

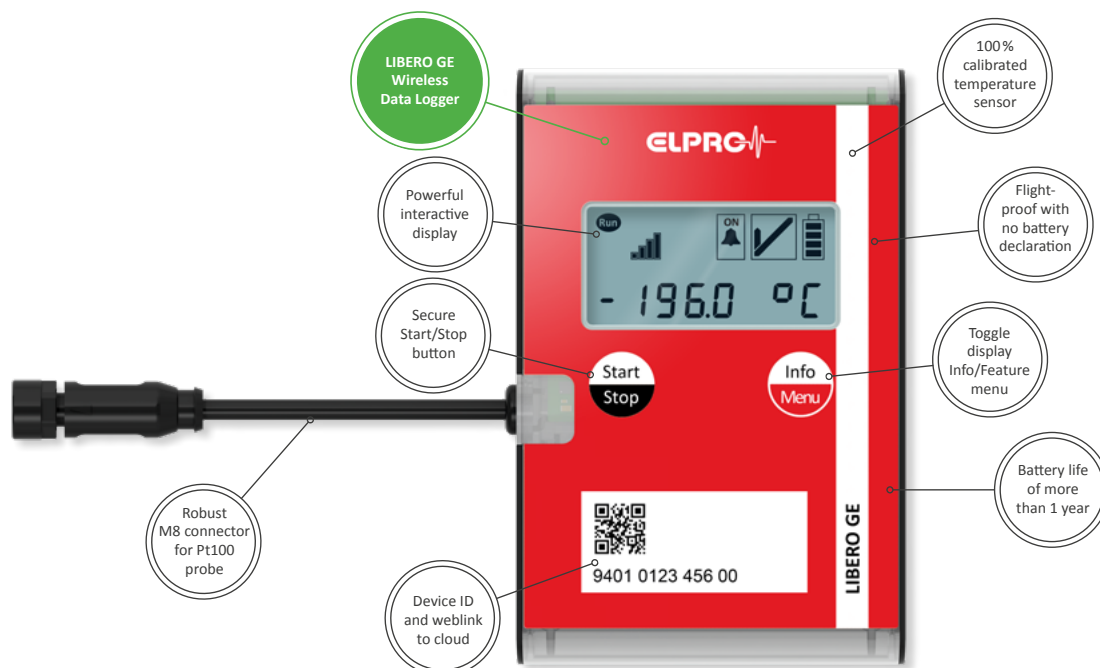


TECHNICAL SPECIFICATIONS

LIBERO GE

Wireless Data Logger with Internal Sensor and External Pt100 Probe

LIBERO GE is the real-time logger that takes your cold chain monitoring to the next level. LIBERO GE covers all kind of applications for transport monitoring and simplifies the shipment process for products with known stability data. The internal temperature sensor is highly accurate and comes with a 100% sensor calibration. Having an external probe (Pt100 probe with M8 connector for safe temperature data transfer), LIBERO GE covers a wide measurement range from -200 °C..+400 °C and allows also monitoring of ultra-low freezers and cryo containers. LIBERO GE is reconfigurable and reusable with a battery life of more than a year. LIBERO GE 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. Having a display, LIBERO GE provides full transparency to the user at any time. Up to 31.000 temperature values can be stored on the data logger to temporarily buffer measurement data. A robust, lockable bracket is available to hold LIBERO Gx in a defined position. 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 monitoring software (elproCLOUD / liberoMANAGER).



we prove it.

SWISS QUALITY



- > Real-time insights into 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 Specifications LIBERO GE

Type	Wireless Data logger with internal sensor and external Pt100 temperature probe (probe not included)		
Application area	Transport Monitoring, (Cryo/Dry ice) Container Monitoring		
Recording options and mode	Multiple use: start/stop, Loop mode		
Sensors	High accuracy digital temperature sensor External probe (Pt100, requires M8 connector) Geographical location Light Tilt		
Measurement range	Measurement range (depending on probe): -200 °C..+400 °C Measurement range of internal sensor: -30 °C..+70 °C		
Application Range	On probe: -200 °C..+400 °C / internal sensor: 0 °C..+55 °C (only short term use above and below application range allowed) ¹		
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	External probe (system accuracy*) ± 1.4 °C in the range of -200.0 °C..-100.1 °C (Class B) ± 1.0 °C in the range of -100.0 °C..-50.1 °C (Class B) ± 0.4 °C in the range of -50.0 °C..-10.1 °C (Class A) ± 0.3 °C in the range of -10.0 °C..+25.0 °C (Class A) ± 0.5 °C in the range of +25.1 °C..+100.0 °C (Class A) ± 0.7 °C in the range of +100.1 °C..+200.0 °C (Class A) ± 1.1 °C in the range of +200.1 °C..+400.0 °C (Class A)	* Includes data logger and external Pt100 probe of stated class
Resolution	0.1 °		
Measurement interval	5 to 60 minutes, configurable via elproCLOUD / liberoMANAGER		
Cellular network	LTE-M and NB-IoT		
Communication interval	30 minutes to 2 hours according to communication mode (Longlife/Standard/Performance), configurable via elproCLOUD / liberoMANAGER, event-driven immediate communication (e.g. temperature excursion). No communication in frozen application (measurement data is buffered and is transmitted with next ordinary communication).		
Measurement capacity	31.000 measurement values (equals 322 days with 15 min measurement interval)		
Expiry date & battery life	Data logger can be started any time during shelf life (auto expiry data management). 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 will shorten battery life.		
Battery type	AA-Alkaline batteries (non-replaceable), exempt from DGR declaration		
Configurable alarms	7 temperature thresholds with alarm delay for internal and external sensor (4 upper limits, 3 lower limits)		
Start-up delay	Configurable based on time, temperature or button		
Display	Multifunction LCD, size: 42 × 20 mm		
Certificate	Manufacturer validation certificate per delivery, production validation and 3-point calibration certificate (ILAC/NIST/ISO 17025 traceable) pre ID number via compliance.elpro.com, additional customer-specific calibration points optionally available.		
Traceability	Unique ID number (traceable to component level)		
Reporting	Real-time visibility and notification about temperature excursions or occurrences via elproCLOUD / liberoMANAGER		
Case dimension weight IP code	ABS plastic material 100 × 65 × 19 mm (3.9 × 2.5 × 0.7 in) 132 g (4.7 oz) IP54		
Conformity	CE FCC UKCA ICES RoHS UN38.3 WEEE NCC RSM TDRA ENACOM IMDA MIC ACMA/RCM		
Standards	EN 12830 RTCA DO-160 (EMC) GAMP5		

¹ No communication if the device is used in a direct environment below 0°C. For a secure communication below 0°C, use LIBERO GF ext.