



VF NUCLEAR



NUCLEAR
POWER PLANTS



WASTE
MANAGEMENT



CALIBRATION
LABORATORIES



RESEARCH
CENTRES



INDUSTRY
& MANUFACTURING

SGN-02

SMART GAMMA AND NEUTRON DETECTOR



MAIN ADVANTAGES

- Measurement of the ambient dose equivalent rate of neutrons and gamma radiation in one device
- Compact, lightweight detector with plastic scintillator
- Separate measurement channels for gamma and neutron radiations
- Fast spectrum analysis using pulse shape discrimination (PSD)
- Precise response in a large range of energies
- Seismic resistance
- High reliability

PURPOSE

The SGN-02 probe is intended for measuring the ambient dose equivalent rate of gamma and neutrons. It can work in two modes: dual mode (measurement of gamma and neutron radiations) or in the gamma only mode.

It can be used in nuclear power plants, PET centers with cyclotrons, neutron calibration laboratories, particle accelerators, spent fuel storage facilities, radioactive waste repositories, etc.

The probe contains a plastic scintillator and high-speed spectrum analyzer, which enables measurement and discrimination of gamma and neutron radiations based on time characteristics (PSD) of detector pulses.

The precise response in a large energy range is possible thanks to energy compensation using the measured spectra.

The signal processing electronics use stored ICRP-74 coefficients to accurately calculate the ambient dose equivalent rate $H^*(10)$ for neutrons and gamma for different energies.

SPECIFICATIONS

Detector type	plastic scintillator 1 × 1 "
Neutrons	
• Measurement range	100 nSv/h - 150 mSv/h
• Energetic range	1 MeV - 20 MeV
Gamma	
• Measurement range	100 nSv/h - 40 mSv/h
• Energy range	60 keV - 6 MeV
Dimensions (ø × h)	100 × 400 mm
Weight	2,7 kg
Power supply	24 V DC
Work temperature	from 5 to 45 °C
IP	65
Communication Interface	RS-485

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RELATED PRODUCTS

MDN-01	Neutron Dose Rate Meter
MDG-04, MDG-08e	Gamma Dose Rate Meter
RDU-22	Radiation Display Unit
ASU-50	Alarm Slave Unit
RMS software	Radiation Monitoring System software



RDU-22 Radiation Display Unit



ASU-50 Alarm Slave Unit



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Specifications subject to change without prior written notice.

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