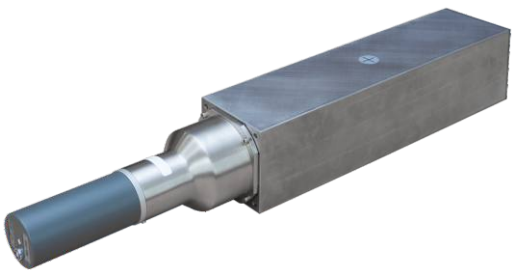
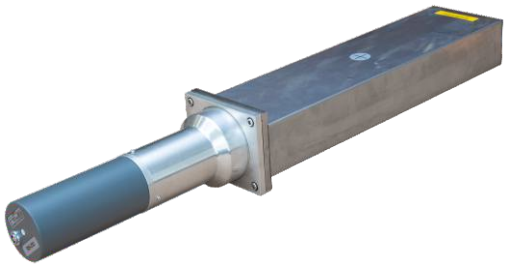
High sensitivity spectrometric gamma radiation detection units

Application

- Stand-off spectrometric and radiometric measurements
- Radioactive contamination mapping
- Search of low activity radioactive sources
- Aerial radioactivity monitoring
- Monitoring of small changes in radiation background

Features

- Smart detection unit with digital MCA and temperature stabilization
- Simultaneous measurement of ambient gamma radiation dose equivalent rate and identification of radionuclide composition
- High sensitivity
- USB / RS232 / RS485 / Bluetooth (via interface adapter) communication interfaces

DETECTION UNIT	BDKG-28	BDKG-34
Detector	Scintillator, NaI(Tl) 100x100x400 mm	Scintillator, NaI(Tl) 50x100x400 mm
Energy range	50 keV – 3 MeV	
Typical resolution at 662 keV (^{137}Cs)	8.5%	
Integral nonlinearity	±1% max.	
Measurement range of ambient dose equivalent rate	0.03 – 7 μSv/h	0.03 – 10 μSv/h
Limits of tolerable intrinsic relative error	±20%	
Typical sensitivity to gamma radiation, cps/(μSv·h^{-1})	130000 (^{241}Am) 33000 (^{137}Cs) 19000 (^{60}Co)	118000 (^{241}Am) 26500 (^{137}Cs) 15500 (^{60}Co)
Burn-up life	≥100 Sv	
Number of ADC channels	1024	
Protection class	IP54	
Interface	USB / RS232 / RS485 / Bluetooth (via interface adapter)	
Power supply	*USB* – USB port of a personal computer or other device; *RS 232* – 5–9 VDC power source; *RS 485* – 7–30 VDC power source; *Bluetooth* – interface adapter	
Mean operating life	≥15 years	
Operation temperature range	-20°C to +50°C	
Relative humidity	≤95% (with air temperature ≤35°C without condensation)	
Overall dimensions, weight	108x108x710 mm, 19 kg	92x143x682 mm, 10 kg
Image		

Design and specifications are subject to change without notice

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Standard and Custom Radiation Detectors

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