



- LIBERO CI**
- Multi-Level PDF Indicator
- Fully user configurable



TECHNICAL SPECIFICATIONS LIBERO CI

## 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 eight 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, both LIBERO CI Indicator and LIBERO CS and CB PDF Loggers are compatible with liberomanager, ELPRO's cold chain database.

**LIBERO CI PDF Report with multi level alarm criteria**

**Additional Information**  
This is an example PDF report of the LIBERO CI Indicator with multiple user configurable temperature zones as alarm criteria. Logged data can be hidden in the PDF report to only show OK or ALARM status to the recipient.

In real shipments information for the recipient or shipment specific information e.g. Transportation Number, Courier, Origin... or any other information, hidden if easier to systematically analyze recorded data can be added here.

LIBERO Configuration					
Type	LIBERO CI	Current State	Stopped		
Device ID	730000002	Start at	14.Sep.2012 21:01:20		
Log Interval	5 min	First Measurement	14.Sep.2012 21:31:20		
Report Time Base	UTC	Checksum	12051687368258		
Configured by	EOB2 / ranner: 14.Sep.2012 07:43:17				

Alarm Zone	Allowed Time	Total Time	No. of Excursions	Longest Exc.	Status
H2: over 40.0 °C	0 s (0)	0 s	0 / unlimited	0 s	OK
H1: over 30.0 °C	0 s (0)	30 min	1 / unlimited	30 min	OK
H1: over 25.0 °C	20.0 h (0)	0 s (0)	2 / unlimited	4 h	OK
0: 15.0 to 25.0 °C	unlimited	20.0 h			OK
L1: below 15.0 °C	20.0 h (0)	11.5 h	4 / unlimited	7.5 h	OK
L2: below 2.0 °C	0 s (0)	0 s	0 / unlimited	0 s	OK

MKT Limits and Maximum Duration		Alarm Conditions	
Duration:	18.0 h		
MKT:	18.3 °C	none	

**Logging Results**

Highest Temperature:	32.0 °C: 15.Sep.2012 04:51:20	Stop at:	17.Sep.2012 07:38:06
Lowest Temperature:	11.0 °C: 16.Sep.2012 00:06:20	Alarm at:	none
Average Temperature:	19.3 °C	File created:	17.Sep.2012 08:14:42

Report created by ELPRO LIBERO

Callouts for the device and report:

- USB Interface
- Any configuration on one device
- Secure Start/Stop button
- Auto expiry date management
- LIBERO CI PDF Indicator
- OK and ALARM indicator
- Shipment information
- Multi-level alarm statistics
- MKT and duration
- LIBERO CI 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 CI

<b>Type</b>	PDF Indicator with multiple alarm levels
<b>Application area</b>	Cold Chain Monitoring – applications without need for temperature graph or tabular data
<b>Recording option</b>	Single use
<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 &amp; run time</b>	1 to 60 minutes, user programmable, resulting in up to one year run time Typically 60 days with measurement interval of 10 minutes
<b>Expiry date &amp; battery life</b>	- Auto expiry date management: After expiry, display changes status and indicator cannot be started anymore - Indicator can be started any time during shelf life of 12 months - Started indicator can perform a maximum of 8'800 measurements - 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 indicator test results
<b>Programmable alarms</b>	- 8 temperature alarm levels with single or cumulative delays - 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 - Current temperature measurement - OK, ALARM or blank - 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 indicator information (ID, configuration, etc.) - Detailed indicator information (ID, configuration, etc.)
<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>Indicator configuration</b>	liberoCONFIG software to create, store and manage individual settings in an indicator profile as well as SmartStart, a liberoCONFIG component allowing a safe and quick application of profiles and shipment information to individual PDF Indicators is downloadable free of charge.