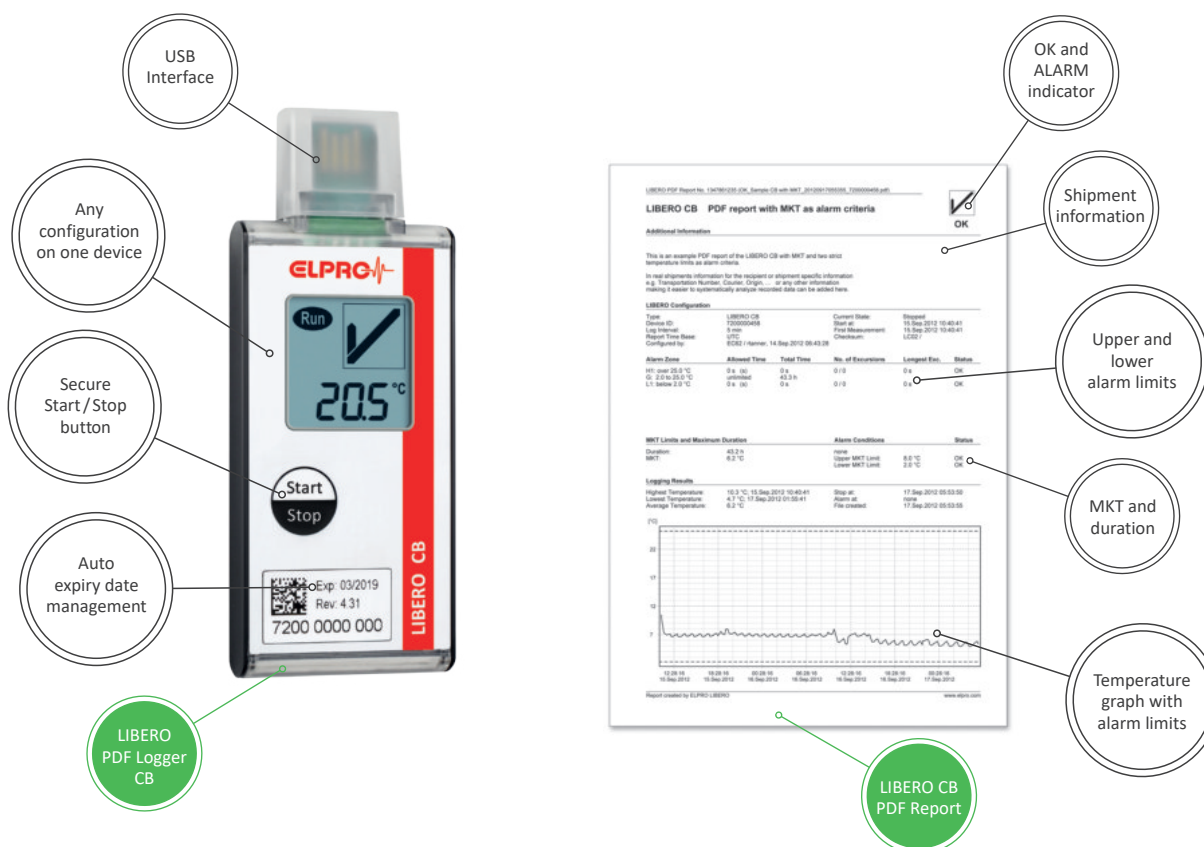


TECHNICAL SPECIFICATIONS LIBERO CB

LIBERO CB

The most Cost-effective Cold Chain Monitoring Solution and Database

LIBERO CB is the universal PDF Logger for almost any cold chain monitoring challenge. Whether you require strict upper and lower alarm limits, alarm on MKT or duration, LIBERO CB offers it all and allows you to individually set these limits. No need to keep different loggers in stock. Simply apply the correct configuration profile and add shipment information at the time of use and send off the logger. No equipment is required and no software needs to be installed. Read the PDF report and forward it to the sender or to **liberoMANAGER**, ELPRO's cold chain database, for further analysis.



we prove it.



- Simple and safe, no equipment, no software
- Quick implementation, also by 3rd parties
- Compatible with liberoMANAGER cold chain database
- 100 % calibrated sensors and electronics
- Fully compliant with industry guidelines

Technical Specifications LIBERO CB

Version 2019

Type	PDF Logger with two alarm thresholds and alarm delay
Application area	Cold Chain Monitoring – applications monitored with strict alarm limits, MKT or time
Recording options and mode	Single use: start / stop mode
Operating range	-30 °C..+70 °C
Measurement accuracy	The LIBERO CB is the most accurate data logger amongst its peers and features a guaranteed accuracy of ± 0.4 °C in the core range of 0.0 °C to 25.0 °C. The typical accuracy (95 % of all LIBEROs) is even better with ± 0.3 °C in the core range. Accuracy over full temperature range: ± 0.4 °C from 0.0 °C to +25.0 °C ± 0.5 °C from -10.0 °C to -0.1 °C as well as +25.1 °C to +50.0 °C ± 1.0 °C from -30.0 °C to -10.1 °C as well as +50.1 °C to +70.0 °C
Resolution	0.1 °
Measurement interval	1 to 60 minutes, user programmable
Memory capacity	24'200 measurement values (equals 168 days run time with 10 min interval)
Expiry date and battery life	- Data logger can be started any time during shelf life - Started data logger runs until memory is full or logger is stopped (max. expiry date +30 days) - Auto expiry date management: After expiry, display changes status and logger cannot be started anymore - Use below 0 °C and above +40 °C for prolonged times can limit battery life
Battery type	Button cell contained in equipment, UN3091, exempt from DGR declaration
Certificate	Ilac / NIST / ISO 17025 traceable production calibration certificate
Programmable alarms	2 temperature thresholds with alarm delay Alarm on MKT Alarm on duration / run time
Start-up delay	0 minutes to 24 h
Display	Multifunction LCD, size: 23.5 x 23.5 mm, with large OK and ALARM indicator
Display functionality	- Status: Conf, Start, Run, Stop - Current temperature measurement - OK, ALARM or blank - Configuration profile identification
Report	Built-in PDF file generator automatically establishes an evaluation report with embedded data upon connection to a USB port. Complies with the ISO standard 19005-1 Document Management for the long-term preservation of electronic documents (PDF/A) and FDA 21 CFR Part 11. - Customizable report title and filename - Text area for additional information (e.g. shipment information, instructions for recipient, etc.) - Statistics (min/max, average, alarm) and detailed logger information (ID, configuration, etc.) - Chart visualizing the temperature curve and alarm limits
Traceability	ID number (traceable to component level)
Case dimension weight	ABS plastic material 96 x 37 x 11 mm (3.8 x 1.5 x 0.5 inch) 38 g (1.34 oz)
Certifications	CE EN12830 EMC RTCA DO-160 RoHS WHO-PQS Safe Transport of Chemical Goods
Data logger configuration and analysis software	liberoCONFIG and SmartStart software to create, store and manage individual settings in a settings profile. liberoMANAGER database as cloud service to store shipment reports and results, analyze shipments, manage release status and trigger customer specific workflows in cold chain processes. elproVIEWER software to access and export embedded data of PDF report, for data analysis and comprehensive report features (for users not using liberoMANAGER).