

LIBERO THi1

- Climate monitoring
- Automatic PDF report



TECHNICAL SPECIFICATIONS LIBERO THi1

LIBERO THi1

PDF Logger for Temperature and Humidity

LIBERO THi1 is the ideal data logger for climate monitoring of smaller storage facilities, display cabinets or climate chambers as well as for test and verification applications. The data logger automatically evaluates alarm criteria and creates a PDF report as soon as it is plugged into the USB port on any computer without the need of installing software. LIBERO THi1 is available in three versions – the two years lifetime (THi1); the multiple use device with 400 days (THi1-Y); and the single use for 100 days (THi1-S). Optionally, a bracket for audible and visual alarm is available.

USB interface

Alarm status indicator

Display with battery status

Combined internal probe T/RH

LIBERO PDF Logger THi1

OK and ALARM indicator

Additional information

Upper and lower alarm limits

Logging results and statistics

T/RH graph with alarm limits

LIBERO THi1 PDF Report

Warehouse Humidity and Temperature

Additional Information
Demo unit Libero THi1 - PDF Logger
Please! PDF Report Language: English
Configure LIBERO according to your needs!

Device Configuration

Type:	Libero THi1 V3.16	Inspection Range:	Last Tr-Arr / Show at
Logger ID:	15000719	Current State:	Logging Transit
Log Interval / Duration:	5 m / 27 #	Remaining Battery:	4.8%
Log Mode:	LOG	Logger Start:	21-Jan-2011 14:24:25
Report Time Base:	GMT -01:00	Checksum:	A9H7 586.575.167
Configured by:	S1903, ELP-806E/epn, 21-Jan-2011 14:24:16		

Alarm Conditions

T: Upper Threshold:	25.0 °C	Total Time:	Status:
T: Lower Threshold:	15.0 °C	T: Time above Threshold:	16.2 d ALARM
rh: Upper Threshold:	75.0 %RH	T: Time below Threshold:	4.8 d ALARM
rh: Lower Threshold:	35.0 %RH	rh: Time above Threshold:	40.7 h ALARM
Alarm Delay:	3.0 h	rh: Time below Threshold:	4.8 d ALARM

Logging Results

Highest Temperature:	32.8 °C, 27-May-2011 03:24:25	Transit Start at:	22-Mar-2011 09:47:22
Lowest Temperature:	2.0 °C, 16-Apr-2011 06:49:25	Not available	
Average Temperature:	22.9 °C	Alarm at:	22-Mar-2011 12:49:25
SUCT	23.2 °C	File created:	01-Dec-2011 17:15:53
Highest rel. Humidity:	68.8 %RH, 27-May-2011 03:24:25		
Lowest rel. Humidity:	12.9 %RH, 16-Apr-2011 06:49:25		
Average rel. Humidity:	47.3 %RH		

T/RH graph with alarm limits

we prove it.



HIGHLIGHTS

- Compact, easy to use temperature and humidity PDF Logger
- Compatible with liberoMANAGER cold chain database
- Optional with audible and visual alarm
- Observes compliance with GLP / GMP guidelines

Technical Specifications LIBERO THI1

Type	THi1 (multiple use, 2 years) THi1-Y (multiple use, 400 days) THi1-S (single use)	
Application area	Site Monitoring Systems, Test & Verification Systems	
Recording options and mode	Multiple use: start / stop or loop mode Single use: start / stop mode	
Type of probe	Combined internal probe T / RH	
Measurement range	-25 °C..+70 °C and 0 %RH..100 %RH	
Measurement accuracy	Temperature: ± 0.5 °C [+10.0 °C..+40.0 °C] ± 0.8 °C [-10.0 °C..+9.9 °C] and [+40.1 °C..+55.0 °C] ± 1.2 °C [-25.0 °C..-10.1 °C] and [+55.1 °C..+70.0 °C]	Humidity (RH): ± 2 %RH [10.1 %RH..65 %RH] ± 3 %RH [65.1 %RH..80 %RH] ± 4 %RH [0 %RH..10 %RH] and [80.1 %RH..100 %RH]
Measurement interval	THi1: 5 to 60 minutes, user programmable THi1-Y: 2 to 60 minutes, user programmable THi1-S: 1 to 60 minutes, user programmable	
Memory capacity	8'000 measurement values each for temperature and humidity	
Battery life	THi1: 2 years THi1-Y: 400 days THi1-S: 100 days Non-replaceable battery Use below 0 °C and above +40 °C can limit battery life	
Programmable alarms	Upper and lower alarm limits for temperature and humidity	
Start-up delay	0 minutes to 24 h, user programmable	
Display	Multifunction LCD, size: 23.5 x 23.5 mm (0.93 x 0.93 inch), with OK and ALARM indicator	
Display functionality	<ul style="list-style-type: none"> - Status: Conf, Start, Logging, Stop - Current temperature and humidity measurement - Configuration profile identification - Remaining battery life in days - Statistical data (min, max, average) 	
Report	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. <ul style="list-style-type: none"> - Customizable report title and filename - Text area for additional information, user instructions, monitoring location - Immediate release or quarantine based on alarm status - Statistics (min / max, average, alarm) and detailed logger information (ID, configuration, etc.) - Chart visualizing the temperature and humidity curve and alarm limits 	
Case dimension weight	ABS plastic material 102 x 40 x 19 mm (4.0 x 1.6 x 0.75 inch) 45 g (1.45 oz)	
Accessories	LIBERO Simple bracket, LIBERO Alarm bracket	
Data logger configuration and additional analysis software	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 to PDF Logger. elproVIEWER software to access and export embedded data of PDF report, for data analysis and comprehensive report features. Both software products are downloadable at www.elpro.com/downloads .	