



- LIBERO CH**
- > Multi-Use PDF Logger
  - > Temperature and humidity
  - > USB and Bluetooth® Interface



TECHNICAL SPECIFICATIONS

# LIBERO CH

Multi-Level and Multi-Use PDF Logger with USB and Bluetooth® Interface with Internal Temperature and Relative Humidity Sensor.

LIBERO CH is a highly versatile multi-use PDF-logger for shipment monitoring as well as monitoring of site and storage conditions. The internal combined temperature and relative humidity sensor comes with a 100% sensor calibration<sup>1</sup>. Supporting up to eight temperature alarm zones, 2 humidity thresholds, MKT and duration as alarm criteria – LIBERO CH allows you to create temperature/humidity profiles for individual products. In addition, you have the option to switch the alarming function off and on again if alarming criteria is required. This can be useful in cases where for example a transportation box or storage container has to be cleaned.

LIBERO CH can store up to 75'500 measurement values, 37'750 values each for temperature and humidity, and has a battery lifetime of up to 3 years (depending on usage of Bluetooth® interface). It can be ordered with an optional stainless steel bracket for easy mounting on your equipment. Release products with confidence based on the OK or ALARM status on the display and download the PDF report via the convenient USB interface without any additional software being required. Or use the logger's Bluetooth® interface to download the PDF to your smart device via LIBERO Cx BLE app available for iOS and Android, which you can also use to start or stop the logger without having to remove it from your equipment or consignment.



\* Depending on usage of Bluetooth®



- > Monitors your valuable goods during transport or storage
- > 100% calibrated temperature and humidity sensor<sup>1</sup>
- > Simple and safe in use
- > Compatible with ELPRO's liberoMANAGER cold chain database
- > Alarming on and alarming off

## Technical Specifications LIBERO CH

<b>Type</b>	PDF Logger with USB and Bluetooth® Low Energy (BLE) interface with internal temperature/humidity probe	
<b>Application area</b>	Site Monitoring, Container Monitoring, Round Trip Monitoring, Storage	
<b>Recording options and mode</b>	Multiple use: start/stop or loop mode	
<b>Type of probe</b>	High-accuracy digital temperature/humidity sensor	
<b>Measurement range</b>	-30 °C..+70 °C, 0 %RH..100 %RH	
<b>Measurement accuracy</b>	<b>Temperature:</b> ±0.4 °C for -30.0 °C..+70.0 °C	<b>Relative humidity:</b> ±2.5 %RH for 0.0 %rF..90.0 %RH ±3.5 %RH for 90.1 %rF..100.0 %RH
<b>Measurement resolution</b>	0.1 °C, 0.1 %RH	
<b>Measurement interval</b>	1 to 60 minutes, user configurable	
<b>Measurement capacity</b>	37'750 values each for temperature and humidity (equals logging duration of 12 months at 15 minute logging interval)	
<b>Battery life</b>	14 months to 3 years (depending on usage of Bluetooth® interface and ambient temperature below 0 °C)	
<b>Battery type</b>	Button cell contained in equipment UN3091, exempt from DGR declaration; non-replaceable battery	
<b>Configurable alarms</b>	8 temperature alarm zones with single or cumulative delays, 2 humidity thresholds, with alarm delay, MKT alarm	
<b>Start-up delay</b>	User configurable based on time or temperature	
<b>Display</b>	Multifunction LCD, size: 22 × 22 mm (0.87 x 0.87 inch), with OK and Alarm indicator	
<b>Certificate</b>	Manufacturer validation certificate per delivery, production validation and 3-point calibration <sup>1</sup> certificate ILAC/NIST/ISO 17025 traceable, as manufacturer or ISO 17025 edition <sup>2</sup> ) per ID number via <a href="https://compliance.elpro.com">compliance.elpro.com</a> , additional customer-specific calibration points optionally available (also according to ISO 17025 standard)	
<b>Traceability</b>	Unique ID number (traceable to component level)	
<b>Report</b>	Built-in PDF file generator automatically establishes an evaluation report with embedded data upon connection to a USB port or when triggered in the LIBERO Cx BLE app connected via Bluetooth®. Compliant to standards ISO 19005-1 (Document Management, file format for long-term preservation, PDF/A) and FDA 21 CFR Part 11. - Customizable text areas (report title, filename, shipment information, instructions for recipient, etc.) - Extended statistics and logger information, chart visualizing the temperature curve and alarm limits	
<b>Case   dimension   weight   IP code</b>	ABS/PC plastic material   95 × 41 × 11 mm (3.74 x 1.61 x 0.43 inch)   39 g (0.1 lb)   IP54	
<b>Certifications   conformity</b>	CE   FCC   ICES   RoHS   Safe Transport of Chemical Goods   WEEE	
<b>Standards and Guidelines</b>	GAMP5   RTCA DO-160   EN12830	
<b>App for Smart Device</b>	iOS and Android	
<b>Wireless connection to the App</b>	Bluetooth® Low Energy (BLE)	
<b>Data logger configuration and additional analysis software</b>	liberoCONFIG software to create, store and manage individual settings in a logger profile, including SmartStart, allowing a safe and quick application of profiles. elproVIEWER software to access and export embedded data of PDF report, for data analysis. Both software products can be downloaded at <a href="https://elpro.com/software-downloads">elpro.com/software-downloads</a> . Fully compatible with liberoMANAGER database.	

<sup>1</sup> Available Q3/2021; until then only a validation certificate will be issued by default.

<sup>2</sup> Reported without customer contact information according to ISO 17025 7.8.1.3 due to data protection requirements.