![berlinger logo] **berlinger**
feel safe

Designed for vaccine monitoring at ultra low temperatures

Proven Fridge-tag quality for ultra-low temperatures

The Fridge-tag Ultra low is the intelligent temperature logger for the continuous monitoring of sensitive vaccines and pharmaceuticals stored at ultra low temperatures up to -95°C.

If an alarm limit is exceeded, an alarm will be triggered on the display and is audible as an audio signal. A quick decision and immediate action is thus possible.

With the built-in USB connection, a secure PDF/A report with all relevant temperature data presented in a clear and easy understandable overview with temperature graph can be generated.

- Coolest operating temperature with external sensor: **–95°C** to 0°C / –139°F to +32°F

- **The device has an operating time of up to 3 years** - only the external sensor needs to be replaced

- User-friendly, reliable and high-precision

DESCRIPTION	Electronic ultra low temperature logger with USB and external Sensor
	Fridge-tag device must be mounted outside of the freezer with external sensor placed inside
MANUFACTURER'S REF	Fridge-tag Ultra Low
TYPICAL APPLICATION AREA	Monitoring of ultra-low temperature freezer up to -90°C
EXTERNAL DIMENSIONS (L X W X H)	128 x 75 x 19 mm, Display 95 x 27 mm
WEIGHT	112 g
STORAGE CONDITION (INACTIVE)	0 °C to +30 °C / +32 °F to +86 °F
	ONLY WITH EXTERNAL SENSOR PLACED INSIDE THE FREEZER (Fridge-tag device must be mounted outside of the freezer)
OPERATING TEMPERATURE	−95°C to 0°C / −139°F to +32°F
ALARM TEMPERATURE RANGE	−90°C to -5°C, in 0.1°C increments −130°F to +23°F
ACCURACY OF TEMPERATURE MEASUREMENT	+/- 2.0°C from −95°C to −25°C | +/-3.6°F from −139°F to −13°F +/- 0.8°C from −25°C to −10°C | +/-1.44 °F from −13°F to +14°F +/- 0.5°C from −10°C to +0°C | +/ 0.9 °F from +14°F to +32°F
ALARM LIMITS	2 individually programmable alarm limits (1 upper and 1 lower alarm limit)
ALARM TRIGGER TIME	1 minute to 23 h 59 min
ALARM INDICATION	visual, optional audible (buzzer)
LOGGING INTERVAL	5 min (standard)
MEASUREMENT ACCURACY OF THE TIME	+/- 30 minutes / year
CALIBRATION	Calibration traceable to ILAC recognised international standard (e.g. SAS, NIST) upon request
MEMORY SPACE	30 day overview on display; PDF report length factory settable: 28, 56, 84 or 112 day overview
BATTERY	Lithium battery- complies with IATA DGR Packaging Instruction 970-Section II
PROTECTION CLASS	IP64 (external sensor not plugged in)
2D CODE ON LABEL	2D data matrix
OPERATING LIFETIME AND SHELF LIFE	Up to 3½ years (½ year storage / 3 years useful life). The battery status indicator on the display provides information on the remaining lifetime.
WARRANTY	2 years from date of delivery (see general Berlinger Terms & Conditions)
MANIPULATION	Fridge-tag Ultra Low cannot be manipulated, reset or turned off without destroying it
FORMAT OF THE ORIGINAL DOCUMENT	PDF / ASCII (it can also be imported by many ERP or data management systems)
SOFTWARE FOR VERIFYING PDF AND ASCII FILE	berlinger verifier www.berlinger.com/verifier JAVA™ / The software verifies the digital signature of the ASCII and PDF files.
STANDARDS	CE, EMC, ROHS compliant, REACH

Subject to change. Please note that all information in this document is correct at the time of publication. Due to our policy of continuous product development, we reserve the right to change this information without prior notice.

For more information download the whole user manual www.berlinger.com/user-manuals

External Sensor for Ultra Low Temperatures

CABLE LENGHT	1.5 meter (flat cable)
OPERATING TEMPERATURE	−95°C to 0°C / −139°F to +32°F
OPERATING LIFETIME	1 year useful life
ACCURACY OF TEMPERATURE MEASUREMENT	+/- 2.0°C from −95°C to −25°C +/-3.6°F from −139°F to −13°F +/- 0.8°C from −25°C to −10°C +/-1.44 °F from −13°F to +14°F +/- 0.5°C from −10°C to +0°C +/ 0.9 °F from +14°F to +32°F