

Operating Instructions

LOG100/110/CRYO

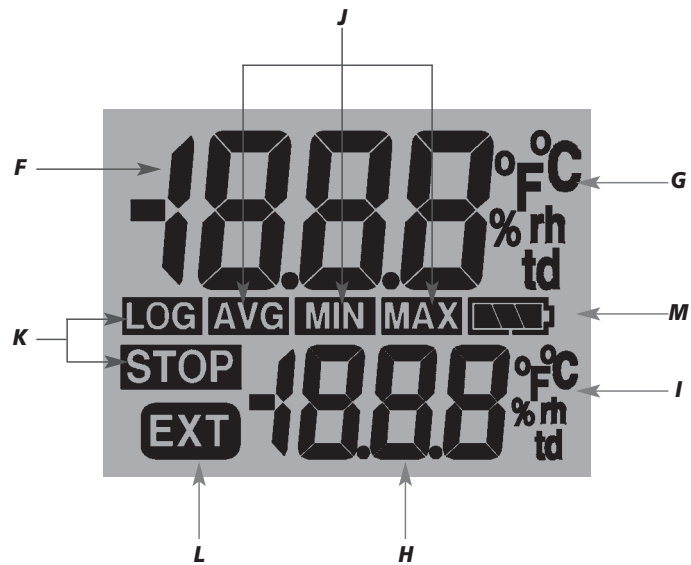


Nr. 5005-0100
Nr. 5005-0105
Nr. 5005-0110

Fig. 1



Fig. 2



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1. Introduction

Dear customer,

thank you very much for purchasing one of our products. Before operating the data logger please read this manual carefully. You will get useful information for understanding all functions.

1.1 General advice

- *For cleaning the instrument please do not use an abrasive cleaner only a dry or wet piece of soft cloth.*
- *Please store the measuring instrument in a dry and clean place.*
- *Avoid any force like shocks or pressure to the instrument.*
- *Do not use force to connect the probe or the interface plugs in. The interface plug is different from the probe plug.*

1.2 Before operation

- *Before operating the instrument take the instrument out of the packaging. Check whether a full battery CR2032 (3 Volt) is already inserted.*



Display indication



*Display indication after key depression
FS = Factory settings*

- *After inserting the battery the instrument displays for 10 seconds the actual measurements, afterwards the instrument displays for 30 seconds "FS", after this the instrument turn off. The same procedure appear after pressing any button.*

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1.3 Standard settings / Factory settings

- Note the following default settings of the data logger before first use. By using the DE-LOG-Graph software, the setting parameter can easily be changed:
 1. Description: blank (max. 16 characters)
 2. LCD-Snooze mode:
 3. LCD-Snooze after Sec.: 10
 4. Mode-button active:
 5. Alarm settings for temperature:
Log100/110: -30,0°C 70,0°C -40,0°C 150,0°C
Log100CRYO: -10,0°C 70,0°C -200,0°C 350,0°C
Alarm settings humidity: 0,0% 100,0% (Log110 only)
 6. Alarm delay:
 7. Alarm cumulation: off
 8. Alarm reset:
 9. Alarm-LED-interval 3 seconds
 10. Alarm-LED-blink duration 1 second
 11. Alarm-Buzzer-interval 30 seconds
 12. Alarm-Buzzer-duration 1 second
 13. Temperature unit: °C
 14. Start-button active:
 15. Start by Reed-contact: (by request only)
 16. Waiting for manual start:
 17. Single use only:
 18. Measuring interval: 15 Minutes
 19. Stop-button active:
 20. Stop by Reed-contact: (by request only)
 21. Cycle memory: (if the memory is full the oldest measurement will be overwritten)

= Default

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1.4. Marking

- Log100/110/100CRYO: CE-conformity
- Log100 only: EN 12830, EN 13485, Suitability for storage (S) and transportation (T) for food storage and distribution(C), Accuracy classification 1 (-30..+70°C), according to EN 13486 we recommend a recalibration once per year.

2. Operation

- For configuring the data logger, please install the Software DE-LOG-Graph on a PC.

2.1 USB-Port

- When the Software Installation has been completed please connect the PC with data logger via USB-cable. For detailed information please read the manual of the DE-LOG-Graph-Software.

2.2 Panel and display (Fig. 1)

Log100/110/100CRYO have a large display, two LEDs and two buttons.

A: LCD-display indicate humidity, temperature, external temperature(in case of an external sensor), Low bat-warning, Max-Min-Avg-measurements, status information

B: Start-Stop-button

C: Mode-button

D: LED: green/red

E: USB-port (with rubber cap)

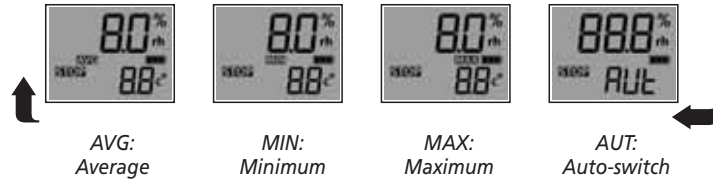
2.3 Button-handling

- On the front panel there are two buttons. Both buttons can be deactivated by using the Software DE-LOG-Graph, to prevent unauthorized use.

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- **Start-Stop-button:**
Depending on the setup configuration, you can start or Stop the data logger via the mentioned Start-Stop-buttons. You have to press and hold the buttons 3 seconds. When it starts a short acoustic signal and the green LED will flash and the display indication will switch from STOP to LOG.
- **Mode-button:**
By pressing the Mode-button you will see on the bottom line the Average (AVG)-, Minimum (MIN)- and Maximum (MAX) temperature of the recorded measurements. If the data logger is not started it will display --- instead of AVG, MIN or MAX temperature.



By using the AUTO-Mode (AUT) the display will switch automatically every two seconds.

In LOG mode, acoustic alerts can be disabled by pressing the Mode-button for 2 seconds (Display "Bep Off").

2.4 Display segments of LCD (Fig. 2)

- Besides the two measurements, the large LCD displays several status information. By using the Software DE-LOG-Graph you are able to switch on or off the display, or to setup an interval how long the display will stay on when no button is pressed (snooze function). By using this function it is possible to prevent it displaying information to unauthorized persons.

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- F: **Measurement 1** displays the current relative humidity (Log110) or the current temperature (Log100 / Log100CRYO).
- G: **Unit Measurement 1** display the current measuring unit of measurement 1.
- H: **Measurement 2** displays the measurement in the lower display line. Depending on the logger model, the settings of the internal or the external temperature measurement, average, minimum or maximum measurements will be displayed.
- I: **Unit Measurement 2** display the current measuring unit of measurement 2.
- J: **MAX-MIN-AVG** display the average, minimum or maximum measurements.
- K: **Status info** display the operation mode LOG or STOP. LOG indicates the recording mode and STOP indicates standby mode.
- L: **External probe EXT** s displayed when an external sensor is connected. In the lower display line the measurement 2 is corresponding with the external sensor.
- M: **Lowbat** indicates the capacity of the battery.

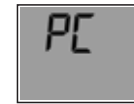
Note: °C = Celsius, °F = Fahrenheit
%rh = relative humidity, td = dew point temperature

Other display information

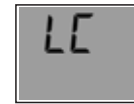
- In addition to the above mentioned information, the display also indicates several other information. This information will be displayed depending on the display settings (snooze function) and operation mode:



Display switched off

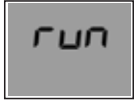


connected to the PC



Logger configured

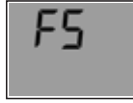
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Logger
is recording



Battery
(total empty)



Factory settings

2.5 LED-Indication and Buzzer

- The two LED's and the internal buzzer help you to understand all logger information, several status modes and alarm indications.
- **LED green:**
The green LED flashes during the logger start and according to the measuring interval if the standard settings hasn't been changed.
- **LED red:**
The red LED flashes when Hi- or Lo-Alarm has been achieved.
- **Buzzer:**
The Buzzer rings when Hi- or Lo-Alarm has been achieved (if the buzzer is not deactivated). The Buzzer also rings when the configuration has been transferred successful from the PC to the Logger.
- You can activate or deactivate both, LEDs and Buzzer by using the Software DE-LOG-Graph.

2.6 USB-Port

- For readout or programming, the data logger must be connected via USB-cable with a PC.
- View from the front: On the left side there is the USB-port. The port is protected by a small white rubber cap. To operate the USB-port please remove the rubber cap.

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- After the completed communication with the PC do not forget to plug the rubber cap back into the port. It prevents dirt and water from entering the data logger.

2.7 External sensor connection

- Use the USB socket to connect the external temperature sensor. Therefore remove the rubber cap from the USB socket. Afterwards connect the external probe by use of the socket. The probe will be registered automatically.
- **Note:** Using the external temperature sensor the instrument loses the splash water protection (IP65).

2.8 Rear side of the data logger / battery case

- On the rear side of the data logger you will find the battery case and a printed sticker.

2.9 Replacing battery

- To replace the battery please open the battery cover on the rear side. Therefore you have to turn the battery cover 90° to the left. Remove the battery from the instrument and replace with a new battery.
- The "BAT" symbol indicates that the battery needs to be exchanged. The instrument allows app. 10 hours of further operation after displaying the "BAT" symbol. The battery symbol indicates according to the battery status between 1 to 3 segments.
- If the display indicates only "PF", the battery is completely exhausted. Please replace the battery immediately.

3.0 Waste disposal

This product has been manufactured using high-grade materials and components which can be recycled and reused.

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Never dispose of empty batteries and rechargeable batteries in household waste.

As a consumer, you are legally required to take them to your retail store or to appropriate collection sites depending on national or local regulations in order to protect the environment. The symbols for the heavy metals contained are:
Cd=cadmium, Hg=mercury, Pb=lead



This instrument is labeled in accordance with the EU Waste Electrical and Electronic Equipment Directive (WEEE). Please do not dispose of this instrument in household waste. The user is obligated to take end-of-life devices to a designated collection point for the disposal of electrical and electronic equipment, in order to ensure environmentally-compatible disposal.

3.1 Specifications

Data logger	Log100 Temperature	Log100CRYO Temperature	Log110 Temperature humidity
Internal temperature probe	-30..+70°C	-10..+70°C	-30..+70°C
External temperature probe	-50..+125°C	-200..+350°C	-50..+125°C
Relative humidity	- - -	- - -	0..99%rH
Memory	← appr. 60.000 Data sets →		
Interface	← USB →		
Working temperature (without display)	-30..+70°C	-10..+70°C	-30..+70°C

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Storage temperature	← -30..+70°C →
Dimensions	← 88 x 55 x 20 mm →
Weight	← 95 g →
Power supply	← 1 x CR2032 3 V →