NUVIATECH INSTRUMENTS

PORTAL P

Radiation screening system for critical sites

PORTAL P is a compact and highly effective radiation screening system designed for pedestrian monitoring at critical security locations such as public events, border crossings, airports, and nuclear facilities. The system operates with user-friendly software and provides automatic radiation level monitoring and alarm handling.

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Benefits

- Automatic background radiation adjustment to ensure optimal sensitivity
- Multiple alarm handling options (detector unit, PC workstation, mobile alarm unit)
- Neutron detection available as an optional feature
- Flexible installation for both indoor and outdoor environments

Key figures

50 keV - 2 MeV

Gamma energy range

60 kBq

MDA for Cs-137

35 l

Total detector volume (for 2 panels)

V202503

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Product description

The Portal P is designed for the control (detection) of ionizing radiation emitted from transported goods and materials carried by passing persons. It utilizes a gamma and neutron radiation detection system, consisting of a plastic scintillation gamma detector and a neutron detector. When a person passes through the detection zone, the system monitors radiation levels. If the preset threshold values are exceeded, an acoustic and light alarm is triggered.

If no person or object is detected in the detection zone, the system automatically measures and updates the background radiation level.

Radiation alarms are transmitted via an Ethernet network to the PC workstation of the local supervision center and simultaneously to the mobile alarm unit of the local customs control patrol.

Alarms can be acknowledged directly at the detector, on the PC workstation, or through the mobile alarm unit. If a positive radiation alarm is not cleared within the adjustable time limit, it is automatically transferred to the database at the central surveillance point.

The system operates within 90 seconds after startup. Power is supplied via Power over Ethernet (PoE), and a backup power module ensures continuous operation during short power outages.

Product application

- Monitoring of ionizing radiation in pedestrian areas and controlled facilities
- Detection of illicit transportation of radioactive materials at border crossings, airports, customs checkpoints, and other security-sensitive locations
- Radiation screening at high-traffic areas, including public events and transportation hubs
- Deployment in industrial and governmental facilities for radiation safety compliance

Specification

Power supply	PoE IEEE 802.3af (Ethernet)
Detectors	17,5 l plastic scintillation detector, neutron detector optional
Gamma energy range	50 keV to 2 MeV
Dimensions	1600 x 140 x 400 mm, where a base is 400 x 400 mm
Alarms	Acoustic and visual
Control unit	Integrated electronics for power management, detector connections, and embedded PC with SW application.
MDA (at a distance of 1 m from the front of the portal, with a measurement time of 1 sec and approximately 100 nSv/h	Am-241: 350 MBq Cs-137: 60 kBq Co-60: 20 kBq Neutrons: 0.04 n/cm²/s (with ≥90% probability)
Operating temperature	From -10°C to +50°C
Software	PortIS package for data processing and system setting

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