

- LIBERO CB**
- PDF Logger
  - Fully user configurable
  - No equipment



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.



**LIBERO PDF Report No. 1347662235-CK\_Sample CB with MKT\_2012081705355\_7200000456.pdf**

**LIBERO CB PDF report with MKT as alarm criteria**  OK

**Additional Information**

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

In real shipments information for the recipient or shipment specific information (e.g. Transportation Number, Country, Origin, ... or any other information) should be transfer to externally analyse recorded data can be added here.

LIBERO Configuration			
Type:	LIBERO CB	Current State:	Stopped
Device ID:	72000456	Start at:	15.Sep.2012 10:40:41
Log Interval:	5 min	First Measurement:	15.Sep.2012 10:40:41
Report Time Base:	UTC	Checksum:	LC051
Configured by:	ECG2 / name: 14.Sep.2012 06:43:28		

Alarm Zone	Allowed Time	Total Time	No. of Excursions	Longest Exc.	Status
01: over 25.0 °C	5 h (0)	0 h	0 / 0	0 h	OK
02: 2.8 to 25.0 °C	unlimited	43.3 h	0 / 0	0 h	OK
03: below 2.0 °C	5 h (0)	0 h	0 / 0	0 h	OK

MKT Limits and Maximum Duration	Alarm Conditions	Status
Duration: 43.3 h	name:	OK
MKT:	Upper MKT Limit: 8.0 °C	OK
	Lower MKT Limit:	OK

Logging Results			
Highest Temperature:	10.3 °C, 15.Sep.2012 10:40:41	Stop at:	17.Sep.2012 05:53:50
Lowest Temperature:	4.7 °C, 17.Sep.2012 01:58:41	Alarm at:	none
Average Temperature:	8.2 °C	File created:	17.Sep.2012 09:53:55

LIBERO CB PDF Report

we prove it.



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

## Technical specifications LIBERO CB

<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>Type of probe</b>	Internal NTC probe
<b>Measurement range</b>	-20 °C..+70 °C
<b>Measurement accuracy</b>	± 0.5 °C in the range of 0 °C..+25 °C ± 1.0 °C in the range of -10.0 °C..-0.1 °C as well as +25.1 °C..+50.0 °C ± 1.5 °C in the range of -20.0 °C..-10.1 °C as well as +50.1 °C..+70.0 °C
<b>Resolution</b>	0.1 °
<b>Measurement interval</b>	1 to 60 minutes, user programmable
<b>Memory capacity (run time)</b>	8'800 measuring data points (equals 60 days run time with 10 min interval)
<b>Expiry date &amp; battery life</b>	- Data logger can be started any time during shelf life of 12 months - Started data logger runs until memory is full or logger is stopped - Auto expiry date management: After expiry, display changes status and logger cannot be started anymore - Long time operating range: -10.0 °C..+50.0 °C for entire shelf life - Exposure to extreme conditions: 10 days at -20.0 °C and 10 days at +70.0 °C
<b>Certificate</b>	12 month certificate with reference to sensor calibration and data logger test results
<b>Programmable alarms</b>	- 2 temperature thresholds with alarm delay - Alarm on MKT - Alarm on duration / logging 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 (logging), 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 raw data upon connection to an USB port. Complies with the ISO standard 19005-1 Document Management for the long-term preservation of electronic documents (PDF/A) and 21 CFR Part 11. - Customizable report title and filename - Text area for additional information (e.g. shipment information, instructions for recipient, etc.) - Immediate release or quarantine based on alarm status - 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>Data logger configuration</b>	liberoCONFIG software to create, store and manage individual settings in a logger profile as well as SmartStart, a liberoCONFIG component allowing a safe and quick application of profiles and shipment information to PDF Loggers is downloadable free of charge.