

NuDET ENA

WIDE RANGE OF SODIUM IODIDE, LBC, CeBr₃ SCINTILLATOR PROBES



The NuDET ENA premium series of spectrometric gamma probes are designed for a wide range of applications including industry, early warning networks, environmental monitoring and nuclear site monitoring. The probes are capable of working in environments with ambient dose equivalent rates from 10 nSv/h to 40 µSv/h (2" NaI:TI crystal), 10 nSv/h to 20 µSv/h (3" NaI:TI crystal), from 10 nSv/h to 60 µSv/h (1.5" CeBr₃, 1.5" LBC). The probes can be connected directly to PC via USB cable or the Ethernet.

Benefits

- Integrated MCB3 multichannel analyzer
- Different types of crystals – NaI(Tl), LBC, CeBr₃
- Measurement of ambient dose equivalent rate
- Automatic recovery after power supply outage
- Spectrum stabilization
- Direct connection to PC via USB or ethernet

Key figures

40 keV - 3 MeV

➔ Energy range

10 nSv/h - 40 µSv/h

➔ Maximum H*(10) range for 2" NaI probe

IP67

➔ Ingress protection

Product Description

- NuDET NAI SBG.D.2.2.2 or NuDET NAI SBG. D3.3.3 2" or 3" NaI(Tl) scintillation crystal with PMT, LBC 1.5" or CeBr₃ 1.5" or 2"
- NuNA MCB3 multi channel analyzer
- Auxiliary electronic components (connectors, power regulators etc.)
- Aluminum housing
- Optional meteorological station, and GPS module for cabinet

Control Software

- MS Windows 10, 11 compatible
- Measurement of ambient dose rate equivalent rate
- Calculation of abundance of radionuclides in the spectrum
- Periodic storage of measured spectra
- Displaying current spectrum
- User customizable nuclide library
- Potential to display data from other sources, e. g. meteorological data, temperature sensor, GPS mapping

Product Application

- Industrial applications
- Environmental monitoring
- Workplace monitoring

Product Specifications

Power supply	12 - 24 VDC ±25%
Consumption	< 3W
Interfaces	RS-485, USB or RJ45 LAN (Ethernet)
Dimensions	Height 443 mm, diameter 110 mm
Temperature range	from -30 to +55°C
Ingress protection	IP67
Detector resolution	< 6.8% (2" NaI probe) < 7.8% (3" NaI probe) < 3.1% (1.5" LBC probe) < 4.1% (1.5" CeBr ₃ probe)
Maximum usable H*(10) range	10 nSv/h - 40 µSv/h (2" NaI) 10 nSv/h - 20 µSv/h (3" NaI) 10 nSv/h - 60 µSv/h (CeBr ₃ , LBC)

Detector stabilization	By gain shift controlled by position of 1460 keV line of K-40
Energy range	40 keV - 3 MeV
Conversion gain	256, 512, 1024, 2048 or 4096 channels
Coarse gain	x1, x2
Fine gain	from 0.8 to 2.0
Dead time correction	Gedcke-Hale live-time clock method; < 5% error up to 50 000 CPS input count rate
HV power supply	from 0 to +1100 V DC in step of 1V (software adjustable)
Shaper	Trapezoidal shaper. Rise time: 0.5 to 6 µs. Flat top: 0.5 to 2 µs
Time pre-set	Live time, real time: 0 to 2 ³¹ , in step of 100 ms.

