

A BRAND-NEW UNIVERSAL DOSIMETER-RADIOMETER THAT IS CAPABLE OF WIRELESS OPERATING WITH THE COMPUTER AND THE EXTERNAL PROBES

APPLICATION:

- measurement of ambient dose equivalent and ambient dose equivalent rate for photon radiation;
- efficient search for ionizing radiation sources and radioactive substances;
- measurement of alpha and beta radiation flux density and fluence;
- measurement of surface alpha and beta activity.

FEATURES:

- high-sensitivity scintillation detectors of large area;
- visual image and accompanying frequency modulated sound of the measurement results;
- capability to set various alarm thresholds for: dose, dose rate, alpha and beta contamination (with the corresponding external probe);
- automatic recording of the results into the nonvolatile memory;
- quick charging Li-Po battery;
- bright, high-contrast display with graphical interface;
- radio channel or wired interface for communication between the external probe and control unit, communication with the computer via radio channel;
- built-in GLONASS / GPS module allows environment surveying with references to geographical coordinates.



Dosimeter-radiometer of alpha radiation (with the external alpha probe BDZA-R5D)



Dosimeter-radiometer of gamma radiation (with the external gamma probe BDKG-R20D)



Dosimeter-radiometer of beta and gamma radiation (with the external beta and gamma probe BDZB-R5D)

TECHNICAL CHARACTERISTICS

Warm-up time, no more	10 s
Continuous operation time from the fully charged batteries under normal conditions, no less	18 h
Nonvolatile memory capacity	900 measurements
IP rating	IP65
Mean lifetime, no less	15 years
Mean time between failures, no less	30 000 h

OVERALL DIMENSIONS, WEIGHT, NO MORE:

• control unit UPI-01D	132x28x89 mm, 0.24 kg
• external gamma probe BDKG-R20D	245x152x78 mm, 1.39 kg
• external beta and gamma probe BDZB-R5D	180x180x176 mm, 1.79 kg
• external alpha probe BDZA-R5D	180x180x176 mm, 1.55 kg

DOSIMETER RADIOMETER WITH THE EXTERNAL GAMMA PROBE BDKG-R20D

Energy range of detected photon radiation	0.05 ÷ 3.0 MeV
Measurement range of ambient dose equivalent rate for photon radiation \dot{H}^* (10)	0.1 μ Sv/h ÷ 10.0 Sv/h
Measurement range of ambient dose equivalent for photon radiation H^* (10)	0.1 μ Sv ÷ 10.0 Sv
Sensitivity to gamma radiation with 0.662 MeV (Cs-137) energy, ambient dose equivalent rate in the range 0.1 μ Sv/h ÷ 1 mSv/h	500 s ⁻¹ /(μ Sv/h)

DOSIMETER-RADIOMETER WITH THE EXTERNAL ALPHA PROBE BDZA-R5D

Energy range of detected alpha radiation	4.0 ÷ 8.0 MeV
Measurement range of alpha radiation flux density	0.1 ÷ 5.0·10 ⁴ min ⁻¹ cm ⁻²
Measurement range of alpha radiation fluence (when flux density is within its measurement range)	0.5 ÷ 3.0·10 ⁵ cm ⁻²
Measurement range of surface activity of Pu-239 radionuclide	3.4·10 ⁻³ ÷ 1.7·10 ³ Bq/cm ²
Sensitivity to alpha radiation of radionuclide, no less:	
• Pu-239	1.2 s ⁻¹ ·min·cm ⁻²

DOSIMETER-RADIOMETER WITH THE EXTERNAL BETA AND GAMMA PROBE BDZB-R5D

Range of average energies of detected beta radiation	0.049 ÷ 1.508 MeV
Range of maximum energies of detected beta radiation	0.156 ÷ 3.540 MeV
Energy range of detected photon radiation	0.05 ÷ 3.0 MeV
Measurement range of beta radiation flux density	1.0 ÷ 1.0·10 ⁶ min ⁻¹ cm ⁻²
Measurement range of beta radiation fluence (when flux density is within its measurement range)	0.5 ÷ 3.0·10 ⁶ cm ⁻²
Measurement range of surface activity of Sr-90+Y-90	3.4·10 ⁻² ÷ 4.0·10 ⁴ Bq/cm ²
Measurement range of ambient dose equivalent rate for photon radiation $H^*(10)$	0.1 μ Sv/h ÷ 5.0 mSv/h
Sensitivity to beta radiation of Sr-90+Y-90 radionuclide, no less	2.0 s ⁻¹ /(min ⁻¹ ·cm ²)
Sensitivity to gamma radiation of Cs-137 radionuclide, no less	400 s ⁻¹ /(μ Sv/h)

