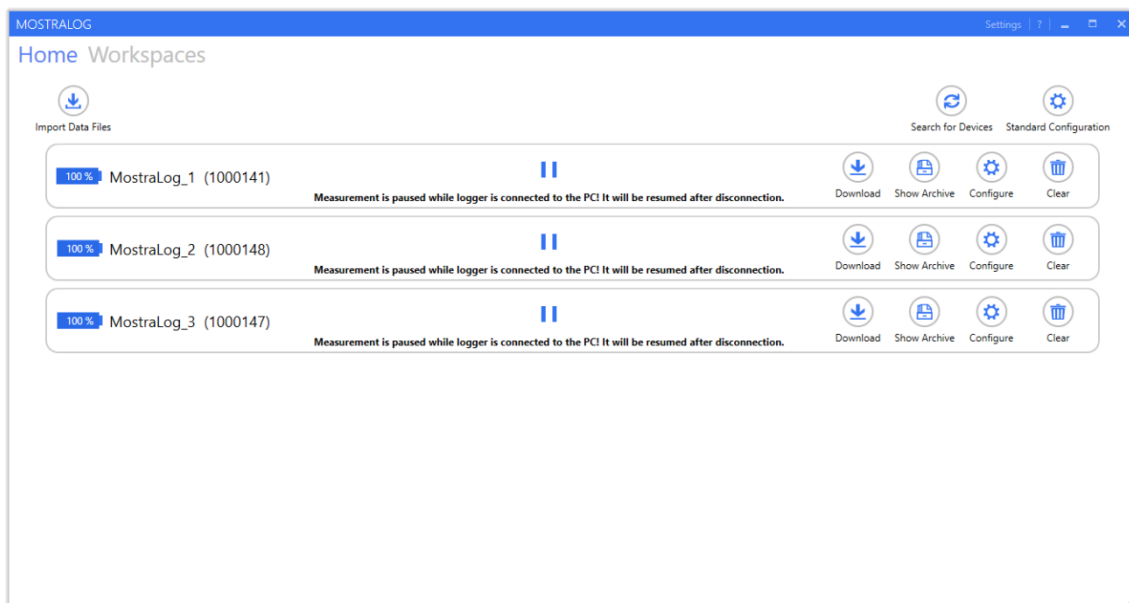
Figure 2: About dialog

### 6.3 Home

After starting the software it automatically displays the “home” view and searches for MostraLog logger devices connected to the PC via USB interface. Depending on the size of memory card used inside the logger this can take some time.

On top of this view, there are three general buttons:

- **Import Data Files**  
Imports climate data sets from MostraLog data loggers. These text files can be imported from any location (such as USB memory stick ...). There is no need to have a MostraLog data logger connected for this purpose.  
*Hint: Date and time of the climate data must always be stated in UTC!*
- **Search for Devices**  
Searches for MostraLog logger devices connected to the computer via USB interface.
- **Standard Configuration**  
Opens a configuration dialog (cf. Figure 1) where “standard” parameters for logger devices can be specified. These settings will be applied to all connected devices.



**Figure 3: Home view with list of connected MostraLog logger devices**

All MostraLog data logger devices actually connected to the computer are listed on the home view. Individual loggers will be identified by their name and serial number. On the left hand side the actual battery status can be seen. On the right hand side buttons can be clicked to handle logging data stored on the memory card of the logger and to configure the logger itself.

- **Download**  
Transfers logging data stored on the memory card of the logger to the computer. The data will be copied to the *Documents* folder of the computer's user account currently used. Besides this, it will be moved from the main directory of the logger's memory card to a folder named *Archive* and saved there for later usage.  
*Hint: Date and time of the climate data must always be stated in UTC!*

- **Show Archive**  
Opens the *Archive* folder of the device and displays logged climate data files stored there.
- **Configure**  
Opens a configuration dialog (cf. Figure 4) where parameters of a selected device can be adjusted.
- **Clear**  
Deletes all climate data files stored on the memory card of the device.

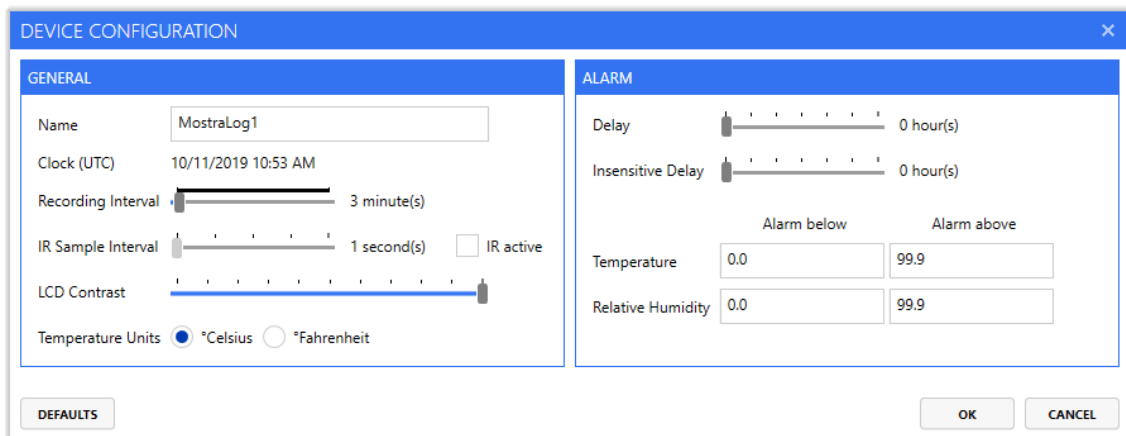


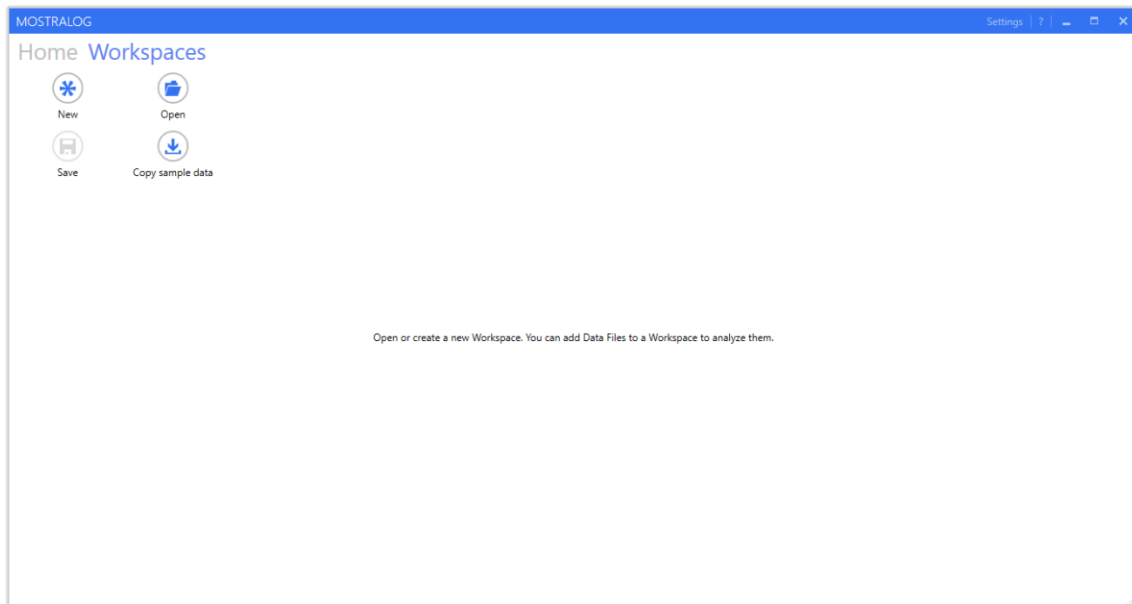
Figure 4: Configuration window

- **General**
  - **Name**  
Custom name of the MostraLog logger device
  - **Clock (UTC, coordinated universal time)**  
Current date and time (UTC) of the device  
*Hint: Date and time information of the climate data is always stored in UTC!*
  - **Recording Interval**  
Logging interval of the device, i.e. time between two subsequent temperature/humidity measurements stored in the log file.  
*Hint: A measurement interval of 5 to 30 minutes is recommended; the factory setting is 5 minutes. A short measurement interval requires more time for data download and reduces battery life.*
  - **IR Sample Interval**  
Sampling interval of infrared interface. The smaller this interval, the better the reaction time. However, a small interval reduces the battery lifetime of the device.  
*Hint: An IR sampling interval of 5 seconds is recommended.*
  - **IR active**  
Activates / deactivates infrared interface of the device used for communication with an optional remote control.
  - **LCD Contrast**  
Contrast of the LCD display

- Temperature Units  
Unit of temperature to be displayed by the device (°C or °F).
- Alarm
  - Delay  
Timespan an alert will be delayed in order to prevent faulty alert activation (e.g. during installation of device).
  - Insensitive Delay  
Allowed timespan within which the specified alarm limits can be exceeded.
  - Temperature Alarm  
Lower and upper alarm limits for temperature values (range: -9 °C – 99.9 °C or 16 °F – 211.8 °F, respectively). Alarm will be activated if measured temperature values fall below the lower limit or rise above the upper limit. Alarms remain active until acknowledged (see chapter 7.2.1).
  - Humidity Alarm  
Lower and upper alarm limits for humidity values (range: 0 % – 99.9 % RH). Alarms will be activated if measured humidity values fall below the lower limit or rise above the upper limit. Alarms remain active until acknowledged (see chapter 7.2.1).
- Defaults  
Set all parameters to their default values.

## 6.4 Workspaces

Workspaces in MostraLog are used to visualize and analyze temperature and humidity data sets created with MostraLog logger devices. Up to three data sets can be combined and displayed in chart and table views as well as saved as MostraLog project files for further evaluation.



**Figure 5: Empty Workspace**

- **New**  
Creates a new workspace, i.e. MostraLog project to visualize/analyze one or multiple climate data sets. Pressing this button will open the data selection tab (see chapter 6.4.1).
- **Open**  
Opens an existing workspace, i.e. MostraLog project to visualize/analyze contained climate data sets.
- **Save**  
Saves created workspace or modifications of existing workspace to a MostraLog project file (\*.mlw).
- **Copy sample data**  
MostraLog installation provides sample data in order to display some climate data sets without having to measure own data. Clicking on this button will copy the sample data to the user data folder, i.e. *Documents* folder of the computer's user account currently used. From this location it can easily be imported into MostraLog software (cf. New section above).

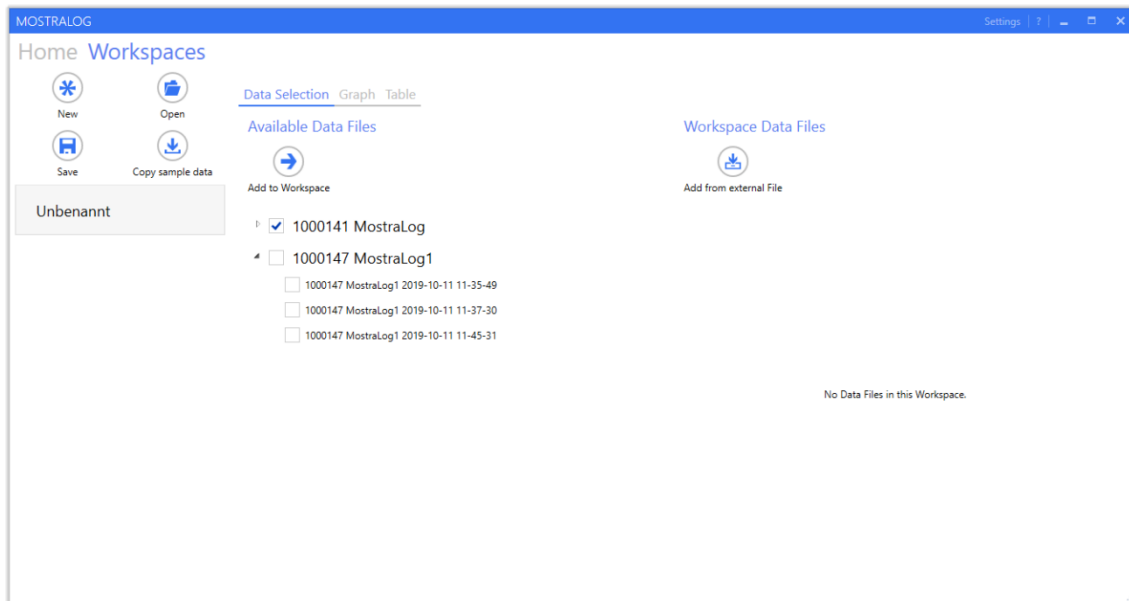
### 6.4.1 Data selection

Arbitrary climate data sets which have been downloaded from connected MostraLog devices can be imported into a MostraLog workspace for visualization and evaluation.

Figure 6 shows available data folders from two different MostraLog devices on the left hand side. The second folder contains multiple climate data files. Either an entire data folder or individual data files can be selected to be imported into the workspace. Clicking the button *Add to Workspace* adds the selected data files to the current workspace and switches to the chart visualization (cf. chapter 6.4.2).



*Hint: Data from different loggers can be stored on a single microSD card. Although microSD cards have a very large memory, it makes sense to delete data from the microSD card after having secured them on the computer. This shortens future download time.*



**Figure 6: Data selection in workspace**

On the right hand side data files already contained in the current workspace are listed. They can be removed from the workspace by clicking the corresponding *X* button on the right. Additional climate data can be added from external files. Clicking the *Add from external File* button will open a data import filter wizard, where the format of external data can be specified. *Hint: Date and time of the climate data must always be stated in UTC!*

### 6.4.2 Data visualization in graph

The *Graph* tab displays the previously selected logger data of the workspace. A list of all currently open workspaces will be displayed on the left of the chart (cf. Figure 7). Switching between multiple open workspaces is possible by clicking on their name. Open workspaces can be closed by clicking the corresponding X button to the right of the name.

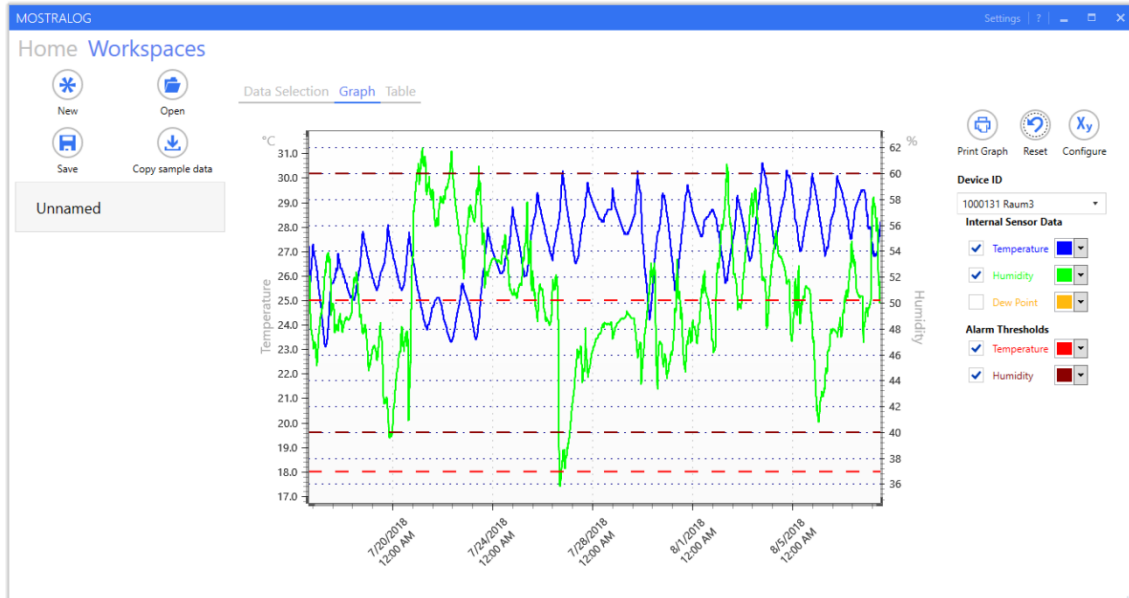


Figure 7: Data visualization with chart

On the right hand side, actions related to the currently selected and displayed workspace data can be found:

- **Print Graph**  
Prints the displayed chart
- **Reset**  
Resets the chart view to the original zoom level, i.e. fits the zoom level to display all data available in the current workspace.
- **Configure Graph**  
Opens a configuration window to specify minimum and maximum extensions of the axis in the chart view. Humidity, temperature and date/time ranges can be specified in units displayed in the graph, i.e. date and time has to be specified in local system time of the computer.

*Hint: If you want to compare printed charts, it is recommended to use uniform chart settings.*

Figure 8: Chart axis configuration

In case the workspace contains climate data sets of multiple data loggers or data from internal and external sensor, the data to be displayed in the graph can be selected using the drop-down boxes on the right. Individual data curves (e.g. temperature, humidity, dew point, alarm thresholds) can be activated or deactivated for display as well. Colors of the curves can be selected, too.

The displayed time on the axis is the UTC time stored by the logger converted to the current system time of the computer.

Within the graph view itself, the user has the possibility to zoom using the mouse wheel either on one of the individual axis (locate the mouse pointer on an axis) or on all axes together (locate the mouse pointer inside the graph). For zooming specific data content, a zoom window can be drawn as well. Just left click the upper left corner of the zoom window and keep it pressed until the lower left corner is reached.

Each chart axis can be shifted linearly by left click, hold and move the mouse on the specific graph axis.

### 6.4.3 Data visualization in table

Date	Times...	Temp...	Rel. H...	Abs...	Dew...	Temp...	Rel. H...	Abs...	Dew...	Temp...	Temp...	Hum...	Hum...
^ 1000131 2018-08-08 12-35-15 (6616)													
7/16/2018	3:11:15 PM	27.20	49.90	12.99	15.84					18.00	25.00	40.00	60.00
7/16/2018	3:16:15 PM	26.60	49.50	12.46	15.17					18.00	25.00	40.00	60.00
7/16/2018	3:21:15 PM	26.30	50.20	12.43	15.11					18.00	25.00	40.00	60.00
7/16/2018	3:26:15 PM	26.00	50.70	12.34	14.99					18.00	25.00	40.00	60.00
7/16/2018	3:31:15 PM	25.90	51.10	12.37	15.02					18.00	25.00	40.00	60.00
7/16/2018	3:36:15 PM	25.80	51.40	12.37	15.02					18.00	25.00	40.00	60.00
7/16/2018	3:41:15 PM	25.70	51.60	12.35	14.99					18.00	25.00	40.00	60.00
7/16/2018	3:46:15 PM	25.70	51.80	12.40	15.05					18.00	25.00	40.00	60.00
7/16/2018	3:51:15 PM	25.60	52.00	12.38	15.02					18.00	25.00	40.00	60.00
7/16/2018	3:56:15 PM	25.60	52.10	12.40	15.04					18.00	25.00	40.00	60.00
7/16/2018	4:01:15 PM	25.50	52.00	12.31	14.92					18.00	25.00	40.00	60.00
7/16/2018	4:06:15 PM	25.60	51.80	12.33	14.96					18.00	25.00	40.00	60.00
7/16/2018	4:11:15 PM	25.60	51.30	12.21	14.80					18.00	25.00	40.00	60.00
7/16/2018	4:16:15 PM	25.60	51.30	12.21	14.80					18.00	25.00	40.00	60.00
7/16/2018	4:21:15 PM	25.60	50.00	11.90	14.41					18.00	25.00	40.00	60.00
7/16/2018	4:26:15 PM	25.60	49.90	11.88	14.38					18.00	25.00	40.00	60.00
7/16/2018	4:31:15 PM	25.70	49.50	11.85	14.34					18.00	25.00	40.00	60.00
7/16/2018	4:36:15 PM	25.70	49.40	11.83	14.31					18.00	25.00	40.00	60.00
7/16/2018	4:41:15 PM	25.70	49.20	11.78	14.25					18.00	25.00	40.00	60.00
7/16/2018	4:46:15 PM	25.80	49.10	11.82	14.31					18.00	25.00	40.00	60.00
7/16/2018	4:51:15 PM	25.80	49.00	11.80	14.28					18.00	25.00	40.00	60.00
7/16/2018	4:56:15 PM	25.80	48.90	11.77	14.25					18.00	25.00	40.00	60.00
7/16/2018	5:01:15 PM	25.90	48.70	11.79	14.27					18.00	25.00	40.00	60.00
7/16/2018	5:06:15 PM	25.90	48.70	11.79	14.27					18.00	25.00	40.00	60.00
7/16/2018	5:11:15 PM	26.00	48.60	11.83	14.33					18.00	25.00	40.00	60.00
7/16/2018	5:16:15 PM	26.00	48.40	11.78	14.27					18.00	25.00	40.00	60.00
7/16/2018	5:21:15 PM	26.10	48.30	11.82	14.33					18.00	25.00	40.00	60.00
7/16/2018	5:26:15 PM	26.20	48.20	11.87	14.39					18.00	25.00	40.00	60.00
7/16/2018	5:31:15 PM	26.20	47.90	11.79	14.29					18.00	25.00	40.00	60.00
7/16/2018	5:36:15 PM	26.30	47.90	11.86	14.38					18.00	25.00	40.00	60.00
7/16/2018	5:41:15 PM	26.30	47.70	11.81	14.32					18.00	25.00	40.00	60.00
7/16/2018	5:46:15 PM	26.40	47.70	11.87	14.41					18.00	25.00	40.00	60.00

Figure 9: Data visualization with table

Switching to the *Table* tab in the workspace view causes the climate data selected in the graphic to be displayed in tabular form. The displayed time in the table is the UTC time stored by the logger converted to the current system time of the computer. By selecting one or multiple lines, the user has the possibility to copy selected data using the key combination CTRL-C and inserting it (CTRL-V) for further processing in third-party software.

## 7 Troubleshooting & Frequently Asked Questions

### 7.1 MostraLog Software

MostraLog software shows occurring errors as well as possible problem solving in a pop-up bar at the bottom of the main window.

In a first step, please try to follow the instructions in the software to fix occurring problems. If you can't solve the problem, please contact technical support.

Error	Suggested solution
No USB device detected	Please make sure that a MostraLog data logger is connected to the PC via USB cable.
Problem with drive detected	Please make sure that the microSD card inserted in the MostraLog data logger is formatted correctly (FAT32).
Not possible to create download folder	The Windows® operating system denies access to user data directory (C:/USERNAME/Documents/MostraLog). Please contact your system administrator.
Not possible to save device configuration	It was not possible to store the specified device configuration on the connected device. Please make sure that MostraLog data logger is connected correctly to the PC.
The lower threshold should be smaller than the upper threshold...	When setting e.g. alarm limits, the lower alarm limit has been set higher than the upper alarm limit, please check.
The value cannot be empty	A required field was not filled. The field is marked in red and must be completed.
Please enter only letters A-Z, a-z, 0-9, '-' and '_'	Only the described characters may be entered in this field.
No data available. Download files from a device	The device or SD card was not recognized. Please plug in the device again and check if it is recognized as a USB device.
Wrong format for the timestamp	A climate data file may have been changed manually and one or more timestamps do not match the expected format.

### 7.2 MostraLog Data Logger

#### 7.2.1 Reset Alarm

In the event of an alarm, the data logger also indicates after an alarm that it has been triggered. There are two ways to disable the alarm.

Option 1:

On the device itself you can switch to the menu item *Reset (RES)* with the left key (using a paper clip). Here, the alarm must be confirmed by pressing the right button twice.

Option 2:

Resetting a triggered alarm can also be done by selecting the corresponding menu item using the remote control if the IR sensor is activated.

## 8 Imprint

### Manufacturer:

Areus Engineering GmbH  
D - Hertzstraße 16  
71083 Herrenberg  
<http://www.areus.de>

Managing directors:  
Dipl.-Ing. (FH) Osama Dengler  
Dipl.-Ing. Oliver Kraus

VAT Id.-Nr.: DE 292226103  
Tax-Nr.: 56470/01857  
Customs-Nr: 6163718  
WEEE-Reg.-Nr.: DE 22320081

Phone: +49 7032 32 098-0  
Fax: +49 7032 32 098-829  
Email: [info@areus.de](mailto:info@areus.de)

County court Stuttgart:  
HRB 245811

### Concept and sales:

Datenlogger-store.de  
Christoph Waller  
Hauptstraße 47  
DE - 79356 Eichstetten  
[www.datenlogger-store.de](http://www.datenlogger-store.de)

County court Freiburg

VAT-Id.-Nr.: DE142078540

Phone: +49 (0) 7663 608 99-0  
Fax: +49 (0) 7663 608 99-20  
Email: [info@datenlogger-store.de](mailto:info@datenlogger-store.de)

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