



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 No: 134788782 OK_Sample CI Multilevel_2012091701442_730000002.pdf

LIBERO CI PDF report with multi level alarm criteria OK

Additional Information
This is an example PDF report of the LIBERO CI indicator with multiple user configurable temperature zones (no alarm criteria). Logged data can be hidden in the PDF report to only show OK or ALARM status to the recipient.

It is real shipments information for the recipient or shipment specific information
#2: Transportation Number, Country, Origin... or any other information making it easier to systematically analyze recorded data can be added here.

LIBERO Configuration

Type:	LIBERO CI	Current State:	Stopped
Device ID:	730000002	Start:	14 Sep 2012 21:01:20
Log Method:	1 min	File Measurement:	14 Sep 2012 21:01:20
Report Time Base:	UTC	Checksum:	LC591 687368258
Configured by:	ELPRO / naper, 14 Sep 2012 07:43:17		

Alarm Zone

Alarm Zone	Allowed Time	Total Time	No. of Excursions	Longest Exc.	Status
H5: over 42.0 °C	0 s (0)	0 s	0 / unlimited	0 s	OK
H2: over 25.0 °C	0 s (0)	30 min	0 / unlimited	30 min	OK
H1: over 25.0 °C	20.0 h (6)	8.5 h	2 / unlimited	2 h	OK
D: 15.0 h to 25.0 °C	unlimited	20.5 h	0 / unlimited	20.5 h	OK
L1: below 15.0 °C	20.0 h (6)	11.5 h	4 / unlimited	7.5 h	OK
L2: below 15.0 °C	0 s (0)	0 s	0 / unlimited	0 s	OK

MKT Limits and Maximum Duration

Parameter	Alarm Conditions
Duration:	55.0 h
MKT:	18.0 °C

Logging Results

Parameter	Value	Stop at:	File created:
Highest Temperature:	22.8 °C	15 Sep 2012 04:51:20	17 Sep 2012 07:36:09
Lowest Temperature:	11.0 °C	15 Sep 2012 00:00:00	17 Sep 2012 07:36:09
Average Temperature:	19.3 °C		17 Sep 2012 09:14:42

Report created by ELPRO LIBERO www.elpro.com

LIBERO CI PDF Indicator CI

USB Interface

Any configuration on one device

Secure Start/Stop button

Auto expiry date management

LIBERO CI

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, also by 3rd parties
- Compatible with liberoMANAGER cold chain database
- 100% calibrated sensors and electronics
- Fully compliant with industry guidelines

Technical Specifications LIBERO CI

Version 2018

Type	PDF Indicator with multiple alarm levels
Application area	Cold Chain Monitoring – applications without need for temperature graph or tabular data
Recording option	Single use
Operating range	-30 °C..+70 °C
Measurement accuracy	<p>The LIBERO CI is the most accurate indicator amongst its peers and features a guaranteed accuracy of ± 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 ± 0.3 °C in the core range.</p> <p>Accuracy over full temperature range:</p> <ul style="list-style-type: none">± 0.4 °C from 0.0 °C to +25.0 °C± 0.5 °C from -10.0 °C to -0.1 °C as well as +25.1 °C to +35.0 °C± 1.0 °C from -30.0 °C to -10.1 °C as well as +35.1 °C to +50.0 °C± 1.3 °C from 50.1 °C to 70.0 °C
Resolution	0.1 °
Measurement interval	1 to 60 minutes, user programmable
Expiry date and battery life	<ul style="list-style-type: none">- Indicator can be started any time during shelf life- Auto expiry date management: After expiry, display changes status and indicator cannot be started anymore- Use below 0 °C and above +40 °C for prolonged times can limit battery life
Battery type	Button cell contained in equipment, UN3091, exempt from DGR declaration
Certificate	Ilac/NIST/ISO 17025 traceable production calibration certificate
Programmable alarms	<ul style="list-style-type: none">- 8 temperature alarm levels with single or cumulative delays- 2 temperature thresholds with alarm delay- Alarm on MKT- Alarm on duration / run time
Start-up delay	0 minutes to 24 h
Display	Multifunction LCD, size: 23.5 × 23.5 mm, with large OK and ALARM indicator
Display functionality	<ul style="list-style-type: none">- Status: Conf, Start, Run, Stop- OK, ALARM or blank- Current temperature measurement- Configuration profile identification
Report	<p>Built-in PDF file generator automatically establishes an evaluation report with embedded 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 FDA 21 CFR Part 11.</p> <ul style="list-style-type: none">- 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 indicator information (ID, configuration, etc.)
Traceability	ID number (traceable to component level)
Case dimension weight	ABS plastic material 96 × 37 × 11 mm (3.8 × 1.5 × 0.5 inch) 38 g (1.34 oz)
Certifications	CE EN12830 EMC RTCA DO-160 RoHS WHO-PQS Safe Transport of Chemical Goods
Indicator configuration and analysis software	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.