



## CADMIUM

(DKS-02PN "CADMIUM" search alarm dosimeter)

### Purpose of use

- Intended to search (detect and localize) for radioactive and nuclear materials relative to their external gamma and neutron radiation.
- Measurement of gamma and X-ray radiation equivalent dose rate.

### Application

- Control of illicit trafficking in radioactive materials.
- Search for radiation sources.

### Features

- The dosimeter operates with both split vibration and audible warning device, and additional wrist vibration and audible warning device (wrist warning device), which is connected with the control panel of the dosimeter through Bluetooth radio channel and does not require wire connection.
- Data communications between the control panel and the PC is done via Bluetooth technology.
- The dosimeter operates in the following conditions:
  - ambient air temperature from -20 to +50°C;
  - relative humidity up to 90% at 35°C, non-condensing;
  - atmospheric pressure from 84 to 106,7 kPa;

## Specifications

- Gamma sensitivity for $^{137}\text{Cs}$ , not less than	(counts/s)/( $\mu\text{Sv/h}$ )	180
- Neutron sensitivity for: thermal neutrons, not less than fast neutrons, not less than	(counts* $\text{cm}^2$ )/ neutron	1.6 0.16
- Measurement range of photon-ionizing radiation EDR	$\mu\text{Sv/h}$	0.01 - 100.00
- Maximum basic relative permissible error of photon-ionizing EDR measurement of the collimated beam of $^{137}\text{Cs}$ with confidence probability of 0.95	%	$\pm(15+2/H)$ , H is a measured value of EDR in $\mu\text{Sv/h}$
- Energy range of detected photon-ionizing radiation	MeV	0.033 - 3.000
- Energy dependence of the dosimeter readings while EDR measurement of photon-ionizing radiation in the energy range from 0.05 to 3.00 MeV in relation to 0.662 MeV energy ( $^{137}\text{Cs}$ )	%	$\pm 25$
- Energy range of detected neutron radiation	MeV	from thermal to 14,00
- Operating supply voltage of the control panel of the dosimeter from AA type nickel metal hydride storage battery	V	1.2
- Operating supply voltage of the wrist warning device from battery of two AAA type nickel metal hydride storage batteries	V	2.4
- Dimensions of the control panel of the dosimeter, not more than	mm	110x36x83
- Weight of the control panel, not more than	kg	0,35
- Dimensions of the wrist warning device, not more than	mm	62x55x22
- Weight of the wrist warning device, not more than	kg	0.1
- Dimensions of the split warning device, not more than	mm	30x68x19
- Weight of the split warning device with the cable, not more than	kg	0.05

## Delivery kit

- control panel(case included);
- split vibration and audible warning device;
- AA type storage battery;
- charger for storage batteries;
- operating manual;
- wrist vibration and audible warning device;
- two AAA type storage batteries;
- packing box;