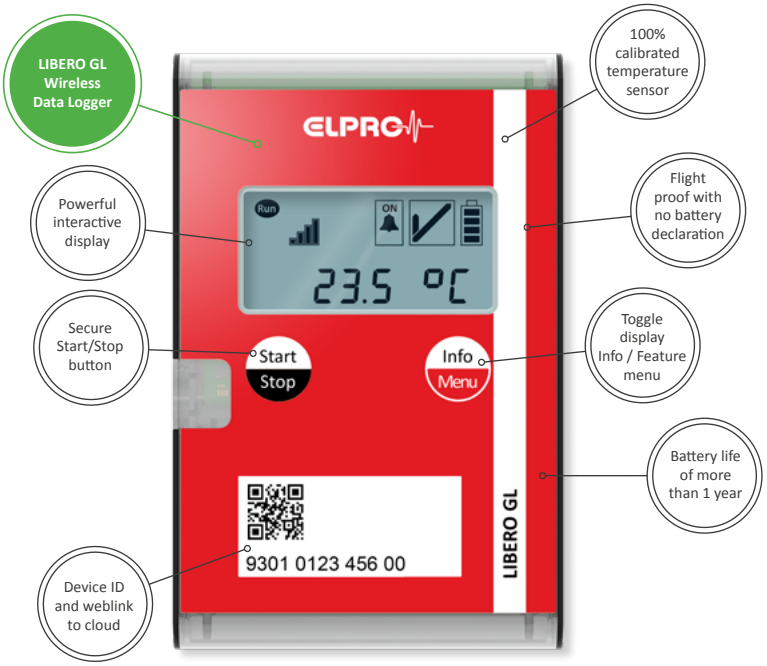
TECHNICAL SPECIFICATIONS

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. In addition to temperature, LIBERO GL monitors the location of the shipment. LIBERO GL features a powerful, interactive display to facilitate your shipment process. LIBERO GL uploads all measured data automatically to a safe 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 use capability of the LIBERO GL significantly lowers cost per use, making the LIBERO GL a versatile, cost effective choice.



- 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

Technical Specification LIBERO GL

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
Sensors	Temperature sensor | Geographical location
Measurement range	Measurement range of internal sensor: -30 °C..+70 °C
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	15 to 60 minutes, user programmable
Cellular network	LTE-M and NB-IoT
Communication interval	2 to 6 hours, user programmable, event-driven immediate communication (e.g. excursion, last will) No communication in frozen application (measurement data is buffered and can be transmitted with next ordinary communication)
Measurement capacity	16.000 measurement values (equals 166 days with 15 min measurement interval)
Expiry date and battery life	Data logger can be started any time during shelf life Started data logger runs up to 14 months 6 months continuous operation with 15 min measurement interval and 120 min communication interval Intensified communication behavior (e.g. bad connection or local provider settings) and application below 0° C and above +55 °C can shorten battery life
Battery type	Alkaline batteries (non-replaceable), exempt from DGR declaration
Configurable alarms	2 temperature thresholds with alarm delay
Start-up delay	User configurable based on time, or button
Display	Multifunction LCD, size: 42 × 20 mm
Certificate	Calibration certificate (3-points); additional calibration points or ISO 17025 certification[1] 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
Case | dimension | weight	ABS plastic material | 100 × 65 × 19 mm (3.9 x 2.5 x 0.7 in) | 125 g (4.4 oz)
Conformity	CE | FCC | ICES | RoHS | UN38.3 | WEEE
Standards	EN 12830 | RTCA DO-160 (EMC) | GAMP5

[1] Reported without customer contact information according to ISO 17025 7.8.1.3 due to data protection requirements.