



LIBERO W

- Temperature monitoring
- Ready to use
- 100% compliant



TECHNICAL SPECIFICATION LIBERO W

LIBERO W

Independent Monitoring Solution for Rooms & Equipment

LIBERO W is the most versatile solution for pharmacies, clinical sites and laboratories. Being wireless and battery operated, there is no need for a complicated installation. Place the sensor in the refrigerator or the piece of equipment you want to monitor, start the LIBERO W base station and you are up and running in no time. Use a preconfigured device which is ready to go or take advantage of different reporting options and customize the device exactly to your application. For a safe and regular readout the device features a reminder function and an integrated USB cable. Peace of mind for your critical environment.

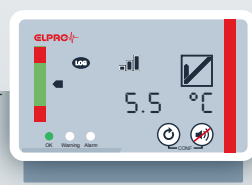
Customizable PDF reports

Embedded raw data.
For various applications.



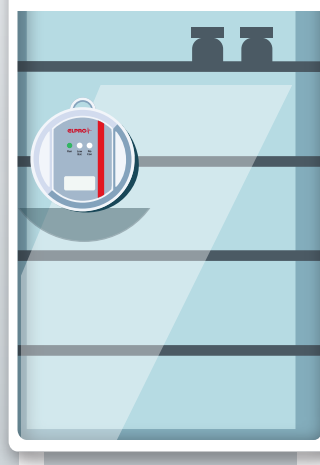
LIBERO W Base

Audio-visual warnings and alarms.
Stand or wallmount.
Integrated USB cable.



LIBERO W Sensor

Status LEDs.
Buffer memory for uninterrupted measurement.



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- Simple installation without cables
- Independent of internet and external power supply
- Uninterrupted record of measuring values
- Automatic and reliable min/max temperature list
- 100 % compliance for pharmacies and clinical sites

Technical Specifications LIBERO W

Type	Wireless PDF datalogger consisting of sensor and base station	
Application area	Temperature monitoring for refrigerators, transport boxes, incubators or climate chambers	
Recording options and mode	Multiple use: loop mode or Start-Stop mode	
Type of probe	Internal NTC	
Measurement range (sensor)	-35 °C..+50 °C	
Measurement accuracy	±1.0 °C in the range between -35.0 °C and -10.1 °C ±0.5 °C in the range between -10.0 °C and -0.1 °C ±0.4 °C in the range between 0.0 °C and +25.0 °C ±0.8 °C in the range between +25.1 °C and +50.0 °C	
Operating range (base station)	0 °C..+50 °C	
Measurement interval	1 min to 60 min	
Run-time (memory capacity)	2 years using 15 min measurement interval (70'000 measuring points in the base station and up to 2'200 measuring points as buffer in the sensor)	
Exchangeable standard batteries	Base station: 3 × alkaline AAA Sensor: 2 × alkaline AAA or 2 × Lithium AAA (for freezer applications)	
Certificate	Ilac/SCS/DAkKS/NIST/UKAS/ISO 17025 traceable Production Calibration Certificate	
Programmable alarms	- 8 temperature alarm levels with single or cumulative alarm delays - 2 temperature thresholds with alarm delay	
Programmable warnings	Temperature warning Read-out reminder Calibration reminder No connection warning	
Display	Multifunction LCD, size: 32 × 80 mm (1.26 × 3.15 inch)	
Display functionality	- Status: OK, WARNING, ALARM - Current temperature measurement - Indication on actual temperature zone - Audio alarm off - Wireless connection strength - Battery replacement due - Calibration due - Read-out due	
Report	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.	
	4 report types: Daily min/max report Status report All data report Event report	
Warning alarm signaling	Audio-visual warnings and alarms (LED, buzzer)	
Case dimension weight	Base station: ABS plastic material 115 × 82.5 × 27 mm (4.53 × 3.25 × 1.06 inch) 195 g (6.88 oz) Sensor: ABS plastic material Ø 73 mm (2.87 inch), 17 mm (0.67 inch) 70 g (2.47 oz)	
Protection class	Base station: IP 54 / NEMA 13 Sensor: IP 64 / NEMA 6	
Data logger configuration and additional analysis software	liberoCONFIG software to create, store and manage individual settings in a data logger profile. elproVIEWER software to access and export embedded data of PDF report, for data analysis and comprehensive report features.	
Technical data wireless connection	Connection between sensor and base station: wireless technology standard to exchange data over short distances in the range of 2.4 GHz.	
Conformity	CE FCC Technical Conformity Mark	



LIBERO Te1-P

- External probe
- Automatic PDF report

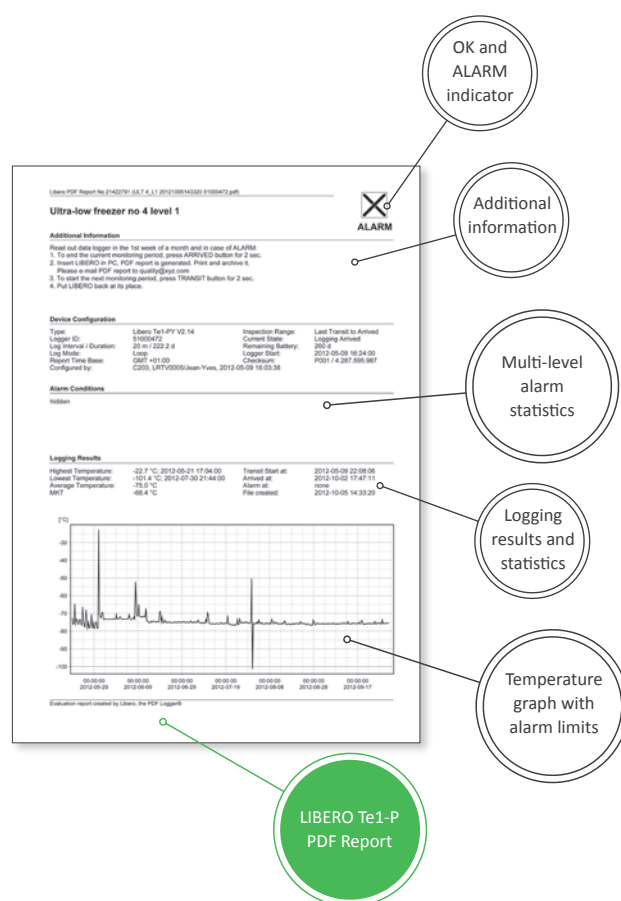
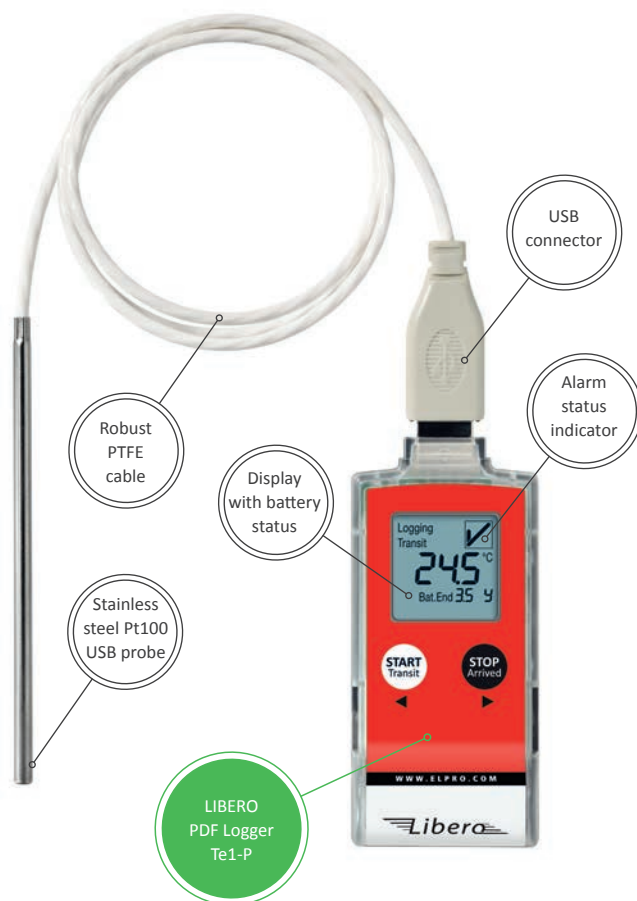


TECHNICAL SPECIFICATIONS LIBERO TE1-P

LIBERO Te1-P

PDF Logger for External Pt100 Temperature Probe

LIBERO PDF Logger Te1-P covers a wide measurement range from -200°C .. $+200^{\circ}\text{C}$ and allows monitoring of ultra-low freezers and cryo containers. Measure temperature close to the product with the external probe and see results and alarm status on the data logger display outside the monitoring area. No software is needed for data download; LIBERO Te1-P automatically generates a PDF report as soon as it is plugged into the USB port of any computer. The LIBERO PDF Logger is available in three versions: multiple use during two years (Te1-P); 400 days (Te1-PY); or single use (Te1-PS).



we prove it.



- Monitors your valuable goods in ultra-low freezers and during transport in cryo containers
- Simple and safe, no software required for data download
- Compatible with liberoMANAGER cold chain database
- Observes compliance with GLP/GMP guidelines

Technical Specifications LIBERO Te1-Px

Type	PDF Logger for external Pt100 temperature probe (probe not included)
Application area	Site Monitoring Systems, Container Monitoring Systems
Recording options and mode	Multiple use: start / stop or loop mode Single use: start / stop mode
Type of probe	Any Pt100 probe, standard class A (IEC751), max. cable length 3 m (118.1 inch), requires USB or M8 connector
Measurement range	Measurement range of probe: -200 °C..+200 °C Operating range of data logger: -35 °C..+70 °C
Measurement accuracy	Device: ± 0.3 °C in the range of -10.0 °C..+25.0 °C ± 0.5 °C in the range of -200.0 °C..-10.1 °C as well as +25.1 °C..+200.0 °C System accuracy with a Pt100 class A probe: ± 0.4 °C in the range of -10.0 °C..+25.0 °C
Measurement interval	Te1-P: 5 to 60 minutes Te1-PY: 1 to 60 minutes Te1-PS: 1 to 60 minutes, user programmable
Memory capacity	16'000 measurement values
Battery life	Te1-P: 2 years Te1-PY: 400 days Te1-PS: 100 days Non-replaceable battery Use below 0 °C and above +40 °C can limit battery life
Programmable alarms	- 6 temperature alarm levels with single or cumulative delays - 2 temperature thresholds with alarm delay
Start-up delay	0 minutes to 24 h, user programmable
Display	Multifunction LCD, size: 23.5 × 23.5 mm (0.93 × 0.93 inch), with OK and ALARM indicator
Display functionality	- Status: Conf, Start, Logging, Stop - Current temperature measurement - Configuration profile identification - Remaining battery life in days - Statistical data (min, max, average) - Start and end marking functionality with START and STOP buttons
Report	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. - Customizable report title and filename - Text area for additional information (e.g. equipment name, location, etc.) - Statistics (min / max, average, alarm) and detailed logger information (ID, configuration, etc.) - Chart visualizing the temperature curve and alarm limits
Case dimension weight	ABS plastic material 102 × 40 × 19 mm (4.0 × 1.6 × 0.8 inch) 45 g (1.59 oz) without probe
Accessories	LIBERO Stainless steel bracket, LIBERO Simple bracket, LIBERO Alarm bracket Variety of Pt100 temperature probes
Alarm output to Alarm bracket	Full functionality for audible and visual alarms (LED, buzzer) incl. internal relay for passing the alarm to an external system as GSM interface or telephone dialing unit.
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

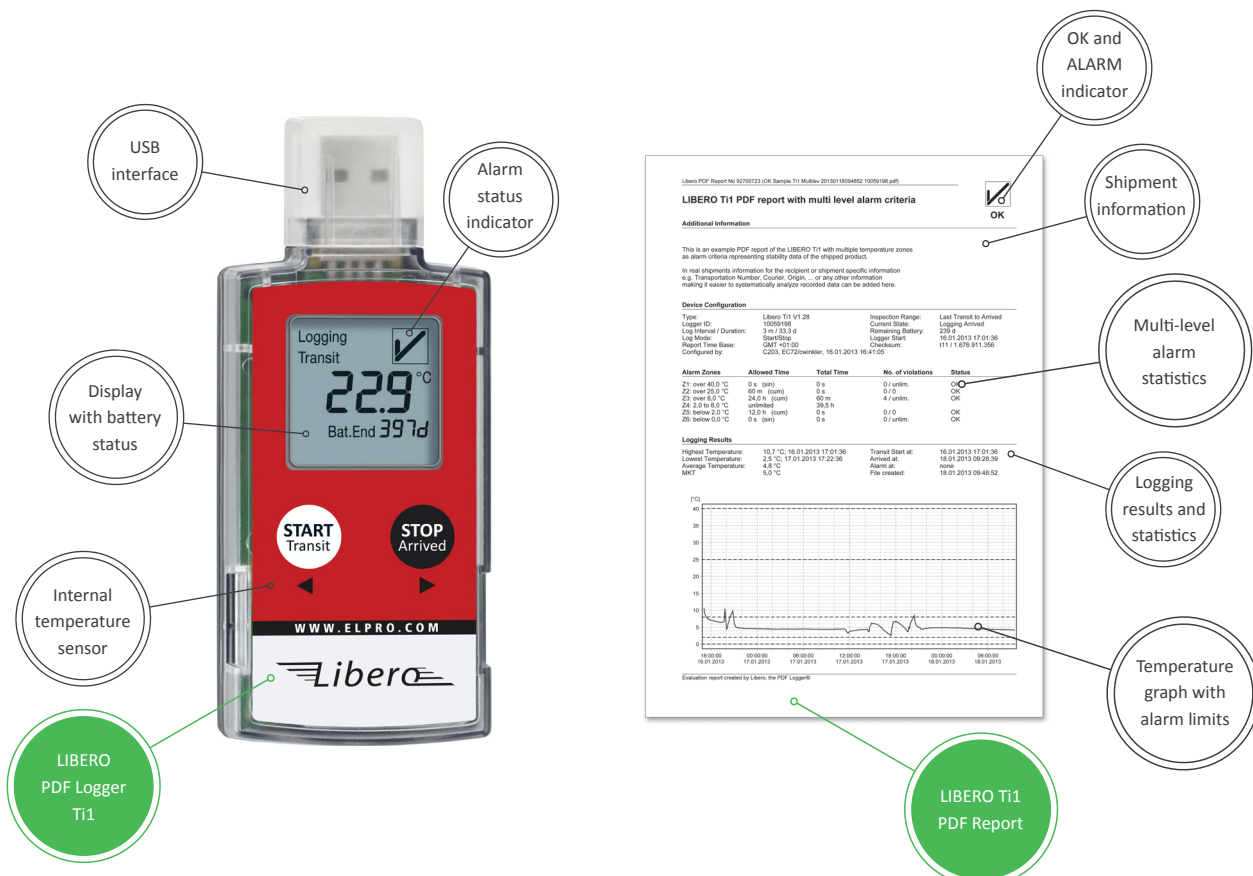


TECHNICAL SPECIFICATIONS LIBERO Ti1

LIBERO Ti1

Reusable Multi-Level PDF Logger

With its wide temperature measurement range, an unmatched accuracy, and a battery lasting for more than one year, the LIBERO Ti1 is a flexible option for various applications. End users can customize up to six alarm levels and add shipment- or project-specific information. After downloading the PDF report via any computer USB port, the LIBERO Ti1 can be immediately reused or reprogrammed with a completely new configuration – even a different temperature range. The multi-use capability of the LIBERO Ti1 significantly lowers cost per use, making the LIBERO Ti1 a versatile, cost-effective choice.



we prove it.

HIGHLIGHTS

- Simple and safe, no equipment, no software
- Used by major pharma companies and CROs worldwide
- Widest temperature measurement range of -35 °C..+70 °C
- Compatible with liberoMANAGER cold chain database
- Fully compliant with industry guidelines

Technical Specifications LIBERO Ti1

Type	PDF Logger with multiple alarm levels
Application area	Cold Chain Monitoring – applications with stability data or other allowed time / temperature excursions
Recording options and mode	Multiple use: start / stop or loop mode
Type of probe	Internal NTC probe
Measurement range	-35 °C..+70 °C
Measurement accuracy	± 0.2 °C in the range of -10 °C..+25 °C ± 0.5 °C in the range of -35 °C..-10.1 °C as well as +25.1 °C..+70 °C
Resolution	0.1 °
Measurement interval	1 to 60 minutes, user programmable
Memory capacity	16'000 measurement values
Expiry date and battery life	- 14 months shelf life - 400 days logging time
Certificate	14 month validation certificate
Programmable alarms	- 6 temperature alarm levels with single or cumulative delays - 2 temperature thresholds with alarm delay
Start-up delay	0 minutes to 24 h
Display	Multifunction LCD, size: 23.5 x 23.5 mm, with OK and ALARM indicator
Display functionality	- Status: Conf, Start, Logging, Stop - Current temperature 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 raw 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. - 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
Case dimension weight	ABS plastic material 95 x 40 x 12 mm (3.8 x 1.6 x 0.5 inch) 38 g (1.34 oz)
Accessory	LIBERO Simple 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.

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