

# Product Information

## LB 112 Micro Gamma Dual Channel Data Logger



### Application

- Stationary dose rate meter for gamma or neutron counters
- Radioactive gas monitor
- Process monitoring for PET installations

### Functions

- Single or dual probe operation
- Low dose / high dose rate system
- Radioactive gas monitor
- 2 serial interfaces RS 232/RS 485/ or Ethernet/USB
- Memory for 4000 data points
- Ratemeter or scaler timer mode
- Network capable with F<sup>2</sup>C protocol
- Electrically separated in- and outputs
- Vacuum-Fluorescence display



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# Product Information

## LB 112 Micro Gamma Dual Channel Data Logger

### Device Concept

Stationary monitor for one or two independent detectors or for a low dose / high dose rate measuring system. The operation of the device is controlled with a simple menu and softkeys. The instrument has a wide range AC power supply input between 85 and 264 V or a 9 to 36 V DC input for battery operation. Up to 4000 data can be stored and transferred via two serial interfaces to an external computer. An RS 485 interface is already built-in so that no external adapter is required. Data transfer can be done using the F<sup>2</sup>C protocol via the serial interfaces, Ethernet or USB.

Operation of the LB 112 is carried out with five softkeys located below the vacuum fluorescence display with adjustable brightness. All parameters are protected by a password.

An info key calls up a menu with important information during the measurement:

alarm conditions, raw data, alarm thresholds and further parameters. If the dose rate unit changed, the results are automatically renormalised. The dose rates are also available as output currents via the two analog outputs 0/4-20 mA, in a linear or logarithmic scale. Up to 15 units can be operated with a twisted pair bus cable in a RS 485 network with a maximum length of 1200 m.

### Technical Data

Low power consumption microprocessor unit, 192 kB eeprom memory, real time clock, two probe connectors with +/- 5V, +/- 15V supply for the detectors, normpuls input and control voltage for high voltage supply.

Electrically separated in- and outputs:

3 digital inputs, 2 current outputs, 2 serial interfaces as RS 232 or RS 485, Ethernet.

version 1: 5 relays (double pole with change-over contacts); slave USB interface,

version 2: 4 single pole relays.

Power supply:

85 to 264 VAC wide range power supply input or 9 to 36 VDC input depending on supply module, power consumption about 12 W.

temperature range: -5°C to 45°C, relative humidity: 10 to 80%, non condensing

protection degree: IP 65, dimensions: 200x200x80mm<sup>3</sup>, weight: 2.6 kg, stainless steel housing.

### Dose rate probes H\*(10):

LB 6500-4-H10, GM-probe:	0.1 µSv/h to 10 mSv/h	65 keV to 1.3 MeV
LB 6500-3-H10, GM-probe:	1 µSv/h to 1 Sv/h	50 keV to 1.3 MeV
LB 6360-H10, Proportional counter:	50 nSv/h to 20 mSv/h	35 keV to 1.3 MeV
LB 6701L-H10, Ionisation chamber:	10 µSv/h to 10 Sv/h	50 keV to 1.3 MeV
LB 6701M-H10, Ionisation chamber:	100 µSv/h to 100 Sv/h	50 keV to 1.3 MeV
LB 6701H-H10, Ionisation chamber:	1 mSv/h to 1000 Sv/h	50 keV to 1.3 MeV
LB 6411 for neutrons:	30 nSv/h to 100 mSv/h	10 meV to 20 MeV



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