![ELPRO logo]

LIBERO ITS
- Thin and compact
- Read-out on unit level
- Low cost and compliant
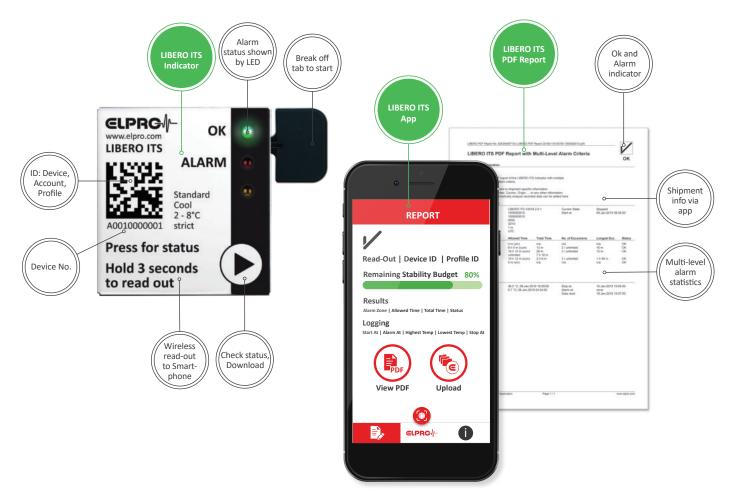
LIBERO ITS

Innovative multi-level indicator with electronic read-out technology

LIBERO ITS is a device for continuous temperature monitoring and calculating remaining stability budget of pharmaceutical products or clinical studies along the entire supply chain. It is thin and small enough to go on clinical kits and sales units of pharmaceuticals and durable enough to stay on the product during its entire shelf life for up to 4 years. LIBERO ITS manages deviations for up to 6 alarm levels. The alarm status is always visible and can be extracted wirelessly per Smartphone app. Follow all your shipments in the same database: LIBERO ITS is compatible with liberoMANAGER, ELPRO's cold chain database.

we prove it.

- **Thin and small, durable, smart and cost effective**
- **Quick implementation, also by 3rd parties**
- **Compatible with liberoMANAGER cold chain database**
- **100 % calibrated, conforms to regulatory guide lines**
- **Stability monitoring along the entire supply chain –**
  last-mile intelligence

Technical Specifications LIBERO ITS

Typ	PDF Indicator with multiple alarm levels
Application area	Cold Chain Monitoring without need for temperature graph or tabular data - Last mile, direct-to-patient - life-time monitoring on box level
Recording options and mode	Single use Start/Stop mode (start by breaking off tab / option «never stop» or «stop statistics by button»)
Operating range	-30 °C..+70 °C
Measurement accuracy	±0.5 °C in the core range of -10 °C to +50 °C Typical accuracy (95 % of all indicators) ±0.4 °C in the core range of -10 °C to +50 °C
	Accuracy outside core temperature range: ±1.0 °C from -30.0 °C to -10.1 °C as well as +50.1 °C to +70.0 °C
Resolution	0.1 °
Measurement interval	1 minute
Expiry date and battery life	- Auto expiry date management: Expired indicator cannot be started anymore - Started indicator runs for maximum 4 years* (or optional: until stopped) *Option «always blink» and use in frozen applications can limit the battery
Battery type	Button cell contained in equipment, UN3091, exempt from DGR declaration
Certificates	Ilac / NIST / ISO 17025 traceable production calibration certificate
Programmable alarms	6 temperature alarm levels with alarm delay options (single or cumulative)
Start-up delay	0 minutes to 45 days configurable
Display	Alarm status shown by LED (no display)
Status visibility	- Status: Ready, Operating, Stopped, EOL - OK, ALARM - Configuration profile identification
Report	PDF file generation via Smartphone app automatically establishes an evaluation report with embedded changing protected raw data. Complies with the ISO standard 19005-1:2005 Document Management for the long-term preservation of electronic documents (PDF/A). - Statistics (min/max, alarm) and detailed indicator information (ID, configuration, etc.) - For customer-specific configurations, customizable report title and text area for additional information (e.g. shipment information, destination, etc.)
Traceability	Device ID number as data matrix (traceable to component level)
Case | dimension | weight	Metal housing | 26 × 28 × 2.8 mm (1.0 × 1.1 × 0.1 inch) | 4.5 g (0.16 oz)
Certifications	CE | EN12830 | WEEE | RoHS | RTCA DO-160 (EMC) | UN 38.3 | Safe Transport of Chemical Goods
Indicator configuration and additional analysis software	Indicators with ELPRO defined standard configuration and label. Customer-specific configuration and hardware options for larger quantities. Wireless read-out of statistics possible with Smartphone app. 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.

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