LB 115 DATA LOGGER

Dose Rate Monitoring your way



BERTHOLD

DOSE RATE MONITORING YOUR WAY

High flexibility. Maximum safety.

The LB 115 Data Logger – Precise Monitoring of Stationary Dose Rate

The LB 115 data logger is a powerful system for stationary dose rate monitoring that combines maximum flexibility with maximum operational reliability. The system consists of a modern central unit with a 7-inch color touchscreen, intuitive software for exceptionally easy operation, and integrated electronics for flexible alarm signaling. The data logger can be combined with up to two external probes.



The LB 115 data loggers have been specifically designed for the reliable measurement of dose rate levels in demanding environments. They are ideal for use in nuclear facilities, nuclide laboratories, hot cells, and numerous other laboratory and production areas where precise and safe radiation monitoring is essential.

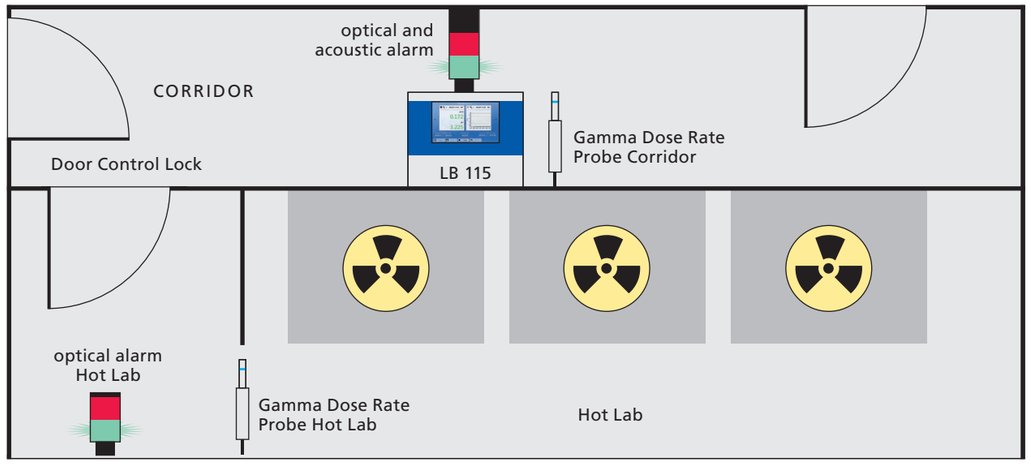
Flexible display options

Highlights and Features

- Large 7-inch color touchscreen display for optimal readability – even from a distance
- Intuitive and user-friendly software that provides a quick and clear overview of the current measurement situation
- Flexible alarm configurations with up to four individually configurable alarm thresholds per channel – ideal for complex security requirements
- Five dual relays for flexible alarm routing and triggering immediate responses, such as visual warning signals or targeted door controls
- Connectivity for up to two measurement probes to reliably perform a wide variety of measurement tasks

DESIGNED TO SUPPORT YOUR SAFETY CONCEPT

Plenty of connection options. Easy to use.



Integration example of a LB 115 controlling door control lock, two Gamma dose rate probes, optical and acoustic alarms

The LB 115 data logger was specifically designed to reliably meet even the most demanding safety requirements. Thanks to a wide range of possible combinations with proven measurement probes and real-time data processing, the system offers maximum flexibility.

Maximum flexibility for a wide range of applications

The LB 115 data logger enables the precise display, recording, and storage of measurement data. Up to two measurement probes can be connected simultaneously, allowing the system to be flexibly adapted to different measurement tasks.

- Gamma and neutron dose rate probes (e.g., LB 6411)
- Systems for measuring low and high dose rates with automatic switching (two probes, e.g., LB 6500-4 H10 and LB 6500-3 H10)
- Large-area proportional counters (e.g., LB 6350)
- Scintillation detectors (e.g., LB 1342)

When used with the appropriate detectors, the LB 115 data logger serves as a stationary dose rate monitor and provides precise activity readings. In addition, it enables reliable measurement of beta and gamma activity in room air and exhaust air, as well as safe monitoring of contamination levels.

Flexible integration and user-friendly operation

The LB 115 data logger offers numerous features that make both integration into existing systems and daily operation particularly simple and efficient.

- Intuitive, app-like touchscreen user interface for exceptionally easy operation
- Flexible display of measured values – either numerical or graphical for an optimal overview
- Remote control option
- Flexible and simple data transfer options
- Password-protected input parameters and access level restrictions
- Connectivity to support various visual and audible alarm units

TECHNICAL SPECIFICATIONS

Technical data LB 115

Mechanical data	
Dimensions	30 cm × 25 cm × 10 cm (W × H × D), stainless steel
Weight incl. signal tower	approx. 5.5 kg
Electronics	
Display	7" color touch screen, 800 × 480 pixels
Potential-free relay	5 × 2 change-over contact max. 50 VAC/120 VDC, 3 A
Optional 24VDC supply	Internal, max. connection power 12 W / 500 mA
On/off switch	Key switch
Ambient conditions	
Temperature	–25 °C to 55 °C (–25 °C to 50 °C with signal tower)
Relative humidity	0 up to 95 % (at +35 °C), non-condensing
Protection class	IP65
Pollution degree	2
Power Supply	
Voltage	100 to 240 VAC, 50/60 Hz
Power max.	60 W (at 20 °C)
Fuse	T1.6 A L 250 V (slow blow)
Software	
Measuring modes	Ratemeter, moving average and counter / timer operation
Data memory	Up to 60,000 measured values
Back-up function	Parameter Up-/Download for external data backup under its serial number on a connected USB stick
Alarm modes	4 alarm thresholds, 1 integral threshold and 1 failure threshold per probe
Service mode	Various service routines such as background measurement, system test and hardware test

Interfaces	
Ethernet (ext.)	10 / 100 / 1000 Mb
USB Host (Typ A) (external)	USB 2.0 (HS); max. 200 mA; Updates via USB
USB Device (Typ B) (external)	USB 2.0 (HS)
RS485 (internal)	9600 – 115 200 Baud, 8 data bits, 1 start bit, 1 stop bit, no parity, no handshake, cable length up to 1200 m, max. 15 participants, cable STP
Probes	2 × RS485 + 24 VDC for detector-interface
Digital inputs	3 × galvanically isolated, Low active (High = 5 V at input)
Current outputs	2 × galvanically isolated, load 400 Ω, modes: 0 to 20 mA, 0 to 24 mA, 4 to 20 mA
Measuring task	**Detector type (LB type)**
Gamma and neutron dose rate	Geiger-Müller (LB 6500-x)
	Proportional counter (LB 6360)
	Ionization chamber (LB 6701x)
	Neutron-counter (LB 6411)
Gamma Search Probe	NaI Scintillation Counter Probe 1" (LB 1234)
	NaI Scintillation Counter Probe 1,5" (LB 1234-2)
Beta-gas activities in room and exhaust air	Large area proportional counter tube (200 cm²) (LB 6350)
	Large area proportional counter tube (1000 cm²) (LB 6377)
Contaminations	Scintillation detector (170 cm²) (LB 1342)
	Scintillation detector (300 cm²) (LB 1343)
Accessories	
Signal tower	Siren (opt.), LED green, flash light red
	Siren (opt.), LED green + yellow, flash light red
Detector-Interface	
Dimensions	9 cm × 11.5 cm × 5.5 cm (W × H × D)
Weight	approx. 0.5 kg
Protection class	IP65
Subject changes without prior notice.	

TRANSFORMING SCIENCE INTO SOLUTIONS

Experience and expertise are of great importance to be able to ensure safety-relevant measurements properly and reliably. With more than 70 years of experience in planning and design, installation and commissioning, calibration, documentation and service of radiation protection measurement systems, we continue to support our customers in their task to continuously optimize their work processes and to ensure the safety of the environment and personnel.

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