# Technical Data Sheet

# Ionisation Chamber LB 6701H-H10

## Application

Dose rate probe for photon radiation in Health Physics applications.

## Measured Quantity

Ambient dose equivalent H*(10) or
Ambient dose rate equivalent $\dot{H}$*(10)

## Construction

The Ionisation Chamber is made from Aluminum with a Nitrogen gas filling at 1 bar and a radiation resistance up to $10^6$ Gy. The chamber current is proportional to the dose rate, this current is converted into a +5 V Norm pulse frequency in the Current/Frequency converter LB3857.

The Current/Frequency converter can be connected to a standard Data Logger using the connection cable Id.Nr. 74553.

A $^{90}$Sr check source with 50 kBq activity is built in the Ionisation Chamber to continuously monitor the proper functioning of the system.

## Technical Data

- **Measuring Range**
  100 µSv/h – 100 Sv/h (0°C to +50°C)
  10 µSv/h – 100 Sv/h (+10°C to +40°C)
- **Energy Range**
  45 keV – 1,3 MeV
  with regard to Cs-137 and 0°
- **Calibration Factor**
  1.4 fA/µSv/h
- **Output pulse I-F-Converter**

| | |
|---|---|
| Polarity: | positive |
| Amplitude: | + 5 V in 50 Ω |
| Pulse Width: | 3 - 5 µs |
| Frequency range: | 100 kHz |

- **High Voltage**
  1000 Volt
- **Operating Conditions**

| | |
|---|---|
| Temperature: | 0°C to +50°C |
| Rel. humidity: | 20% to 80% |
| Storage temp.: | 0°C to 60°C |
| Altitude: | <2000m |

- **Protection Degree**
  IP 54
- **Dimensions**

| | |
|---|---|
| - Ionisation chamber: | 80 mm Ø x 268 mm |
| - I-F-Converter Connection box: | 217 x 81 x 76 mm |