



- LIBERO GL**
- > 100% calibrated & compliant
 - > Flight-proof; no DGR declaration required
 - > Multi-level alarm criteria

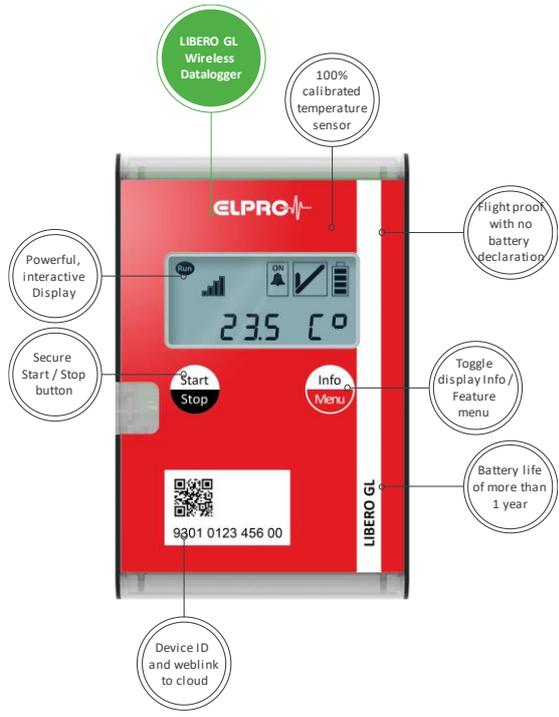


(PRELIMINARY) TECHNICAL SPECIFICATIONS

LIBERO GL

Multi Use Real-Time Temperature Data Logger

With its unbeatable runtime of more than one year, LIBERO GL is the flexible and compliant real-time temperature data logger for various applications.. The internal temperature sensor is highly accurate and comes with a 100% sensor calibration. Allowing to set multi-level alarm criteria, but also does LIBERO GL monitor light and location as well as movement of the shipment. In addition to temperature, LIBERO GL monitors light and location as well as movement of the shipment. LIBERO GL features a powerful, interactive display to facilitate your shipment process. LIBERO GL uploads all measured data automatically to a save cloud environment where all shipments are monitored. The automatic flight detection and the abandonment of lithium batteries allows the usage for airfreight without cumbersome dangerous goods declaration. Up to 16.000 temperature values can be stored on the logger to temporarily buffer measurement data. At the end of the shipment release products directly based on the OK or ALARM status on the display and download the PDF report from the cloud. Optionally, a robust, lockable bracket is available. The multi-us capability of the LIBERO GL significantly lowers cost per use, making the LIBERO GL a versatile, cost effective choice.



we prove it.

+ SWISS QUALITY



- > Real-time insights of your valuable shipments on road, air and sea
- > Highly accurate and 100% calibrated temperature sensor
- > Simple and safe in use and application
- > Fully compliant with industry guidelines
- > Compatible with liberoMANAGER cold chain database

Technical Specification LIBERO GL (preliminary)

Type	Wireless Data logger with internal temperature sensor
Application area	Transport Monitoring: applications with stability data or other allowed time / temperature excursions
Recording options and mode	Multiple use: start / stop or loop mode
Sensors	Temperature sensor Geographical location Light sensor Acceleration sensor (movement/ tilt)
Measurement range	Measurement range of internal sensor: -30 °C..+70 °C
Application range	0 °C..+55 °C (only short term use above and below application range allowed)
Measurement accuracy	Internal Sensor ±1.0 °C for -30.0 °C..-20.1 °C ±0.5 °C for -20.0 °C..-0.1 °C ±0.4 °C for 0.0 °C..+65.0 °C ±0.5 °C for +65.1 °C..+70 °C
Resolution	0.1 °
Measurement interval	10 to 60 minutes, user programmable
Cellular network	LTE-M and NB-IoT (Global Roaming)
Communication interval	1 to 24 hours, user programmable, event-driven immediate communication (e.g. excursion, last will)
Measurement capacity	16'000 measurement values
Battery life	14 months (+ 12 months shelf life) Use below 0 °C and above +40 °C over a longer period of time and / or intensified communication behavior (e.g. bad connection) can shorten battery life
Battery type	Alkaline batteries (non-replaceable), exempt from DGR declaration
Configurable alarms / occurrences	8 temperature & alarm zones with single or cumulative delays Alarm on MKT / duration / runtime 2 temperature warning thresholds with alarm delay Occurrence for light, geo-position and movement / tilt
Start-up Delay	User configurable based on time, temperature or button
Display	Multifunction LCD, size: 42 × 20 mm
Certificate	Calibration certificate (3-points); additional calibration points or ISO 17025 certification available Validation Certificate
Traceability	Unique ID number (traceable to component level)
Reporting	Real-time visibility and notification about temperature excursions or occurrences via an ELPRO cloud solution Secure and compliant archiving of all data in ELPRO cloud (complies with FDA 21 CFR Part 11) Compatible with liberoMANAGER, ELPRO's cold chain database to store shipment reports and results, analyze shipments, conduct stability data assessments, manage release status and trigger customer specific work-flows in cold chain processes.
Case dimension weight	ABS plastic material 100 × 65 × 19 mm (3.9 x 2.5 x 0.7 in) 134 g (4.7 oz)
Conformity	CE FCC ICES RoHS UN38.3 Safe Transport of Chemical Goods WEE EASA
Standards	EN 12830 RTCA DO-160 (EMC) GAMP5