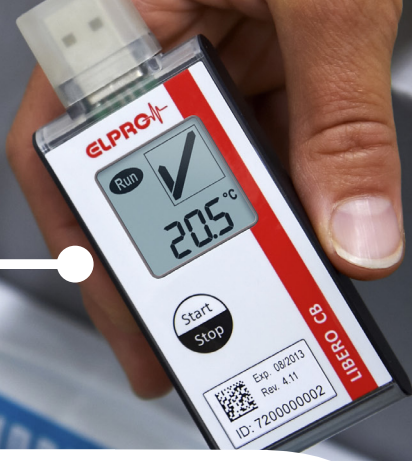


- LIBERO CB**
- PDF Logger
 - Fully user configurable
 - No equipment



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. 1347682235-CK_Sample CB with MKT_2012091705355_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.

For real shipments information for the recipient or shipment specific information (e.g. Transportation Number, Country, Origin, ... or any other information) please refer to externally available recorded data or to the sender.

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:	ECG / 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

High Temperature	Stop at:
10.3 °C, 15 Sep 2012 10:40:41	Alarm at:
4.7 °C, 17 Sep 2012 01:58:41	none
Average Temperature:	File created:
8.2 °C	17 Sep 2012 09:53:55

LIBERO CB PDF Report

we prove it.

FULLY
QUALIFIED

- 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

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
Type of probe	Internal NTC probe
Measurement range	-20 °C..+70 °C
Measurement accuracy	± 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
Resolution	0.1 °
Measurement interval	1 to 60 minutes, user programmable
Memory capacity (run time)	8'800 measuring data points (equals 60 days run time with 10 min interval)
Expiry date & battery life	- 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
Certificate	12 month certificate with reference to sensor calibration and data logger test results
Programmable alarms	- 2 temperature thresholds with alarm delay - Alarm on MKT - Alarm on duration / logging 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 (logging), Stop - OK, ALARM or blank - Current temperature measurement - Configuration profile identification
Report	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
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)
Data logger configuration	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.