NUVIATECH
INSTRUMENTS

NuDET EGM.G2

WIDE RANGE
INTELLIGENT PROBE
WITH GM COUNTER

The NuDET EGM.G2 premium series of wide range gamma probes based on GM detectors for a variety of indoor and outdoor applications around dose rate measurement.

The EGM series is designed to work in ambient dose equivalent rate environments from 10 nSv/h to 10 Sv/h. It communicates through Ethernet, USB, RS232 or RS-485, and supports MODBUS and NUVIA communication protocols.

Benefits

· High measurement accuracy
· Modular system allowing up to three GM tubes for wide measurement range
· Ability to detect a wide range of dose rates
· Rugged construction, airtight housing and waterproof connectors
· Open and easy-to-use data transfer protocol
· MODBUS support
· Automated and optimized switching between detector tubes

Key Figures

IP67

· *Ingress Protection*

80_{keV}-1.5_{MeV}

· *Compliant with IEC 61017*

<15 %

· *Linearity and energy dependance*

Supporting your energy

Product Description

The new range of intelligent probes with GM tube is in a uniform design. The output interface is given by an interchangeable module. Data storage is possible in the built-in memory. The NuDET EGM.G2 probes are able to operate over a wide variety of measurement ranges and designed for ambient radiation monitoring for radiation sources in the environment or monitoring for radiation safety in the workplace and providing real-time measurement. Being both resistant to harsh environments and a waterproof housing the NuDET EGM can safely and accurately measure in any environmental and radiological conditions.

These highly sensitive probes are used for H*(10) ambient equivalent dose rate measurements over a dynamic range of up to 9 decades. All the probes utilize energy compensated Geiger-Muller tubes and an integrated, microprocessor-based system for calculating, storing and transmitting the measurement and system data. The use of the large volume low dose rate detectors allows detection of minor changes in dose rate even at low background with fast response.

The second or even third detector is for the measurement of high dose rates. Each probe is calibrated to the reference source (Cs-137), and therefore has a high level of accuracy over its full scale. The probe always has one of the following communication interfaces available: USB, RS485/RS232, isolated RS485, Ethernet. The interface can be exchanged by the user for another type. The probes provide measured values in counts per second or µSv/h. This product range is type approved according to the CSN EN 60532:2010.

Product Specifications

Energy range H*(10)	Compliant with IEC 61017 from 80keV to 1.5MeV
Temperature range	from −30 to +55 °C
Relative humidity	up to 80 % RH (noncondensing)
Power supply	12 – 48 VDC ± 25% or PoE 802.3af, less than 0.6 W (with the Ethernet interface less than 1 W)
Interfaces	USB internal (available in all versions), USB external, RS485/RS232 (SW switchable), isolated RS485, Ethernet
Connector	WEIPU* SF1213/P9
Models availabe (See characteristics in the table below)	EGM-01.G2 EGM-02.G2 EGM-03.G2 EGM-04.G2 EGM-05.G2 EGM-06.G2 EGM-07.G2 EGM-08.G2 EGM-0104.G2

Options & Accessories

Data Logger
Standalone data logger with embedded control Single-Board Computer, power supply (options include: mains supply, battery or solar supply) and data transmission system (GSM, GPRS (UMTS), radio, satellite or TCP/IP).

Central software — environmental RMS
NuSOFT RADIS - Radiation monitoring control and information management system for data acquisition, evaluation and presentation. Server based system that remotely monitors and controls the status, operation, data transmission, data storage, data handling, data analysis and display for all radiation monitoring systems within the Environmental Radiation Monitoring Network.

Central software — workplace RMS
NuSOFT DORMIS - Information system for workplace radiation monitoring network (area, technology and personal monitors, personal dosimetry and access control). The software DORMIS is designed for data acquisition from various radiation monitoring devices. It contains modules for the diagnosis, management, processing and presentation of the measured data, modules for output data creation and data archiving. DORMIS contains two main modules – Personal Dosimetry (access management and registration of accumulated dose) and Workplace Radiation Monitoring (indoor RMS data acquisition and registration).

Customization
Special configuration (measuring range, sensitivity), dimensions, colours, materials and parameters (special connector or pre-installed wire cable with open ends) are available on request.

Product Applications

· Environmental monitoring

· Workplace monitoring

· Radiation security monitoring at borders, airports, railways, transportation

Options & Accessories

Series	EGM-01.G2	EGM-02.G2	EGM-03.G2
Detector type	LND* 71210	LND* 71210 (LD) LND* 7149 (HD)	LND* 7807 (LD) LND* 7149 (HD)
Measuring range H*(10)	50 nSv/h - 20 mSv/h	50 nSv/h - 20 mSv/h (LD) 1 µSv/h - 2 Sv/h (HD)	10 nSv/h - 15 µSv/h (LD) 1 µSv/h - 2 Sv/h (HD)
Dimensions (Ø × l)	69/60 × 285 mm	69/60 × 285 mm	69/60 × 580 mm
Weight	0.71 kg	0.72 kg	1.16 kg
Sensitivity (Cs-137)	1.4 CPS per 1 µSv/h	1.4 CPS per 1 µSv/h (LD) 0.15 CPS per 1 µSv/h (HD)	16 CPS per 1 µSv/h (LD) 0.15 CPS per 1 µSv/h (HD)

Series	EGM-04.G2	EGM-05.G2	EGM-06.G2
Detector type	LND* 7807 (LD) LND* 71632 (HD)	LND* 71210 (LD) LND* 71632 (HD)	LND* 7149
Measuring range H*(10)	10 nSv/h - 15 µSv/h (LD) 1 µSv/h - 10 Sv/h (HD)	50 nSv/h - 20 mSv/h (LD) 1 µSv/h - 10 Sv/h (HD)	1 µSv/h - 2 Sv/h (HD)
Dimensions (Ø × l)	69/60 × 580 mm	69/60 × 285 mm	69/60 × 285 mm
Weight	1.16 kg	0.72 kg	0.68 kg
Sensitivity (Cs-137)	16 CPS per 1 µSv/h (LD) 0.026 CPS per 1 µSv/h (HD)	1.4 CPS per 1 µSv/h (LD) 0.026 CPS per 1 µSv/h (HD)	0.15 CPS per 1 µSv/h

Series	EGM-07.G2	EGM-08.G2	EGM-104.G2
Detector type	LND* 71632	LND* 7807	LND* 7807 (LD) LND* 71210 (MD) LND* 71632 (HD)
Measuring range H*(10)	1 µSv/h - 10 Sv/h	10 nSv/h – 1.5 µSv/h	10 nSv/h - 15 µSv/h (LD) 50 nSv/h - 20 mSv/h (MD) 1 µSv/h - 10 Sv/h (HD)
Dimensions (Ø × l)	69/60 × 285 mm	69/60 × 580 mm	69/60 × 580 mm
Weight	0.68 kg	0.96 kg	1.22 kg
Sensitivity (Cs-137)	0.026 CPS per 1 µSv/h	16 CPS per 1 µSv/h	16 CPS per 1 µSv/h (LD) 1.4 CPS per 1 µSv/h (MD) 0.026 CPS per 1 µSv/h (HD)

* Third party trademarks are the property of their respective owners.

NUVIATech Instruments provides a large range of radiation detection and measurement solutions for decades in many countries.

Fields of application

From modelling to implementation, we supply exclusive know-how and state-of-the art technologies in monitoring systems dedicated to the major fields of application:

- RADIATION PROTECTION
- WASTE MANAGEMENT
- ENVIRONMENTAL MONITORING
- LABORATORIES
- HOMELAND SECURITY
- RADIATION MONITORING SYSTEMS
- GEOPHYSICS

NUVIATech Instruments manufacturing sites

CANADA / GERMANY / CZECH REPUBLIC / UK

A brand of NUVIA Group, NUVIATech Instruments is headquartered in France.