





**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


**Swiss Engineering**

## Technical Specifications LIBERO Ti1

<b>Type</b>	PDF Logger with multiple alarm levels
<b>Application area</b>	Cold Chain Monitoring – applications with stability data or other allowed time / temperature excursions
<b>Recording options and mode</b>	<b>Multiple use:</b> start / stop or loop mode
<b>Type of probe</b>	Internal NTC probe
<b>Measurement range</b>	-35 °C..+70 °C
<b>Measurement accuracy</b>	± 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
<b>Resolution</b>	0.1 °
<b>Measurement interval</b>	1 to 60 minutes, user programmable
<b>Memory capacity</b>	16'000 measurement values
<b>Expiry date and battery life</b>	- 14 months shelf life - 400 days logging time
<b>Certificate</b>	14 month validation certificate
<b>Programmable alarms</b>	- 6 temperature alarm levels with single or cumulative delays - 2 temperature thresholds with alarm delay
<b>Start-up delay</b>	0 minutes to 24 h
<b>Display</b>	Multifunction LCD, size: 23.5 x 23.5 mm, with OK and ALARM indicator
<b>Display functionality</b>	- Status: Conf, Start, Logging, Stop - Current temperature measurement - Configuration profile identification - Remaining battery life in days - Statistical data (min, max, average)
<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 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
<b>Traceability</b>	ID number
<b>Case   dimension   weight</b>	ABS plastic material   95 x 40 x 12 mm (3.8 x 1.6 x 0.5 inch)   38 g (1.34 oz)
<b>Accessory</b>	LIBERO Simple Bracket
<b>Data logger configuration and additional analysis software</b>	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 <a href="http://www.elpro.com/downloads">www.elpro.com/downloads</a> .

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