

# Technical Data Sheet

## Radiation Detector MIKON-104

### Measuring range and tolerable errors

$\gamma$ -equivalent dose rate: 0.1 – 99.99  $\mu\text{Sv/h}$  (10 – 9999  $\mu\text{R/h}$ )

error:  $\pm 40\%$  for 0.1 – 1  $\mu\text{Sv/h}$

$\pm 25\%$  for 1 – 10  $\mu\text{Sv/h}$  and 10 – 99.99  $\mu\text{Sv/h}$

$\beta$ -radiation density of surfaces (for the isotopes  $^{90}\text{Sr}/^{90}\text{Y}$ ):

0.1 – 99.99  $1/(\text{s}\cdot\text{cm}^2)$  [6 – 6000  $1/(\text{min}\cdot\text{cm}^2)$ ]

error:  $\pm 60\%$  for 0.1 – 1  $1/(\text{s}\cdot\text{cm}^2)$

$\pm 40\%$  for 1 – 10 and 10 – 99.99  $1/(\text{s}\cdot\text{cm}^2)$

Specific activity of the isotope  $^{137}\text{Cs}$ :  $2\cdot 10^3$  –  $2\cdot 10^6$  Bq/kg ( $5.4\cdot 10^{-8}$  –  $5.4\cdot 10^{-5}$  Ci/kg)

error:  $\pm 60\%$  for  $2\cdot 10^3$  –  $2\cdot 10^4$  Bq/kg

$\pm 40\%$  for  $2\cdot 10^4$  –  $2\cdot 10^5$  Bq/kg and  $2\cdot 10^5$  –  $2\cdot 10^6$  Bq/kg

### Energy ranges and registration dependence of energy

$\beta$ -radiation: 0.5 – 3 MeV; max:  $\pm 150\%$

$\gamma$ -radiation: 0.06 – 1.25 MeV ; max. +50/-25%

Continuous runtime : 12 hours

Temperature : -10 – 35° C (14 – 95° F)

Relative humidity:  $75 \pm 3\%$  (30° C)

Pressure: 86 – 107 kPa

### Maximal tolerable additional errors:

Temperature changing:  $20\pm 5^\circ\text{C}$ :  $\pm 15\%$

Relative humidity:  $75\pm 3\%$  (at 30° C):  $\pm 10\%$

Battery voltage down to 6 V:  $\pm 10\%$

Operation time: min. 4000 hours

Usable for at least 10 years