

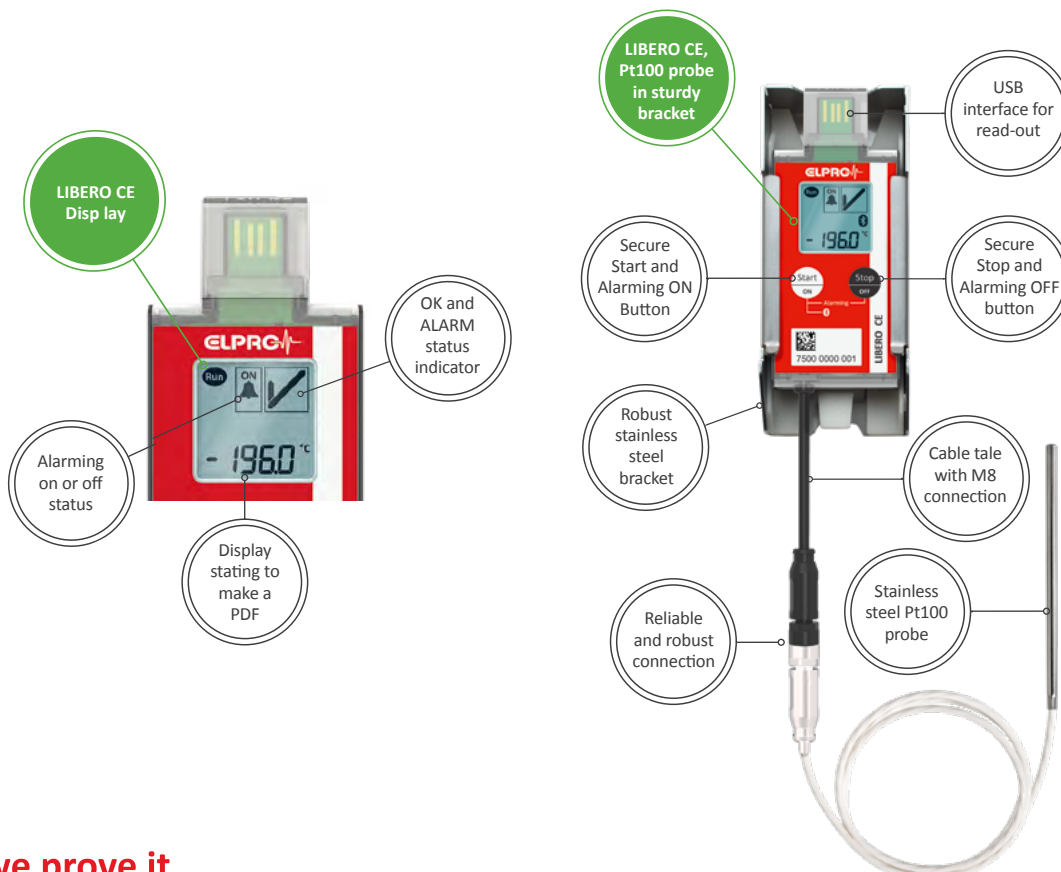


## TECHNICAL SPECIFICATIONS

# LIBERO CE

Multi-level and multi-use PDF Logger with USB and Bluetooth® interface for external Pt100 Probe

LIBERO CE is the ideal PDF Logger to simplify storage and shipment process for products with known stability data. It covers a wide measurement range from  $-200^{\circ}\text{C}$  to  $+400^{\circ}\text{C}$  and monitors temperature of cell and drug deliveries with cryogenic containers, dry ice or other applications using an external Pt100 probe. Supporting up to eight temperature alarm zones, MKT and duration as alarm criteria – LIBERO CE allows you to create temperature 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 a transportation box has been cleaned, or liquid nitrogen has been refilled in a cryogenic container. LIBERO CE is reconfigurable and reusable for 2 years. The external Pt100 probe and M8 connector enables reliable, superior temperature data transfer to the data logger. Up to 75'500 temperature values can be stored on the data logger. LIBERO CE can be ordered with an optional stainless steel bracket. 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 report 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.



**we prove it.**

**SWISS QUALITY**



- > Monitors valuable goods in ultra-low freezers and during cryogenic shipments
- > Simple and safe in use
- > Compatible with ELPRO's liberoMANAGER cold chain database
- > Alarming on and alarming off

## Technical Specifications LIBERO CE

<b>Type</b>	PDF Logger with USB and Bluetooth® Low Energy (BLE) interface for external Pt100 temperature probe (probe not included)
<b>Application area</b>	Site Monitoring, Container Monitoring, Cryo Container Monitoring, Dry-ice Container Monitoring
<b>Recording options and mode</b>	Multiple use: start/stop or loop mode
<b>Type of probe</b>	Pt100 probe (4-wire measuring technique), max. cable length 3 m (118.1 inch), requires M8 connector
<b>Measurement range</b>	Measurement range (depending on probe): -200 °C..+400 °C / Operating range of data Logger: -30 °C..+70 °
<b>Measurement accuracy</b>	<b>System accuracy*:</b> ±1.4 °C in the range of -200.0 °C..-100.1 °C (Class B)    ±0.5 °C in the range of +25.1 °C..+100.0 °C (Class A) ±1.0 °C in the range of -100.0 °C..-50.1 °C (Class B)    ±0.7 °C in the range of +100.1 °C..+200.0 °C (Class A) ±0.4 °C in the range of -50.0 °C..-10.1 °C (Class A)    ±1.1 °C in the range of +200.1 °C..+400.0 °C (Class A) ±0.3 °C in the range of -10.0 °C..+25.0 °C (Class A) *Includes data logger and external Pt100 probe of stated class
<b>Measurement resolution</b>	0.1 °C
<b>Measurement interval</b>	1 to 60 minutes, user configurable
<b>Memory capacity</b>	75'500 measurement values (equals logging duration of 17 months at 10 minute logging interval)
<b>Battery life</b>	2 years (in core range of 0 °C..25 °C, 14 months over full measurement range)
<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, Alarm on MKT, Alarm on duration/run time
<b>Start-up delay</b>	User configurable based on time or temperature
<b>Display</b>	Multifunction LCD, size: 22 x 22 mm (0.87 x 0.87 inch), with OK and Alarm indicator
<b>Certificate</b>	Manufacturer validation certificate per delivery, production validation certificate 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 x 41 x 11 mm (3.74 x 1.61 x 0.43 inch), cable tail 85 mm (3.35 inch) including M8 connector   44 g (0.1 lb)   IP54
<b>Accessories</b>	Stainless steel bracket, variety of Pt100 probes, extension cable with M8 connector
<b>Conformity</b>	CE   UKCA   FCC   ICES   RoHS   Safe Transport of Chemical Goods   WEEE
<b>Standards and Guidelines</b>	GAMP5   RTCA DO-160
<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.