



# 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.

**LIBERO CB PDF Logger CB**

- USB Interface
- Any configuration on one device
- Secure Start/Stop button
- Auto expiry date management
- LIBERO PDF Logger CB
- OK and ALARM indicator
- Shipment information
- Upper and lower alarm limits
- MKT and duration
- Temperature graph with alarm limits
- LIBERO CB PDF Report

**LIBERO CB PDF Report with MKT as alarm criteria**

**Additional Information**

This is an example PDF report of the LIBERO CB with MKT and two strict temperature limits as alarm criteria.

In our previous information on the request or activation information (e.g. Transportation Number, Carton, Digital ID or any other identifier) linking it back to your existing application should also be applicable.

LIBERO Configuration			
Type:	LIBERO CB	Current Time:	13 Sep 2012 10:40:41
Device ID:	1234567890	Start of Trip:	13 Sep 2012 10:40:41
Log Interval:	5 min	End of Trip:	13 Sep 2012 10:40:41
Report File Name:	LIBERO	Destination:	12345
Configured by:	ELPRO System	14 Sep 2012 09:40:00	

Alarm Zone	Allowed Time	Total Time	No. of Excesses	Logged Error	Alarm
High Temp 20.0 °C	0:00:00	0:00:00	0:00	0:00	OK
Low Temp 20.0 °C	0:00:00	0:00:00	0:00	0:00	OK
MKT	0:00:00	0:00:00	0:00	0:00	OK

MKT Limit and Maximum Duration	Alarm Condition	Alarm
Condition: MKT	Upper MKT Limit: 0.0 °C	OK
	Lower MKT Limit: 2.0 °C	OK

**Logging Results**

Highest Temperature	Lowest Temperature	Average Temperature	Stop at Alarm	File created
+0.0 °C	-15.0 °C	15.000 °C	13 Sep 2012 00:00:00	13 Sep 2012 00:00:00
+0.0 °C	-15.0 °C	15.000 °C	13 Sep 2012 00:00:00	13 Sep 2012 00:00:00



- 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

<b>Type</b>	PDF Logger with two alarm thresholds and alarm delay
<b>Application area</b>	Cold Chain Monitoring – applications monitored with strict alarm limits, MKT or time
<b>Recording options and mode</b>	Single use: start / stop mode
<b>Operating range</b>	-30 °C..+70 °C
<b>Measurement accuracy</b>	The LIBERO CB is the most accurate data logger amongst its peers and features a guaranteed accuracy of $\pm 0.4$ °C in the core range of 0.0 °C to 25.0 °C. The typical accuracy (95 % of all LIBEROs) is even better with $\pm 0.3$ °C in the core range.  Accuracy over full temperature range: $\pm 0.4$ °C from 0.0 °C to +25.0 °C $\pm 0.5$ °C from -10.0 °C to -0.1 °C as well as +25.1 °C to +50.0 °C $\pm 1.0$ °C from -30.0 °C to -10.1 °C as well as +50.1 °C to +70.0 °C
<b>Resolution</b>	0.1 °
<b>Measurement interval</b>	1 to 60 minutes, user programmable
<b>Memory capacity</b>	24'200 measurement values (equals 168 days run time with 10 min interval)
<b>Expiry date and battery life</b>	- 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
<b>Battery type</b>	Button cell contained in equipment, UN3091, exempt from DGR declaration
<b>Certificate</b>	ILAC / NIST / ISO 17025 traceable production calibration certificate
<b>Programmable alarms</b>	2 temperature thresholds with alarm delay   Alarm on MKT   Alarm on duration / run time
<b>Start-up delay</b>	0 minutes to 24 h
<b>Display</b>	Multifunction LCD, size: 23.5 x 23.5 mm, with large OK and ALARM indicator
<b>Display functionality</b>	- Status: Conf, Start, Run, Stop - OK, ALARM or blank - Current temperature measurement - Configuration profile identification
<b>Report</b>	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
<b>Traceability</b>	ID number (traceable to component level)
<b>Case   dimension   weight</b>	ABS plastic material   96 x 37 x 11 mm (3.8 x 1.5 x 0.5 inch)   38 g (1.34 oz)
<b>Certifications</b>	CE   EN12830   EMC   RTCA DO-160   RoHS   WHO-PQS   Safe Transport of Chemical Goods
<b>Data logger configuration and analysis software</b>	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).

### CMI FRANCE

Ecoparc d'Affaires  
F-41210 Neung-sur-Beuvron  
Tel : +33 (0)2 54 95 70 95  
infofr@cmitest.com

Agence Rhône Alpes :  
F-26160 La Bégude de Mazenc  
Tel : +33 (0)4 75 54 57 26

infofr@cmitest.com  
www.cmitest.com

