



## Wohler LOG 220 Temperature and Humidity Data Logger User Manual

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# WÖHLER

Operation Manual  
Temperature and humidity data logger



Wöhler LOG 220

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## General

### 1.1 Operation Manual Information

This operation manual allows you to safely work with the Wöhler Log 220. Please keep this manual for your information.

The Wöhler Log 220 should be used by trained professionals for its intended use only. Liability is void for any damages caused by not following this manual.

### 1.2 Symbols used in this operating manual



#### NOTE!

Highlights tips and other useful information.

### 1.3 Proper use

The Wöhler LOG 220 data logger is designed to record long-term temperature and humidity measurements. Consequently, it is suitable for monitoring the climate in buildings as well as ensuring ideal temperatures for heating and cooling purposes. The data logger provides long-term measurement values that make it possible to adhere to quality assurance guidelines.

### 1.4 Scope of supply

Data logger	Features
Wöhler LOG 220	1 data logger with internal temperature and humidity sensors



### 1.5 Disposal

Electronic equipment does not belong to domestic waste, but must be disposed of in accordance with the applicable statutory provisions. You may hand in any defective batteries taken out of the unit to our company as well as to recycling places of public disposal systems or to selling points for new batteries or storage batteries.

### 1.6 Adresse

## Specifications

### 2.1 Measurement values

#### Temperature

Range in Log mode	- 20 – 70 °C
Range when the display is activated	0 – 40 C
Resolution	0.1 °C
Accuracy	±0.6 °C (at -20 to 50 °C) otherwise ±1.2 °C

#### Relative humidity

Range	5% RH to 95 % RH
Resolution	0.1 % RH
Accuracy	±3% RH (at 25 °C. 10 to 90% RH) otherwise ±5% RH

#### External temperature

Range	-40 to 100 °C
Resolution	0.1 °C
Accuracy	±0.6 °C (at -20 to 50 °C) otherwise ±1.2 °C

### 2.2 Technical data

#### Logging function

Number of series measurements	5 333 pro measurement value (°C internal, °C external, % RH)
Log data	Up to 15 999
Logging rate	Can be set between 1 sec. and 4:59:59 hours

#### Ambient conditions

Ambient temperature	0–40 °C
Ambient humidity	< 80% RH
Storage temperature	-10 to 50 °C
Storage humidity	< 80% RH

## Power supply

Power supply	3V CR2 lithium battery
Battery life time	Highly related to the sampling rate: 5 month: sample rate 1s 10 month: sample rate 5s 15 month: sample rate 10s 28 month: sample rate 2h

## General technical data

Memory capacity	15 999 measurement values
Dimensions	75.5 x 53 x 23.5 mm
Weight	Approx. 100 g

## Design and function

### 3.1 Data logger

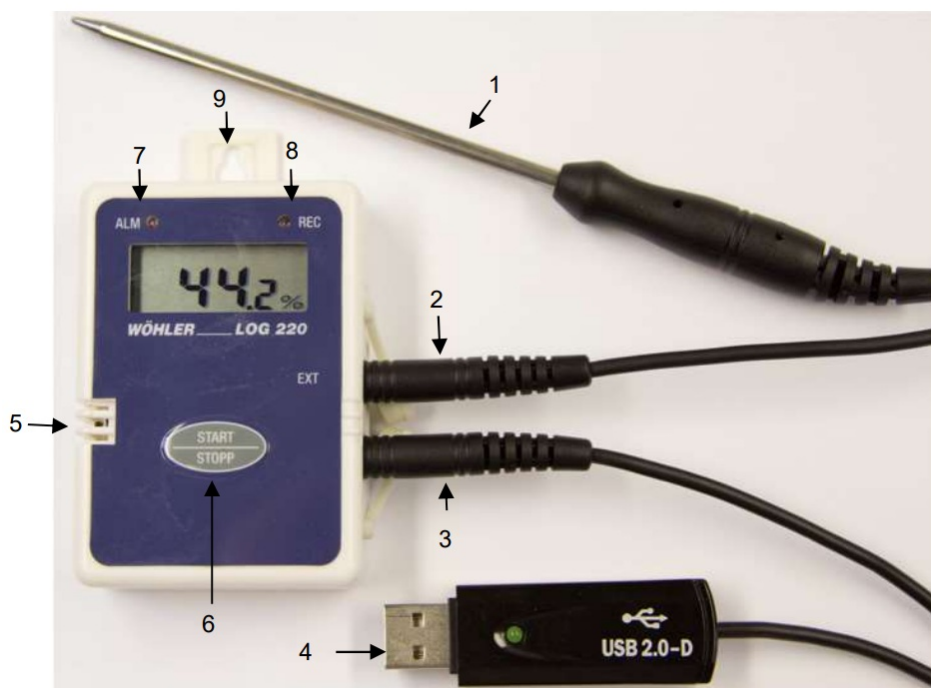


Fig. 11: Wöhler LOG 220 – Device components and connections

## Legend

1. External temperature probe (accessory, not included in the delivery)
2. Connection for external temp. probe
3. Connection for USB adapter cable
4. USB adapter cable (included in the Wöhler CDL 210 energy efficiency measurement case)
5. Internal humidity sensor and temperature sensor
6. START/STOP button
7. Alarm LED
8. Record LED
9. Hanger to safely position the device

### 3.2 Display layout

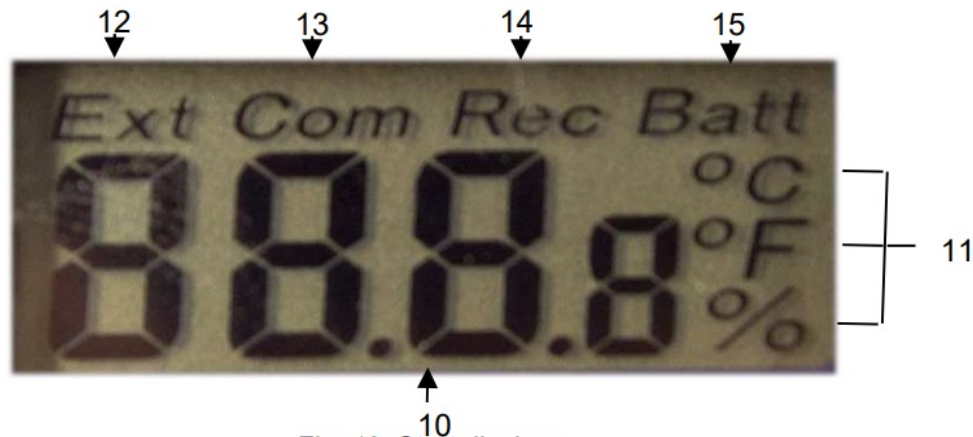


Fig. 12: Start display

10. Measurement value display
11. Measurement unit
12. External temperature measured by the connected external temperature probe



#### NOTE!

If no external temperature probe is connected, — is displayed below “Ext”.

1. Com (communication): Is displayed when data is transferred to a PC
2. Rec: Is displayed when data recording in progress
3. Low battery warning

### Data recording



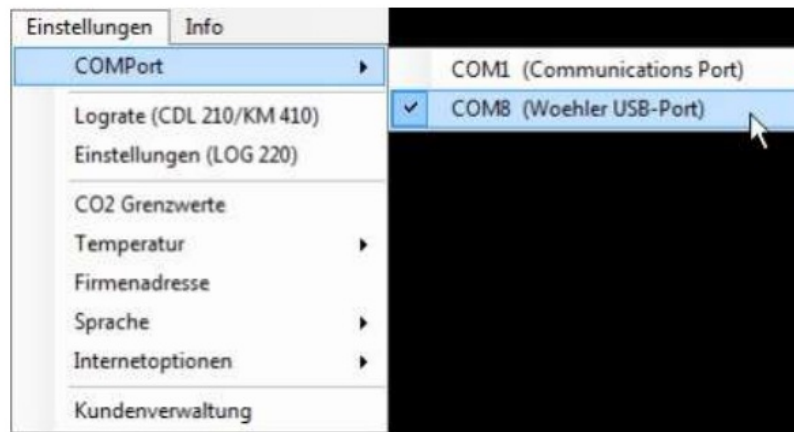
#### NOTE!

To be able to use the data logger you require the Wöhler indoor environment software as well as the driver for the USB adapter cable.

- Install both before starting the data logger on your PC.

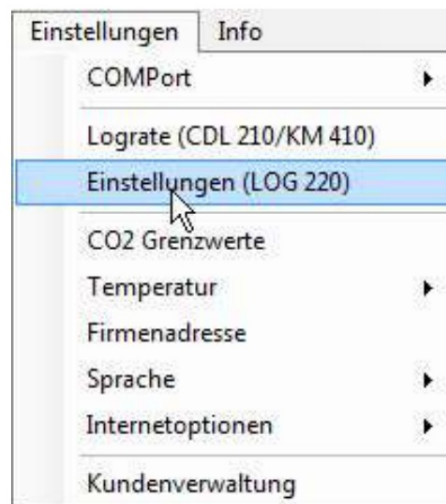
There are two options to set the Wöhler LOG 220 to the recording mode: By pressing the START/STOP button on the data logger or by presetting the starting time in the indoor environment software. To be able to use either of the options you must first make appropriate settings in the software. However, it is not necessary for the data logger to be connected to a PC when recording data.

## 4.1 Pre settings



*Fig. 13: Wöhler indoor environment software – Selecting the COM port*

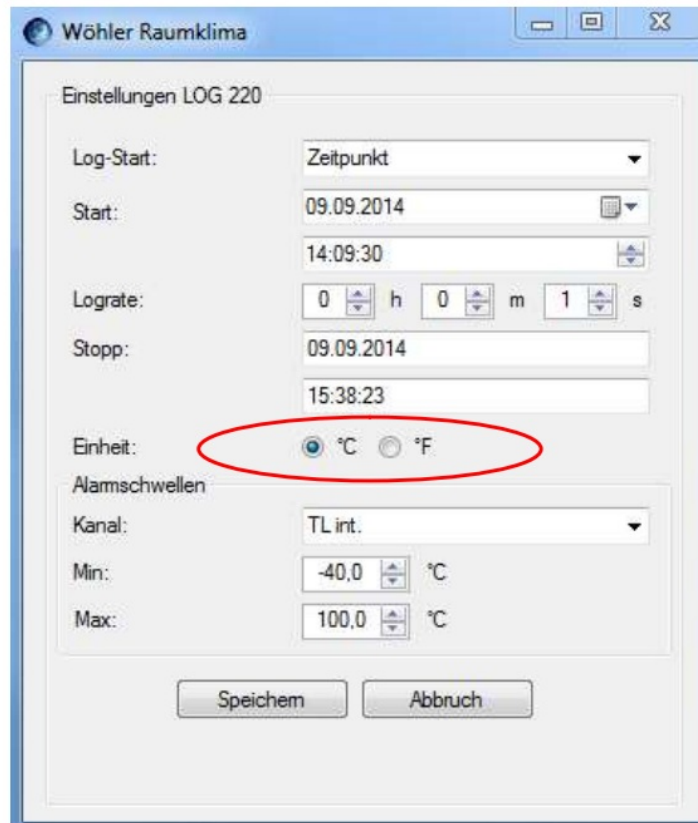
- Launch the Wöhler indoor environment software
- Connect the Wöhler LOG 220 with the PC using the USB adapter cable.
- Select the COM port (Settings > COMPort > COMX (Wöhler USB port))



*Fig. 14: Wöhler indoor climate software – choosing settings for the data logger*

- Select Settings > Settings (LOG 220).

### 4.1.1 Selecting the temperature unit

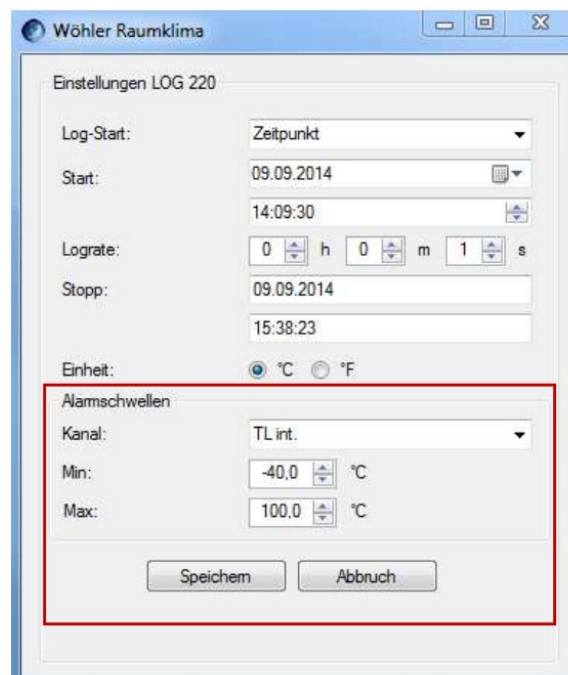


*Fig. 15: Device displays temperature in °C*

- Click the desired temperature unit (°C or °F).
- Click Save to save the setting.

The data logger will now display the temperature in the selected unit.

#### 4.1.2 Setting alarm thresholds



It is possible to set alarm thresholds for the temperature measured by the internal temperature sensor (TL int.), the temperature measured by the external temperature probe (TL ext.), and the relative humidity (RH).

- Select the channel for which the alarm thresholds are to be set.
- Select the upper and lower alarm thresholds in the respective Min:/Max: temperature box.
- Click Save to save the setting.
- The red Alarm LED flashes if a measured value exceeds the set alarm thresholds, see Fig. 1 position 7.

## 4.2 Beginning recordings using the indoor climate software

### 4.2.1 Online measurement

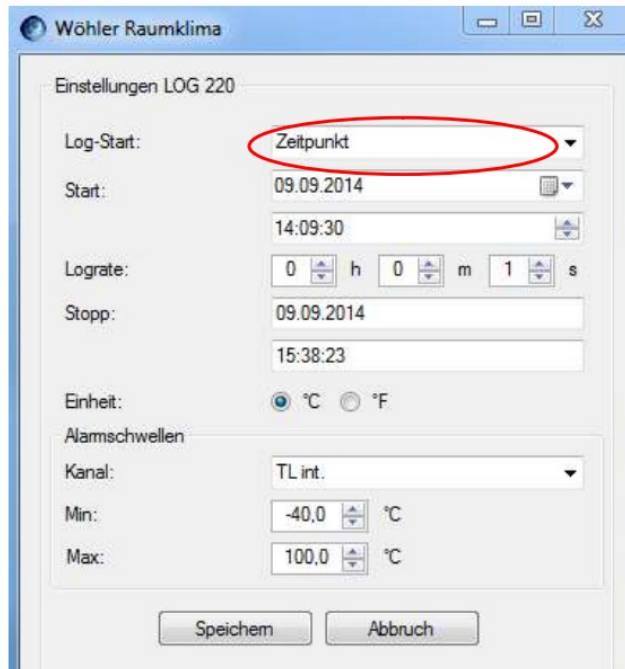


**Fig. 16: Beginning online measurement**

- Perform the steps described in chapter 4.1. When taking online measurements the measurement values are transferred immediately from the data logger to the PC. In the main screen of the software, click "Online measurement"
- Enter the desired measurement interval.
- To start recording, select the "Online measurement" check box to activate the recording.
- To stop recording, clear the "Online measurement" check box to deactivate the recording.

### 4.2.2 Starting the recording at a preset starting time





*Fig. 17: Wöhler indoor climate software – time setting for when data recording is to start automatically*

- Perform the steps described in chapter 4.1.
- Select Start logging > Time.
- Enter the time when recording should start and the logging rate. The program calculates the stop time automatically. Recording stops when the data memory is full.
- Click Save to save the setting. You can now disconnect the data logger from the PC. The data logger will begin recording automatically at the set time.

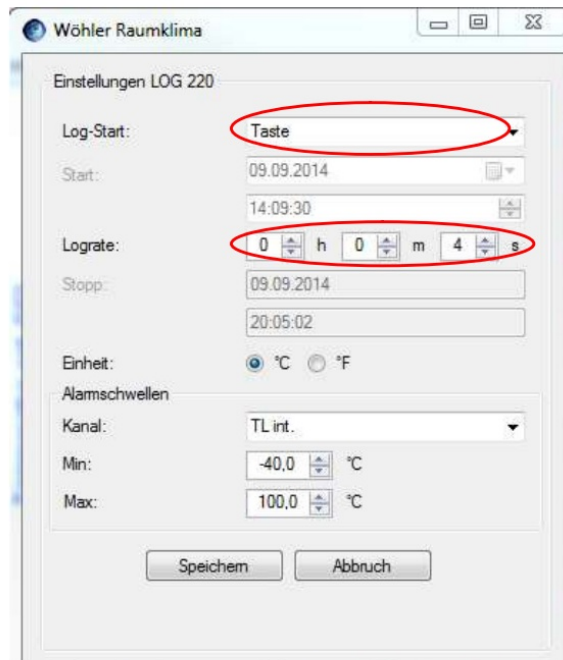


#### **NOTE!**

Data recordings are not shown in the data logger display when the device is set to logging mode. During the recording process, the REC LED flashes when recording a new value.

- If you wish to stop recording earlier than planned, press the START/STOP button on the data logger. The measurement values are then shown in the display. The data logger continues to record data. REC is shown in the display.
- To abort the recording, press and hold the START/STOP button for 2 seconds.
- To switch off the data logger, press the START/STOP switch again.

### **4.3 Starting recording by pressing the device button**



*Fig. 18: Software settings before beginning to operate the device by pressing the device button*

- Perform the steps described in chapter 4.1.
- Select Start logging > Button.
- Set the logging rate.
- Click Save. You can now disconnect the data logger from the PC and position the device anywhere you wish.
- To begin recording, press the START button on the data logger.

The start display is shown for 3 seconds, see Abb. 2. The temperatures measured by the internal temperature sensor and the external temperature probe as well as the relative humidity are then shown alternately. The recorded data are saved in the memory of the data logger.

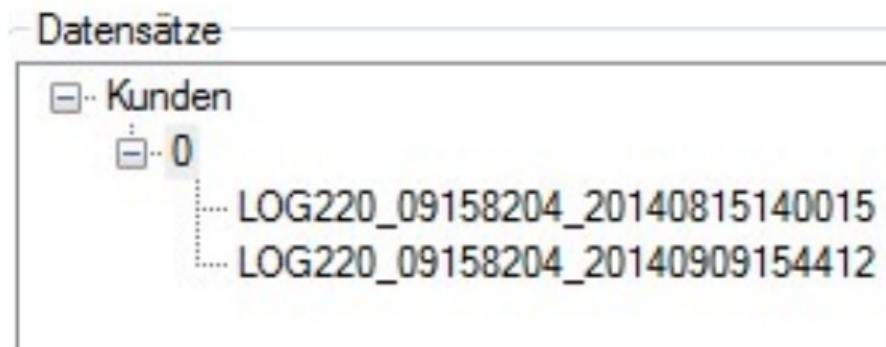
- To stop the recordings, press the STOP button again.



#### **NOTE!**

To start recording data again at the click of a mouse, you must first activate the function Start logging > Button again in the indoor climate software, see Abb. 8.

## **4.4 Reading out data**



**Fig. 19: Read out data sets**

- To read out data, connect the data logger again to the PC with the USB adapter.
- Select the correct COMPort (Settings > COMPort > COMx (Wöhler USB port)).
- In the main screen of the indoor climate software, click “Read out data”. The data will now be displayed in the graphic display of the software.

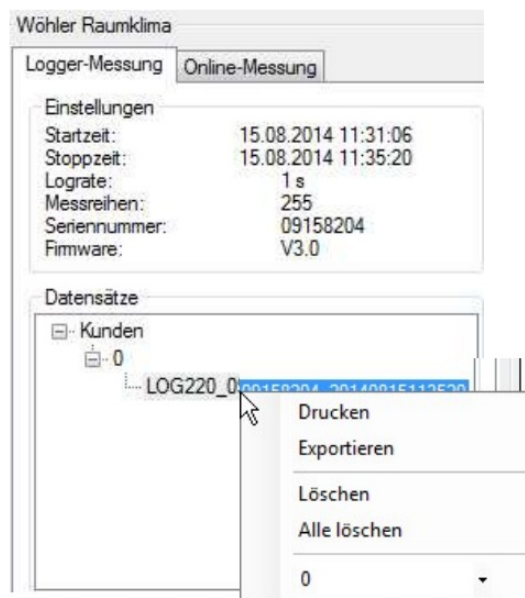
The log file is displayed in the main screen under customer.



**NOTE!**

Data recording is stopped if data is read out when data recording is in progress.

#### 4.5 Data processing



**Fig. 20: Wöhler indoor climate software - data administration**

It is possible to print out the graphic in a log report or export the data for further processing and documentation as a csv file.



**NOTE!** More detailed information about other setting options in the indoor climate software, and in particular customer administration options, is provided in the operating manual “Indoor climate software”, article number: 22413.

## Replacing the battery

- Replace the battery when the battery symbol appears in the display.
- Undo the 4 cross-head screws on the rear of the device and remove the rear part of the housing.
- Replace the used battery with a CR2 Lithium battery. Observe the correct polarity when inserting the battery.
- Screw the rear part of the housing back onto the data logger.


## Accessories

External temperature probe Wöhler LOG 220	Order No.: 6507
3V CR2 lithium battery, 2 pack	Order No.: 6508

### Points of sale and service Your contact:

<b>Germany</b> Wöhler Technik GmbH Wöhler-Platz 1 33181 Bad Wünnenberg Tel.: +49 2953 73-100 Fax: +49 2953 73-96100 <a href="mailto:info@woehler.de">info@woehler.de</a> <a href="http://www.woehler.de">www.woehler.de</a>	<b>USA</b> Wohler USA Inc. 208 S Main Street Middleton, MA 01949 Tel.: +1 978 750 9876 <a href="http://www.woehlerusa.com">www.woehlerusa.com</a>
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## Documents / Resources

	<a href="#">Wohler LOG 220 Temperature and Humidity Data Logger</a> [pdf] User Manual LOG 220, Temperature and Humidity Data Logger, LOG 220 Temperature and Humidity Data Logger
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## References

- [W Wöhler Technik GmbH](#)
- [W Wöhler France SARL](#)
- [W Wöhler Italia SRL](#)
- [W Wohler USA Inc.](#)