



VF NUCLEAR



NUCLEAR POWER PLANTS



WASTE MANAGEMENT



CALIBRATION LABORATORIES



RESEARCH CENTRES



INDUSTRY & MANUFACTURING



NUCLEAR MEDICINE

PNM-02

PORTABLE NEUTRON METER



MAIN ADVANTAGES

- High sensitivity to neutron radiation, low response to gamma background
- Optional detector for simultaneous gamma dose equivalent rate measurement
- User friendly, ease of use
- Long operation from integrated high-capacity rechargeable battery
- Useful in various applications indoors or outdoors
- BlueTooth connection available

PURPOSE

The PNM-02 meter is designed for the measurement of ambient dose equivalent rate in neutron fields in different environments, such as spent fuel storage facilities in nuclear power plants, PET centres with cyclotrons, workplaces with particle accelerators, radioactive waste repositories, neutron calibration laboratories, etc.

PNM-02 contains the detection unit, display, handle and a stand.

The detection unit contains a proportional ^3He detector, sensitive to neutrons. The detector is housed in a polyethylene Bonner sphere, 25 cm in diameter. The sphere moderates the higher energy neutrons to slower neutrons with more easily detectable energies to enable measurement.

The signal from the detector is processed and presented on the integrated display. The display shows the measured value numerically and as a bargraph.

OPTIONAL FEATURES

SGD-01e

Additional probe for the simultaneous measurement of gamma dose equivalent rate

SPECIFICATION

Measuring range	from 1E-7 to 0.1 Sv/h
Sensitivity (^{252}Cf)	4 cps / $\mu\text{Sv/h}$
Response to gamma	2E-3 cps/(mSv/h)
Accuracy	$\pm 20\%$
Dimension	(250 × 435 × 250) mm
Weight	10 kg with batteries
Power supply	Integrated Li-On accumulator mains adapter
Battery life	approx. 190 hours (without illumination and sounds)
Temperature range	from -20 to +50 °C
Humidity range	max. 95 % non-condensing
Units	Sv/h

Measurement of the Gamma Dose Equivalent Rate

Detector type	GM tube
Measuring range	from 5E-8 to 2.5E-1 Sv/h
Energy range	from 50 to 2000 keV

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RELATED PRODUCTS

MDN-01

Neutron Dose Rate Meter

SGN-02

Smart Gamma and Neutron Detector



MDN-01



SGN-02



PNM-02 with SGN-02 probe for the measurement of gamma dose equivalent rate (transport position)



PNM-02 with SGN-02 probe for the measurement of gamma dose equivalent rate (measuring position)



VF NUCLEAR

VF, a.s. Czech Republic

T: +420 516 428 611

E: sales@vfnuclear.com

www.vfnuclear.com

Specification subject to change without prior written notice.

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