SaphyGATE GN



Radiation Portal Monitor for Gamma-Neutron detection and discrimination

- Patented 3He-free Neutron detector developed with the French AlternativeEnergies and Atomic Energy Commission (CEA)
- Automatic compensation of the Gamma background' shielding effect
- Compliant with IEC 62244 & ANSI N42.35 international standards
- Available in 3 versions: vehicle, pedestrian and baggage control

bertin instruments

WWW.BERTIN-TECHNOLOGIES.COM



SAPHYGATE GN

SPECIAL NUCLEAR MATERIAL DETECTION SYSTEM FOR VEHICLE, PEDESTRIAN, BAGGAGE AND LOAD CONTROL

Developed in partnership with the French Alternative Energies and Atomic Energy Commission (CEA), SaphyGATE GN is a new generation portal monitor capable of detecting Gamma-Neutron radioactive sources without using 3He gas.

Compliant with international safety standards, its technology is based on large volume plastic scintillators coupled with photomultipliers to ensure high performances while providing an effective Gamma-Neutron detection and discrimination.

Robust and versatile, the SaphyGATE GN is ideally suited to avoid illicit movements of radioactive sources in customs, harbors, airports or any other critical infrastructure, while making a non-invasive inspection of people, loads and luggage. With its Neutron detection capability, it can also detect Special Nuclear Material (SNM) that may enter in the production process of dirty bombs or Radiological Dispersion Devices (RDD).







Gamma background compensation



For its SaphyGATE line of products (G & GN), Bertin Instruments has developed an innovative algorithm, especially designed to compensate the Gamma background attenuation caused by vehicle shielding. This feature allows to perform a better radiation detection by reducing significantly the false alarm rate compared to other classic systems, even in case of low activity sources.

Applications



Homeland Security



Nuclear access control



Border control

Technical features

System composition	1 to 4 Gamma-Neutron detectors 1 electrical box 1 central unit 1 presence detection kit
Detector composition	1 protection cabinet (IP65) 8 PVT scintillators coupled to high speed photomultipliers
Detector dimensions	H: 1,900 x W: 660 x D: 430 mm
Detector weight	Approx. 160 kg
Gamma detection	**Energy range**: from 50 keV. to 7 MeV. **Gamma sensitivity**: ≥ 15 c/s / kBq. for 137Cs at 1 meter
Neutron detection 252cf	**Detection limit:** 12,000 n/s **Neutron sensitivity**: 8.7 c/s for a 20,000 n/s 252Cf bare source at 2.5 meters from the detection
Central unit	PC based HMI
Standards	Compliant with international standards including IEC 62244 & ANSI N42.35

Bertin Instruments - May 2023 - Copyrights: Bertin / IStock / Fotolia

Bertin Technologies S.A.S • Parc d'Activités du Pas du Lac • 10 bis, avenue Ampère, 78180 Montigny Le Bretonneux, France
www.bertin-technologies.com