



PDS-100G/GN

Personal Radiation Detector

- **Detection and measurement of gamma and neutron nuclear radiation for Homeland Security applications**

- gamma / neutron independent channels
- high sensitivity and fast response time
- visual, audio and vibration alarms
- wireless communication interface
- small, rugged, compact, user-friendly
- complies and exceeds ITRAP and ANSI standards

The PDS-100G and PDS-100GN are the new generation of gamma and gamma/neutron radiation detectors.

These sensitive pocket-sized devices are designed to detect, locate and quantify any radioactive materials as Special Nuclear Materials or as Radiological Dispersal Devices (RDD), in a very short time.

The PDS-100G and PDS-100GN feature the capability to transmit the measurement and the spectrum on request.

They have been designed specially for First Responders, Law Enforcement, Customs inspectors and for Personnel and Site security in critical infrastructures.



Nuclear Characteristics

- **detectors:**
 - gamma: CsI
 - neutron: Li6
- energy range (gamma): 35 keV to ≥ 1.8 MeV
- energy range (neutron): thermal to ≥ 10 MeV
- gamma dose rate display:
0.01 $\mu\text{Sv/h}$ to 100 $\mu\text{Sv/h}$ / 1 $\mu\text{R/h}$ to 10 mR/h
- gamma count rate display: 0 to 99 999 cps
- neutron count rate display: 0.0 to 999 cps
- gamma alert response time: for a 0.5 $\mu\text{Sv/h}$ increase (Am, Cs, Co) in 0.1 $\mu\text{Sv/h}$ background: < 1 sec
- neutron alert response time: mean time to detect 2.5 n/s/cm² Cf²⁵² : < 2 sec

Functional Features

- complies with ANSI 42-32, ITRAP/IAEA recommendations
- two main operating modes: «Detection» and «Search» with specific response time and display configuration
- independent gamma/neutron «Detection Alert» and «Danger Alarm» signaling (latched)
- visual, audible and silent alarms (vibration, earphone)
- multi-channel analysis (MCA)
- easy-to-read display (OLED technology) for user's interface
- capability to record measurements for future analysis
- wireless communication using IRDA and Bluetooth® technology
- tri-band GSM option

Electrical & Mechanical Characteristics

- power supply: 2 x AA batteries (Alkaline or Ni-MH)
- battery life time: > 100 hours
- dimensions (l x w x h): 123 x 74 x 43 mm (4.84 x 2.91 x 1.69 in)
- weight: 300 g (10.58 oz) with battery

Environmental Characteristics

- temperature range: -20°C to 50°C (-4°F to 122°F)
- humidity: 95 % at 35°C (95°F)
- EMI, shock, vibration, drop and water resistant

Versions

- PDS-100G: gamma version
- PDS-100GN: gamma and neutron version

Accessories

- pouch with belt clip
- external power supply / battery charger
- interface to RS232 or to USB

130462B

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As standards, specifications and design change from time to time, please ask for confirmation of the information given in this publication.