



Q-tag CLm doc Devices User Guide

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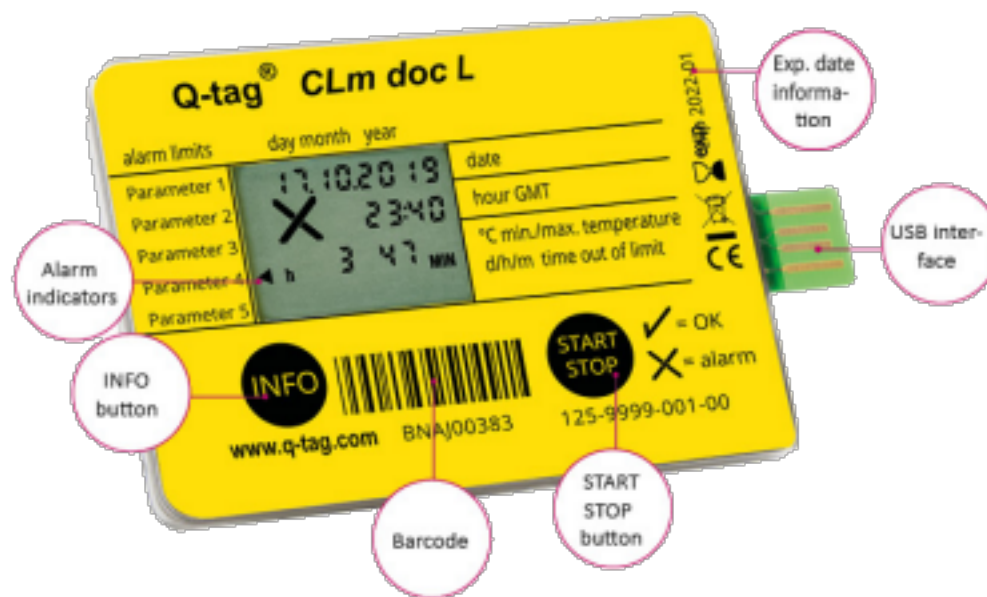
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Document Purpose

This document provides detailed information about Q-tag CLm doc devices: Q-tag CLm doc, Q-tag CLm doc L, Q-tag CLm doc LR, Q-tag CLm doc D, Q-tag CLm doc Ice, and Q-tag CLm doc Ice R.

Introduction



The Q-tag CLm doc family monitors reliably and precisely preset temperature profiles. It indicates the current date and time and provides a visual indication of ALARMS on the display. Details about ALARM events may be obtained upon pressing the INFO button and/or via a downloaded report achieved through the USB connection with a computer.

Data verification is facilitated by the Sensitech Verifier, allowing users to confirm the information recorded by each CLm doc device. For comprehensive data management, Sensitech SmartView provides advanced analysis of temperature data collected from Q-tag CLm doc devices, supporting substantial enhancements in workflow efficiency.

Product Overview

Q-tag CLm doc L



The durable one

To monitor your transport and storage

Single-use data logger with 38,000 log points.

[Technical / Device Information](#)

Q-tag CLm doc D



The cool one

To monitor your dry ice packages

Single-use data logger with 38,000 log points

[Technical / Device Information](#)

Q-tag CLm doc LR



The profitable one

To monitor your transport
Reusable data logger with 38,000 log points

[Technical / Device Information](#)

Q-tag CLm doc



The clever one

To monitor your passive cold transport
Single-use data logger

[Technical / Device Information](#)

Q-tag CLm Ice



The frosty one

To monitor your frozen packages

Single-use data logger with 38,000 log points

[Technical / Device Information](#)

Q-tag CLm Ice R



The restart able chilly one

To monitor your frozen packages

Reusable data logger with 38,000 log points

[Technical / Device Information](#)

Display Explanations

The Q-tag CLm doc family monitors reliably and precisely preset temperature profiles. It indicates the current date and time and provides a visual indication of ALARMS on the display. Details about ALARM events may be obtained upon pressing the INFO-button and/or via a downloaded report achieved through the USB connection with a computer.



1. OK (✓) or ALARM (✗) indicator
2. Individual ALARM indicators ◀
3. Operating indicator (running indicator) ●
4. START indicator (device started)
5. TIME EXP: time expired indicator (allowed recording time exceeded, optional)
6. EXP OFF: device expired
7. OFF indicator (device stopped)
8. Duration display (DAY/h or h/MIN) and temperature display
9. Time display (duration and temperature display in sleep mode)
10. Date display (details of ALARM settings in sleep mode)

State of Delivery / Sleep Mode

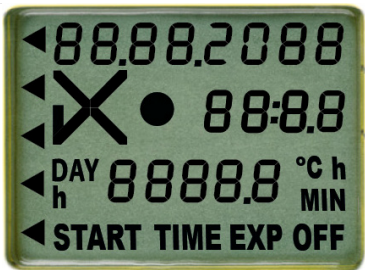
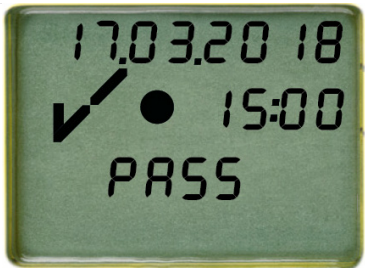
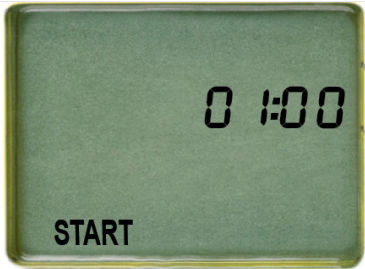
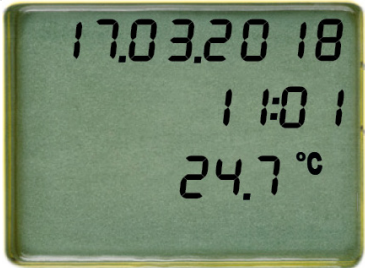
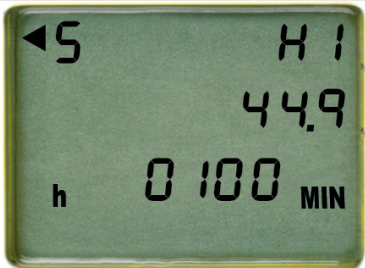
Q-tag CLm doc devices will be shipped in the “sleep mode”.

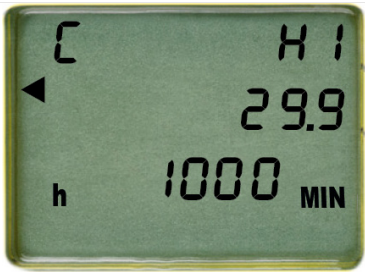
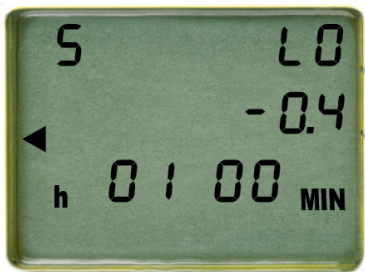
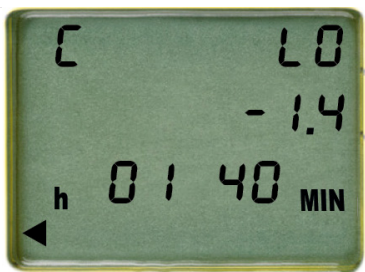
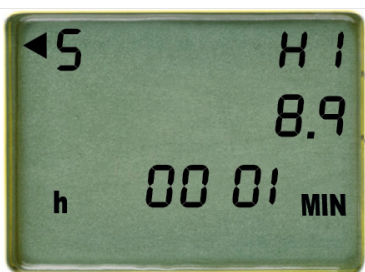


In this mode, the display is blank. This is the state of delivery of the device. The device is not activated, and no data is recorded.

Gathering Information Prior to Device Activation (in sleep mode)

Diverse information can be read after the INFO button has been pressed 3 times in one second. After 1 minute the device goes back into sleep mode; the display is blank again. (The date format is dd/ mm/yyyy.)

1 st Display:		All segments activated
2 nd Display:		Date and time of production test results
3 rd Display:		Start delay time
4 th Display:		Current date, time, and ambient temperature
5 th Display:		Temperature, time limits and ALARM type S: single event HI: high limit Time: h 01 00 MIN

		Explanation: Alarm occurs if the limit of 44.9°C is exceeded by 1 hour continuously.
6th Display: *		Temperature, time limits and ALARM type C: cumulative event HI: high limit Time: h 10 00 MIN Explanation: Alarm occurs if the limit of 29.9°C exceeds 10 hours in total (sum of HI Range violation).
7th Display: *		Temperature, time limits and ALARM type S: single event LO: low limit -0.4°C Time: h 01 00 MIN Explanation: Alarm occurs if the limit of -0.4°C is undercut by 1 hour continuously.
8th Display: *		Temperature, time limits and ALARM type C: cumulative event LO: low limit -0.4°C Time: h 01 40 MIN Explanation: Alarm occurs if the limit of -1.4°C is undercut by 1 h 40 min. (sum of LO range violation).
9th Display: *		Temperature, time limits and ALARM type S: single event HI: high limit Time: h 00 01 MIN Explanation: Alarm occurs if the limit of 8.9°C exceeds 1 minute continuously.
10th Display:		Time expiry (max. running time in days) Explanation: TIME EXP appears on the display after 20 days of operation.

* This is shown only for factory-preset settings; otherwise, it is omitted.

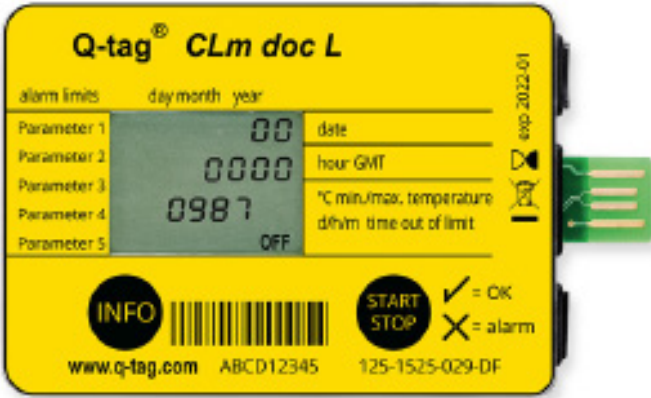
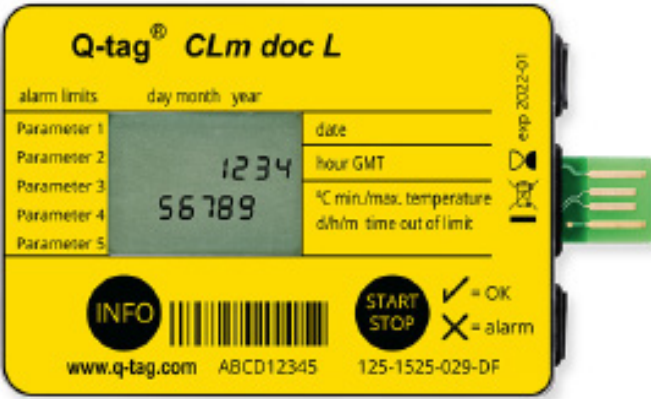
Start It

In this section:

- [Reading out CID/serial number](#)
- [Activation of a Q-tag CLm doc family device](#)

Reading out CID / serial number

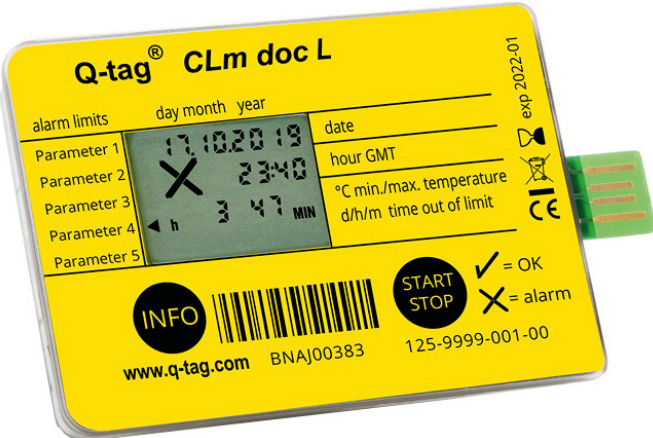
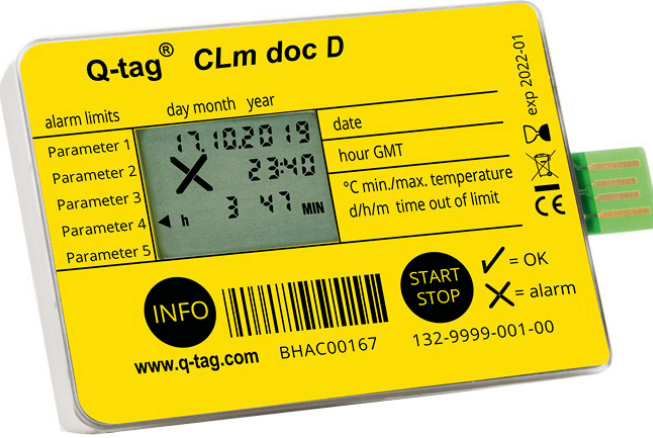
Before activation press and hold the INFO button until the display starts up. The CID number (configuration ID) is shown for 10 seconds, after that the serial number is displayed for 10 seconds. Then the display goes back into sleep mode.

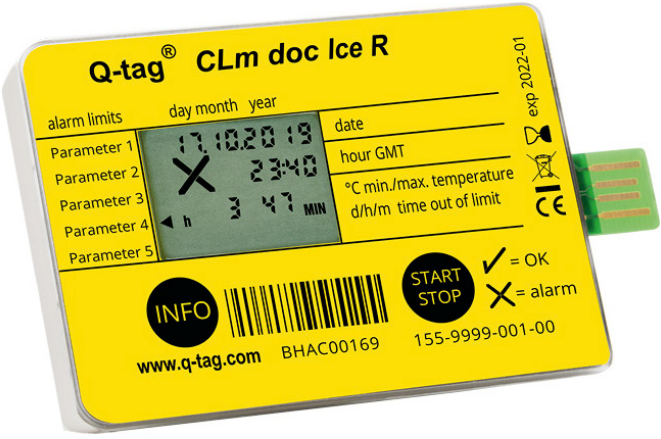
	CID (Configuration Identification Number)
	Serial number

After activation (start logging) both numbers cannot be read through the device anymore. After stopping, the CID and serial number can be read through the PDF file with a computer.

Activation of a Q-tag CLm doc family device

Q-tag CLm doc devices can be started as follows:

Q-tag CLm doc L	To initiate a shipment, press and hold the START/ STOP button until the display starts. Active recording is shown by the ✓ (OK symbol) or ✗ (ALARM symbol) and the flashing dot on the LCD.	 The image shows a yellow Q-tag CLm doc L device. The LCD screen displays '17.10.2019' for the date, '23:40' for the hour GMT, and '3 47 MIN' for the temperature. A large 'X' is shown on the screen, indicating an alarm. The device has a 'START STOP' button and a 'break to stop' label. The bottom of the device shows the website 'www.q-tag.com', the ID 'BNAJ00383', and the serial number '125-9999-001-00'.
Q-tag CLm doc D & CLm doc Ice	To initiate a shipment, press and hold the START/ STOP button until the display starts. Active recording is shown by the ✓ (OK symbol) or ✗ (ALARM symbol) and the flashing dot on the LCD.	 The image shows a yellow Q-tag CLm doc D device. The LCD screen displays '17.10.2019' for the date, '23:40' for the hour GMT, and '3 47 MIN' for the temperature. A large 'X' is shown on the screen, indicating an alarm. The device has a 'START STOP' button and a 'break to stop' label. The bottom of the device shows the website 'www.q-tag.com', the ID 'BHAC00167', and the serial number '132-9999-001-00'.
Q-tag CLm doc	To initiate a shipment, press and hold the START/ STOP button until the display starts. Active recording is shown by the ✓ (OK symbol) or ✗ (ALARM symbol) and the flashing dot on the LCD.	 The image shows a yellow Q-tag CLm doc device. The LCD screen displays '17.10.2019' for the date, '23:40' for the hour GMT, and '3 47 MIN' for the temperature. A large 'X' is shown on the screen, indicating an alarm. The device has a 'START STOP' button and a 'break to stop' label. The bottom of the device shows the website 'www.q-tag.com', the ID 'BCAH98862', and the serial number '105-9999-001-00'.

Q-tag CLm doc LR & CLm doc Ice R	Option 1: To initiate a shipment, press and hold the START/STOP button until the display starts. Option 2: After reactivation with the software, easy go and disconnect the device from the USB interface. Option 3: After preconfigured auto start date and time Active recording is shown by the ✓ (OK symbol) or ✗ (ALARM symbol) and the flashing dot on the LCD.	 Important: Before reactivating a Q-tag CLm doc LR or Q-tag CLm doc Ice R device you must connect the device to a USB port, please read out the recorded data, otherwise the recorded data will be lost!
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Expiry date: Please always verify the expiry date prior to using any device.

Expiry date explanation: Example exp 2020-01: In this example, the expiry date of the device is January 2020 or 365 days after first use.

Q-tag Easy Go Software



Reconfiguration and Backup

The Q-tag easy go software is used to activate and reconfigure Q-tag CLm doc LR and Q-tag CLm doc Ice R devices as well as to safeguard the collected data.

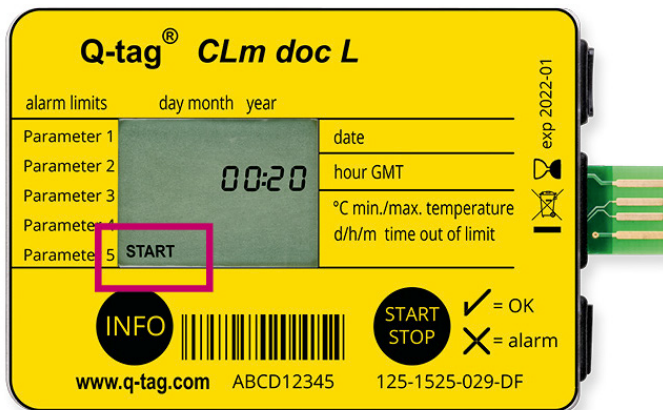
EO: sales@eofirm.com | www.eofirm.com | 0755-84200058

Send It

In this section:

- [Start Delay](#)
- [Error Messages](#)
- [Temperature Recording / Placing the Device](#)
- [Add a Marker](#)
- [Display Indication During Temperature Recording](#)

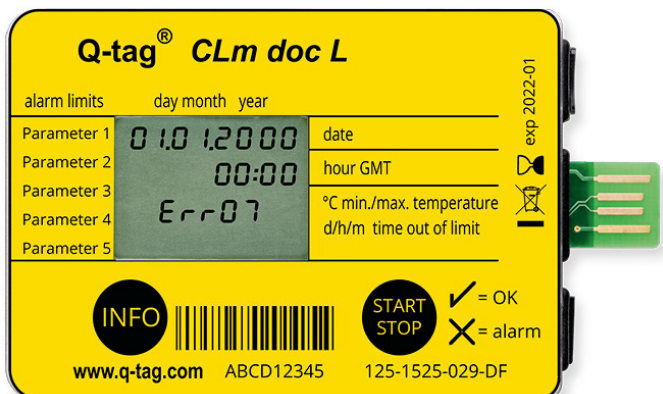
Start Delay (optional)



If a start delay has been preset, the device starts recording the temperature after the completion of the start delay time. The start delay time is displayed by the flashing START and the remaining time of the countdown.

Stopping the device during the start period is not possible.

Error Messages



An error message can only occur before or during the device activation. If an error message like in the example occurs, do not use the device in any case!

(Possible error notifications: Err01-Err17)

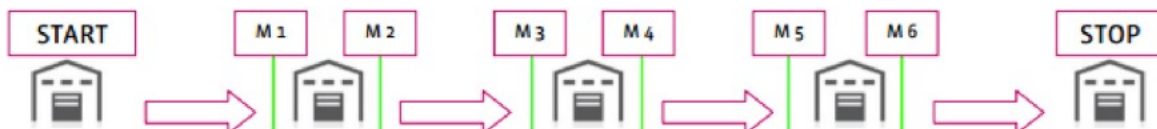
Please contact the Sensitech support team immediately: Sensitech.support@carrier.com

Temperature Recording / Placing the Device

The activated monitor must be placed immediately in its predetermined location. As described in the SOP, or otherwise it is recommended to place the device as close to the supervised goods as possible. This is an important prerequisite to ensure the temperatures observed by the device are as close to the product temperature as possible.

Important: It is recommended to “precondition” the device to the desired mean temperature for about 30 minutes before use, especially if no start delay time has been programmed. This is to ensure against false readings during start-up.

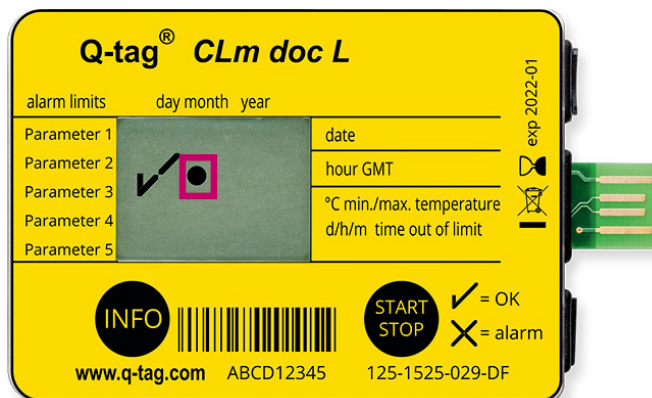
Add a Marker



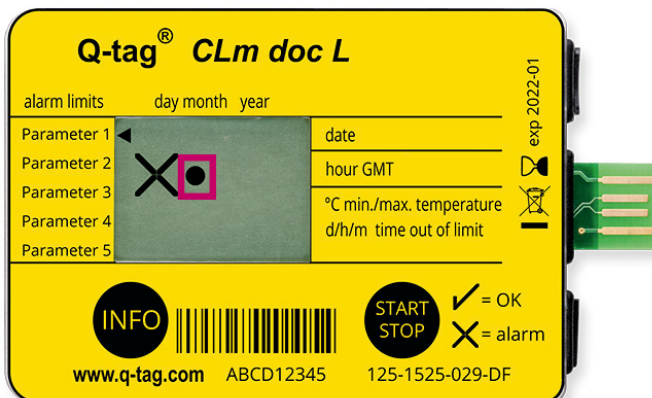
To mark a special event like the start of a destination “A” or an arrival of a destination “B” with a time stamp (M1, M2, etc.) on the PDF, press the INFO button 3 times in a row. When setting the first marker “1” will be shown at the display for 3 seconds, after that the information disappears. For the next marker “2” is shown on the screen and so on and so forth. Up to 255 markers can be set per run.

Display Indication During Temperature Recording

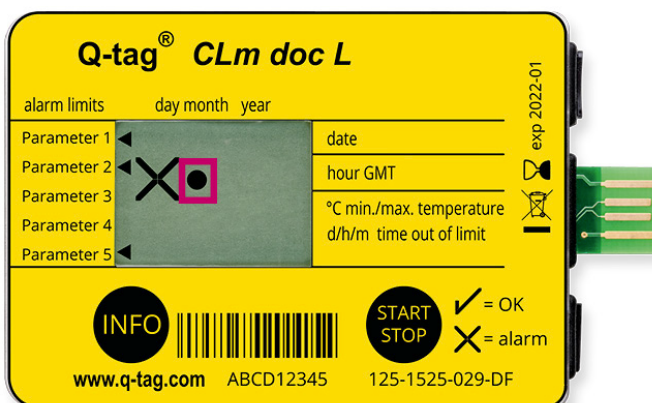
A ✓ (OK symbol) is indicated during normal operation as long as no ALARM has been recorded.



This ✓ (OK symbol) will be replaced by a ✕ (ALARM symbol) as soon as any ALARM has been triggered. (1 violation)



Additional arrows are shown in the left display area to indicate which limit has been violated. The operating indicator is flashing. (3 violations)



Stop It

In this section:

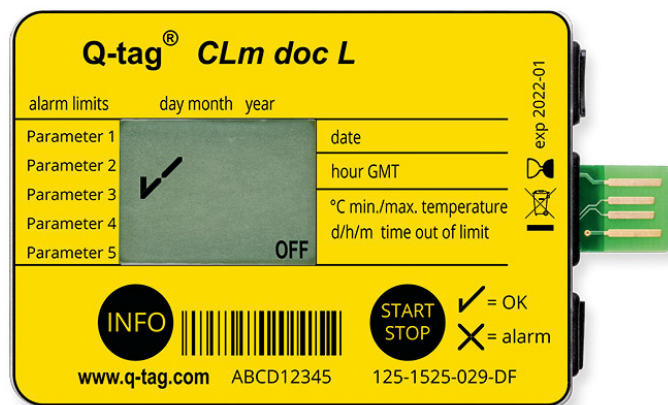
- [End of Temperature Recording / STOP Mode](#)
- [Reading the Display After the Device Has Been Stopped](#)
- [Gathering Information After Activation of the Device or in Stop Mode](#)

End of Temperature Recording / STOP Mode

The device may be stopped if the recording shall be finished, e.g. if a shipment has reached its final destination.

To do so press and hold the START/STOP button until OFF appears on the bottom right corner of the display.

The dot will disappear.



For the Q-tag CLm doc only the plastic USB cover must be pushed down and up to break off the STOP tab.

The display indicates "OFF" and the flashing dot disappears.

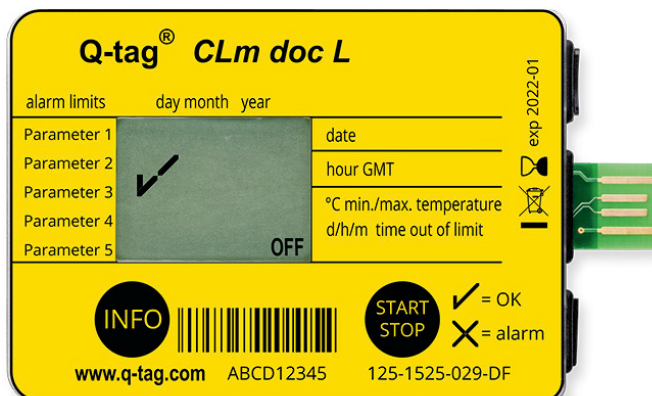


Important: All other indicators such as ✓ (OK symbol) or ✗ (ALARM symbol) and individual ALARM arrows remain stable for at least 3 months after recording has been stopped.

Reading the Display After the Device Has Been Stopped

OK display

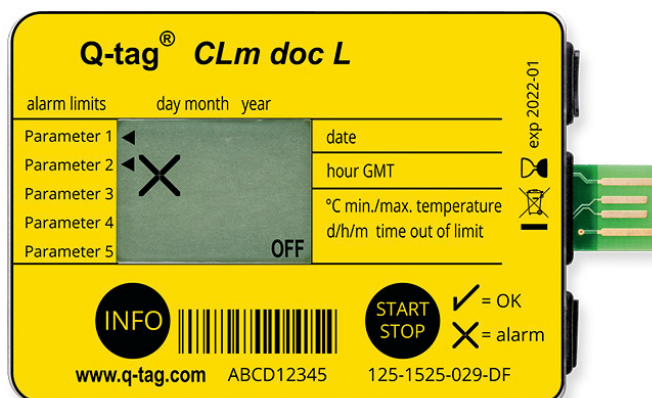
The monitored goods have not been exposed to temperature and time conditions outside the preset ALARM parameters.



ALARM display

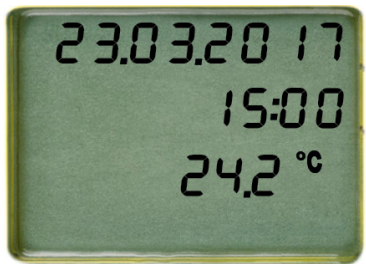
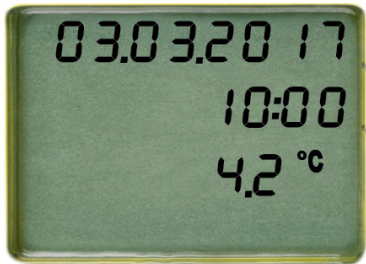
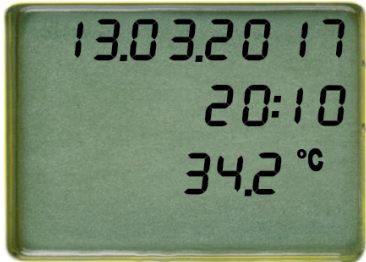
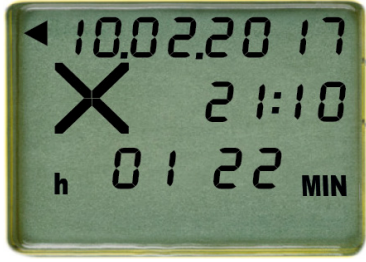
The monitored goods have been exposed to temperature and time conditions outside the preset ALARM parameters.

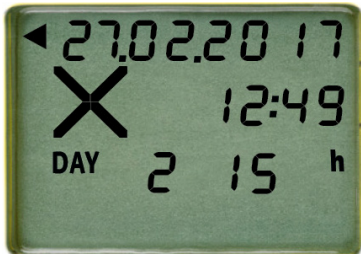
Important: the ALARM indication cannot be cancelled or reset.



Gathering Information After Activation of the Device or in STOP Mode

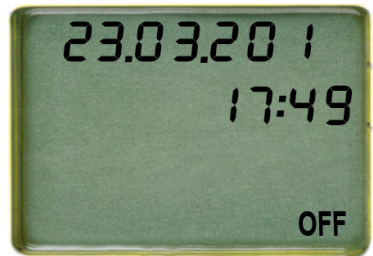
The information indicated on the LCD screen upon successive pressing of the INFO button after activation or in STOP mode is explained below. (The date format is dd/mm/yyyy).

1.	Current date, time, and ambient temperature	
2.	Temperature minimum with date and time of occurrence	
3.	Temperature maximum with date and time of occurrence	
4.*	Date, time, and duration of 1 st ALARM type	

5.**	Date, time and duration of 2 nd occurrence of 1 st ALARM (max. 3 single events)	
6.**	Date, time, and duration of 3 rd occurrence of 1 st ALARM (max. 3 single events)	

The information will be the same as from point 4. to 6. referring to your individual alarm settings.

7.*	Date, time, and duration of 2 nd ALARM
8.**	Date, time, and duration of 2 nd occurrence of 2 nd ALARM (max. 3 single events)
9.**	Date, time, and duration of 3 rd occurrence of 2 nd ALARM (max. 3 single events)
10.*	Date, time, and duration of 3 rd ALARM
11.**	Date, time, and duration of 2 nd occurrence of 3 rd ALARM (max. 3 single events)
12.**	Date, time, and duration of 3 rd occurrence of 3 rd ALARM (max. 3 single events)
13.*	Date, time, and duration of 4 th ALARM
14.**	Date, time, and duration of 2 nd occurrence of 4 th ALARM (max. 3 single events)
15.**	Date, time, and duration of 3 rd occurrence of 4 th ALARM (max. 3 single events)
16.*	Date, time, and duration of 5 th ALARM
17.**	Date, time, and duration of 2 nd occurrence of 5 th ALARM (max. 3 single events)
18.**	Date, time, and duration of 3 rd occurrence of 5 th ALARM (max. 3 single events)

19.	Transport time	
20.	Start date and time (device activation)	
21.	Off date and time (device activation)	

*(only indicated if ALARM limit preset and range violations occurred, otherwise skipped)

** (only indicated if ALARM limit preset as single-event type and range violations occurred, otherwise skipped)

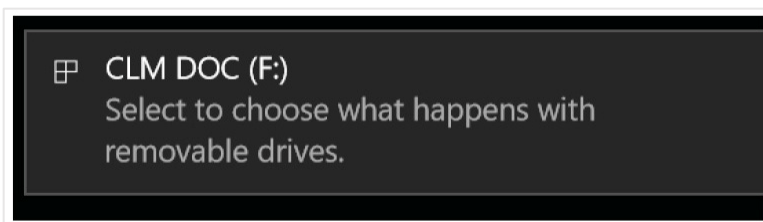
Read Out

In this section:

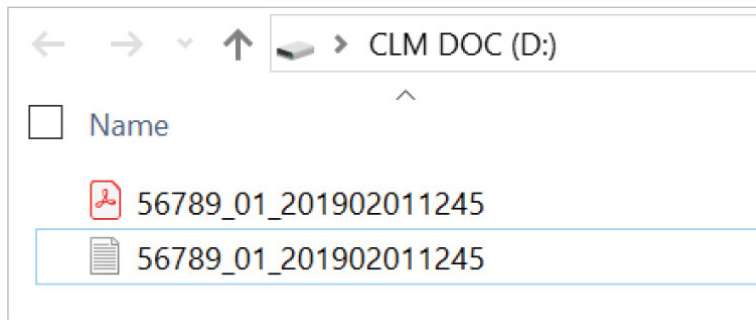
- [Connecting the device with a computer](#)
- [Remove device from USB port](#)

Connecting the Device with a Computer

Plug in the device into any computer via USB interface. Make sure the device is plugged in properly. The following window will appear.



Wait sufficient time for the device to generate the ASCII and PDF files (approx. 10 seconds). Double-click the Q-tag CLM doc device (like any external file/drive). Save the PDF and text file on your computer and open the PDF file to see a summary of data and graph or open the text file to view individual temperature recordings (raw data).



Note: For this process, no additional software is necessary.

PDF file – sample of a PDF file generated by a Q-tag CLm doc L

Page 1: Information Overview

Read-Out document of the Q-tag CLm doc L

Q-tag® CLm doc L

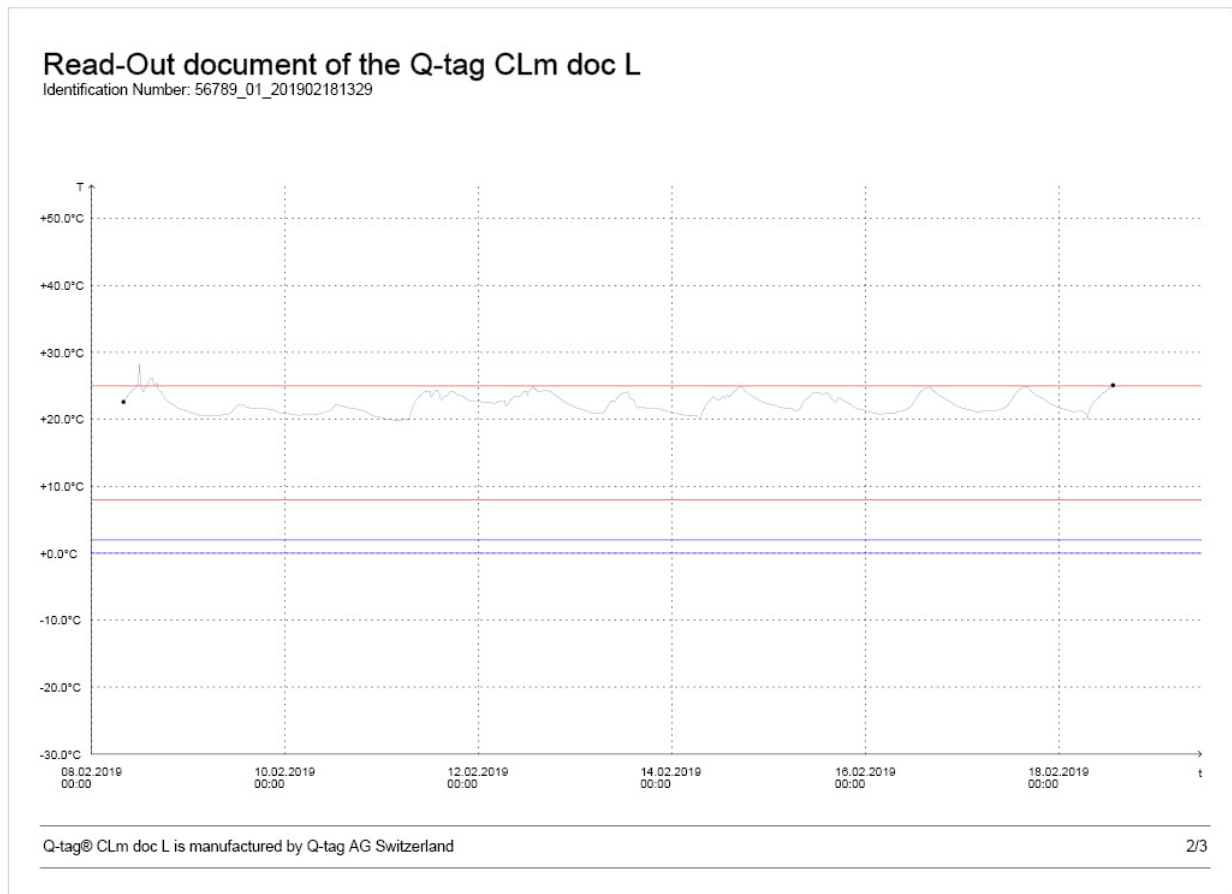
Identification Number: 56789_01_201902181329

Configuration id number (CID) 0987
Start delay 30 min
Alarm status Alarm
Total number of measurements 1842
Logging Interval 8 min

Alarm	Configuration	Status	Date (dd.MM.yyyy)	Time (GMT)	Duration
1: Single Event	above 25.0°C for 1min	ALARM	08.02.2019	11:32	47min
		ALARM	08.02.2019	13:41	2h 40min
		ALARM	18.02.2019	13:14	16min
		ALARM	08.02.2019	08:55	10d 5h 34min
2: Accumulated	above 8.0°C for 1h				
4: Accumulated	below 2.0°C for 1h	OK			
5: Single Event	below 0.0°C for 1min	OK			

Log Result	Temperature	Date (dd.MM.yyyy)	Time (GMT)
Start date and time		08.02.2019	07:55
Stop date and time		18.02.2019	13:29
Highest temperature	+28.3°C	08.02.2019	11:55
Lowest temperature	+19.8°C	11.02.2019	03:39
MKT	+22.3°C		
Average temperature	+22.2°C		

Page 2: Temperature Graph



Page 3: Marker Information

Read-Out document of the Q-tag CLm doc L

Q-tag® CLm doc L

Identification Number: 56789_01_201902181329

Marker	Temperature	Date (dd.MM.yyyy)	Time (GMT)	Time difference to last Marker
M1	+24°C	11.02.2019	06:42	...
M2	+24.4°C	11.02.2019	07:58	1h 16 min

Q-tag® CLm doc L is manufactured by Q-tag AG Switzerland

3/3

Sample of an ASCII file generated by a Q-tag CLm doc L

Sample of an ASCII file



56789_01_201902181329 - Editor

Datei Bearbeiten Format Ansicht ?

Device: Q-tag CLm doc L

Vers: 1.9

Fw Vers: 4.7.04o

Device ID: 80

Sensor: 1

Conf:

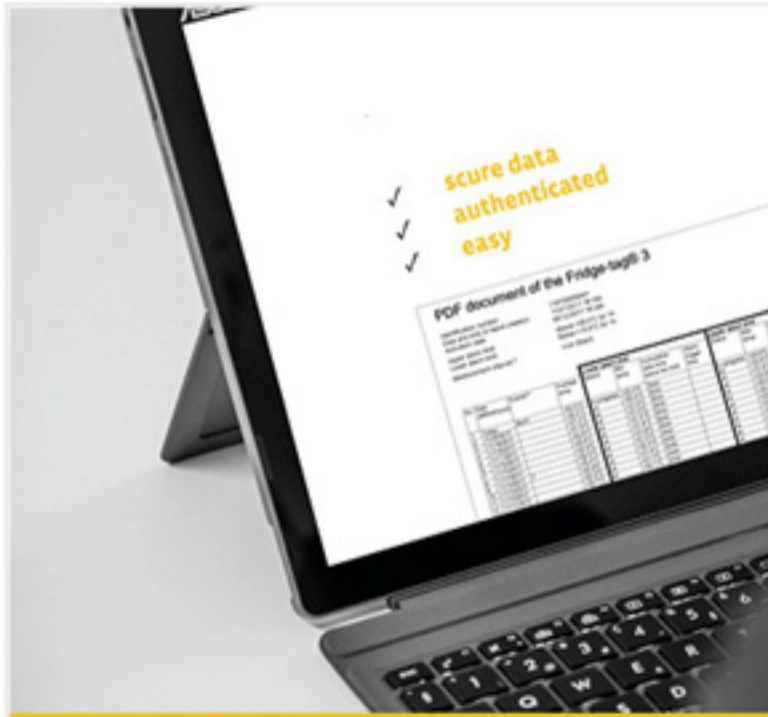
Serial: 56789

PCB: 81618290001742

CTD: 0007

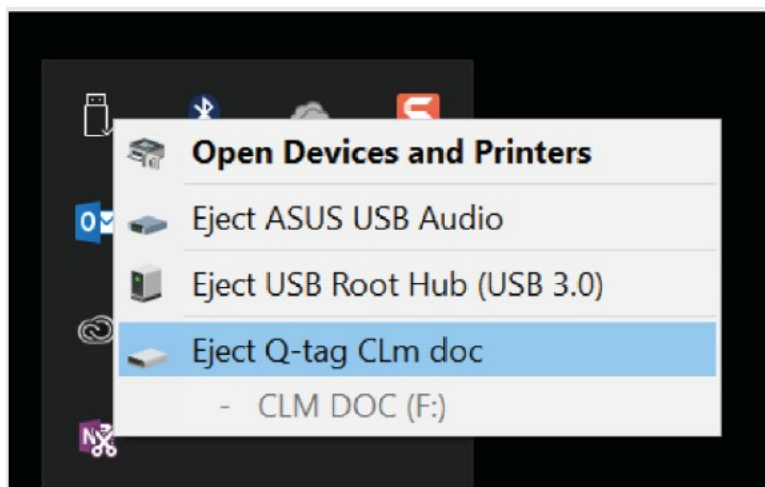
Data control with Sensitech Verifier

The data of each Q-tag CLm doc device can be verified with Sensitech Verifier. Contact us to get the software: Sensitech.support@carrier.com



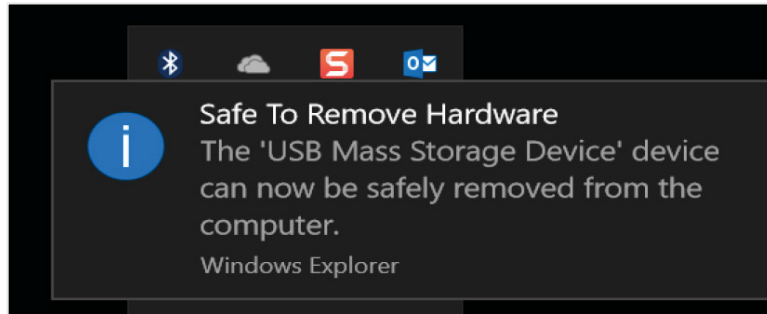
Remove Device from USB Port

For a proper USB port disconnection of the device, please always use the “safely remove hardware” function on your PC/Mac.



Do not disconnect the device before you receive the following message:

Hardware can be removed now. The device "CLM DOC (D:) can be removed from the computer now."



Important Information

Liability

The manufacturer shall not be held liable:

- if the device was used beyond the manufacturer's given limitations.
- for any claims due to the improper storage and use of the device.
- for any problems with the temperature controlling and/or cooling unit.
- for the bad quality of any monitored goods.
- for incorrect readings if the device was used beyond its expiry date.

Battery

The devices of the Q-tag CLm doc family contain a lithium battery. Please pay strict attention to the following points:

- The housing of a Q-tag CLm doc family device must never be opened or destroyed.
- Never expose a device of the Q-tag CLm doc family to temperatures above the allowed range (fire, oven, microwaves, etc.). It may cause injuries.
- Always keep a device from the Q-tag CLm doc family out of the reach of children.
- The battery complies with IATA DGR Packaging Instruction 970 Section II and is therefore not considered dangerous good.
- Dispose or recycle the device from the Q-tag CLm doc family in accordance with the WEEE 2012/19/EU guidelines or your local regulations. The device may also be returned to the manufacturer for proper recycling.
- The end of the battery life is indicated by the expiry date printed on the label. Accuracy and proper function of the device cannot be assured beyond this date.

Useful Life

The devices can be used XXX days, but not longer than 365 days. It depends on the device type (see [technical specifications](#)) and on the condition that:

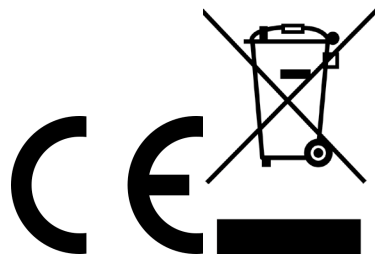
- The buttons are not pressed for a very long time, e.g. if jammed between the goods in a shipment.
- Storage and operation of the device should remain inside the recommendations of the manufacturer, especially temperatures below 0°C or 32°F could have a negative influence on the operating lifetime of the battery.

Attention

All devices of the Q-tag CLm doc family monitor temperature exposures and not the product quality. Its purpose is to signal if product quality evaluation or testing is required.

Subject to change. Please note that all information in this document is correct at the time of publication. Due to our policy of continuous product development, we reserve the right to change this information without prior notice.

Regulatory Certification



Q-tag CLm doc L User Guide Videos

Visit [Sensitech.com](https://www.sensitech.com) to find videos and user guides online.

FAQ / Glossary

Frequently Asked Questions (FAQ)

For technical problems or questions, please contact Sensitech.support@carrier.com.

Glossary of Terms

Abbreviation	Title	Description
SOP	Standard Operating Procedure	Standard Operating Procedure (short SOP) is a binding textual description of the processes of procedures including the examination of results and their documentation.