

PURPOSE

BDKN-96 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 allowed to measure the ambient dose equivalent rate $\dot{H}^*(10)$ of neutron radiation, the ambient dose equivalent $H^*(10)$ of neutron radiation, as well as to measure the neutron flux density.



FEATURES

- wide measurement range;
- high sensitivity and wide energy range;
- operation in harsh weather conditions.

SPECIFICATIONS

Type of registered radiation	ADER, ADE, FD n
Energy range of registered neutron-radiation	from 0,025 eV to 14 MeV
Measurement range of ambient dose equivalent rate $H^*(10)$ of neutron-radiation	0,1 μ Sv/h - 0,1 Sv/h
Measurement range of ambient dose equivalent $H^*(10)$ of neutron-radiation	0,1 μ Sv - 10 Sv
Measurement range of flux density of neutron-radiation	$0,1-1 \cdot 10^5 \text{ s}^{-1} \cdot \text{cm}^{-2}$
Limits of tolerable intrinsic relative error, %	$\pm (15 + 2/Ax)$
Energy dependence	$\pm 40 \%$
Typical sensitivity, no less:	$1,00 \text{ s}^{-1} \cdot \mu\text{Sv}^{-1} \cdot \text{h}$
Own background	not standardized
Type of detector	slow neutron counter filled with ^3He (in polyethylene moderator, cylinder \varnothing 100 mm)
Active area of detector, mm^2	$\varnothing 18 \times 140$
Continuous operation time, no less	$\geq 24 \text{ h}$
Overall dimensions, mm	$295 \times 142 \times 100$
Weight, kg	2,5
<i>Note: where Ax – numerical value measured value</i>	

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 67;
- 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