SMART RADIATION DETECTOR BDZB-400-RSF

PURPOSE

This detector is intended for measurement of contamination level of beta particles flux density.

BDZB-400-RSF is an external radiation detector of dosimeter-radiometer MKS-18 (use with one of measurement console UIK-09, UIK-10 or UIK-11) or can be applied as a part of an automated radiation monitoring system.

FEATURES

- a short measurement time and quick automated adaption to changing radiation conditions;
- an operation in a wide temperature range;
- a data exchange between radiation detector and measurement console from a set of MKS-18 is made via interface RS-485;
- an ability of connection to a personal computer for an operation with the special software which has been developed by SPE «TETRA» Ltd («Atlant-Monitor», «TETRA_Checker», «TETRA_Reporter» etc).

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	$5\text{-}1\cdot10^{5}$ $min^{-1}\cdot cm^{-2}$
Measurement range of beta surface activity	$0{,}1\text{-}3\cdot10^{3}$ $Bq\cdot cm^{-2}$
Typical sensitivity of radiation detector, no less	2,56 $s^{-1}\cdot min\cdot cm^{2}$
Limits of tolerable intrinsic relative error	± (20 + 5/Ax)*
Own background, no more	20 $min^{-1}\cdot cm^{-2}$
Type of detector	scintillation plastic detector
Active area of detector	330 cm^{2}
Warm-up time, no more	1 мин
Overall dimensions	170x280x60
Weight	2,7
Note: where * – for beta radiation sources with radionuclides $^{90}Sr+^{90}Y$.	

ENVIRONMENT

- operating temperature range: from minus 40 °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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