

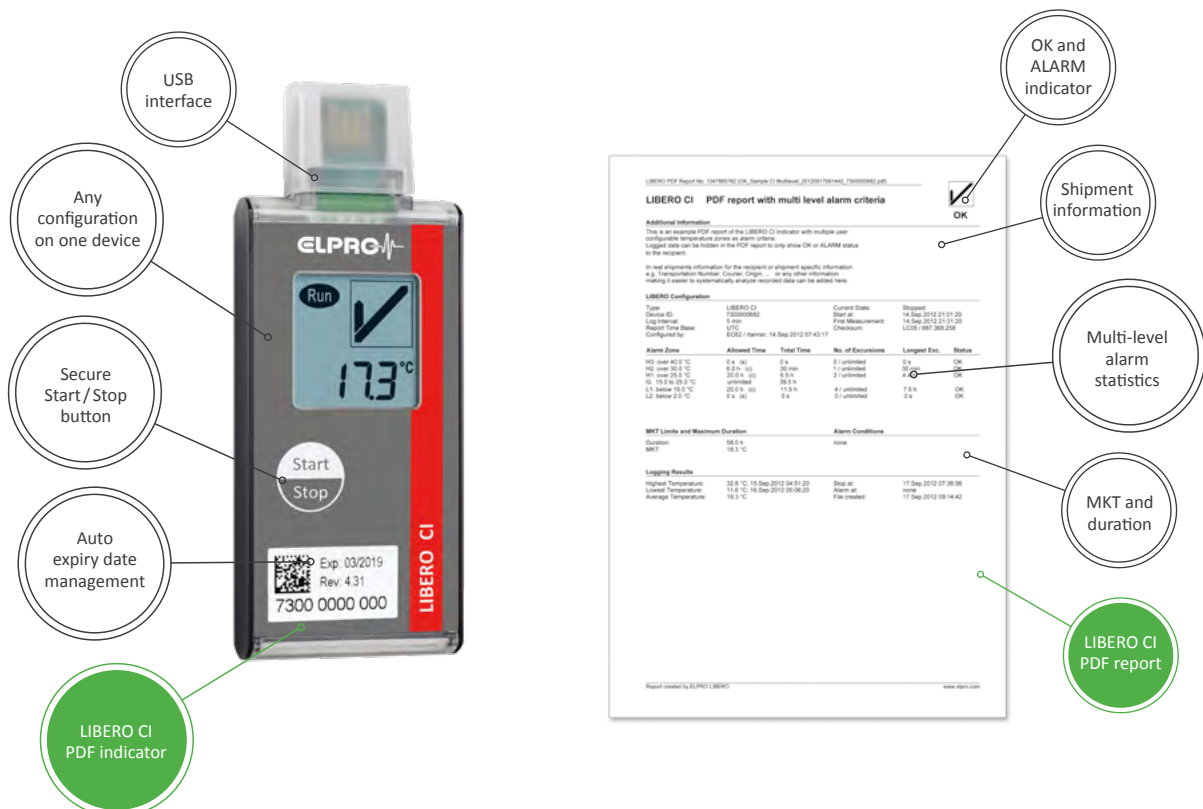


TECHNICAL SPECIFICATIONS

LIBERO CI

User Configurable PDF Indicator with Cold Chain Database in the Cloud

LIBERO CI accepts any temperature profile at the time of use with up to 8 alarm levels, MKT or duration as alarm criteria. No need to keep different indicators in stock. Simply apply the correct temperature profile, add shipment information, and send the indicator together with your product. Decide how much information should be visible for the recipient or if a simple OK or ALARM is all the recipient should see. Follow all your shipments in the same database. The LIBERO CI indicator, the LIBERO CS, the LIBERO CB and the LIBERO CD PDF data loggers are all compatible with liberoMANAGER, ELPRO's cold chain database.



we prove it.

SWISS QUALITY



- > 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 CI

Type	PDF indicator with multiple alarm levels
Application area	Cold chain monitoring – applications without need for temperature graph or tabular data
Recording option	Single use
Operating range	-30 °C..+70 °C
Measurement accuracy	The LIBERO CI is the most accurate indicator among 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 +35.0 °C ± 1.0 °C from -30.0 °C to -10.1 °C as well as +35.1 °C to +70.0 °C
Resolution	0.1 °C
Measurement interval	1 to 60 minutes, user programmable
Expiry date and battery life	- Indicator can be started any time during shelf life. - Started indicator runs until indicator is stopped (max. expiry date +30 days). - Auto expiry date management: After expiry, display changes status and indicator 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	- 8 temperature alarm levels with single or cumulative delays - 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 × 23.5 mm, with large OK and ALARM indicator
Display functionality	- Status: Conf, Start, Run, Stop - OK, ALARM, or blank - Current temperature measurement - Configuration profile identification
Report	Built-in PDF file generator automatically establishes an evaluation report with embedded data upon connection to 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 (shipment information, instructions for recipient, etc.). - Statistics (min/max, average, alarm) and detailed indicator information (ID, configuration, etc.). - Detailed indicator information (ID, configuration, etc.)
Traceability	ID number (traceable to component level)
Case dimension weight IP code	ABS plastic material 96 × 37 × 11 mm (3.8 × 1.5 × 0.5 inch) 38 g (1.34 oz) IP54
Certifications	CE EN12830 EMC RTCA DO-160 RoHS WHO-PQS Safe Transport of Chemical Goods
Indicator 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.