BETA RADIATION DETECTOR BDZB-96b

PURPOSE

BDZB-96s is designed to be used as a part of dosimeter-radiometer MKS-08 (with measurement console UIK-05, UIK-05-01 or UIK-06).
It is intended for measurement of beta contamination level of sources with radionuclides $^{90}Sr+^{90}Y$.

FEATURES

- wide measurement range of beta particles flux density;
- high sensitivity and wide energy range;
- operation in harsh weather conditions.

SPECIFICATIONS

Type of registered radiation	flux density of β-radiation
Energy range of registered beta particles	from 0,12 to 3,5 MeV
Measurement range of beta particles flux density	from 1 to $1 \cdot 10^5$ $min^{-1} \cdot cm^{-2}$
Limits of tolerable intrinsic relative error	± (15 + 20/Ax), %
Typical sensitivity, $s^{-1} \cdot min \cdot cm^2$, no less	0,10 $s^{-1} \cdot min \cdot cm^2$
Registration efficiency of beta-radiation $^{90}Sr+^{90}Y$, no less	45 %
Own background during measurement: • alpha-radiation, $min^{-1} \cdot cm^{-2}$, no more than • beta-radiation, $min^{-1} \cdot cm^{-2}$, no more than	 0,1 20
Type of detector	Beta-2
Active area of detector, cm^2	15 cm^2
Continuous operation time, no less	≥24 h
Overall dimensions, mm	Ø 65 × 65
Weight, kg	0,3
Note: where Ax – numerical value measured value	

ENVIRONMENT

- operating temperature range: from minus 20 °C to +50°C;
- relative humidity up to 95% at +35°C;
- atmospheric pressure from 84 to 106,7 kPa;
- protection class – IP 54;
- housing easy to decontaminate

RELIABILITY AND GUARANTEES

- working resource before the complete overhaul is 10000 hours for 10 years of operation;
- overhaul period is 5000 hours upon condition of average amount of repairs for the service period;
- warranty period of operation is 18 months from the moment of putting into operation or if the guarantee period of storage is expired.
- guarantee period of storage is 6 months from the sale date.

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