NUVIATECH INSTRUMENTS

SPECIFICATION

PORTAL D

Emergency deployable modular radiation screening system

PORTAL D is a compact modular system for emergency radiation screening designed according to FEMA-REP-21, intended for rapid inspection of people and vehicles. Its key advantages are high mobility and quick assembly, enabling immediate deployment at mass events, border crossings, nuclear facilities and other homeland security applications. The system is controlled by a computer with intuitive software and can be configured to meet specific customer requirements.

Benefits

- Turnkeysolution for various emergency tasks
- Lightweight and solid construction
- Operative fast deployment
- Modular system enabling multiple uses, adaptable to vehicle and pedestrian screening
- Led lights for night work
- Easy to fully decontaminate
- Power supply from various independent sources (car battery / battery / mains /diesel generator)

Key figures

50 keV - 3 MeV

Gamma energy range

37 kBq

Detection threshold for CS^{137} at 662 keV

8 h

Battery operation

V202602

NUVIATECH INSTRUMENTS

PORTAL D

Emergency deployable modular radiation screening system

Product description

The main supporting frame of the PORTAL D system is made of precisely formed lightweight aluminum beams that ensure high mechanical strength and allow fast system assembly. The structure can be easily adapted to the intended application, enabling the creation of a portal monitor for pedestrians, passenger vehicles or trucks.

The system is equipped with up to six highly sensitive 5-liter plastic scintillation detectors housed in robust waterproof and dust-tight enclosures with a special surface finish for easy decontamination. The size and number of detectors can be configured to meet specific operational requirements. The detection units are connected to the control unit, which provides power distribution, backup battery capacity and an interface to the PC with the system control software.

The control unit enables up to 8 hours of autonomous battery operation and also supports power supply from the mains, a vehicle or a mobile generator. PORTAL D is delivered as a complete set including all necessary components—cabling, traffic lights, motion sensor, rain cover, protocol and label printer, LED lighting, power supply, PC and other accessories required for immediate deployment.

Specification

Power supply	Diesel generator,230 (110) V / 50 (60) Hz, lithium accumulators based on LiFePO 4 (LFP), car cigarette lighter
Battery operation	Up to 8 hours
Detectors	6 plastic scintillation detectors with a volume of 5 litres, housed in ruggedised cases
Gamma energy range	50 keV to 3 MeV
Alarms	Acoustic and visual
Control unit	Box with electronics for power supply management, connection of detectors and a PC with a SW application and other functions
Software	PortIS package for data processing and system setting
Software capabilities	Measured object identification data input, measured values display and logging, printing protocols, etc.
Frame	Ruggedised, portable aluminium girders
Variable assemblies	For pedestrians, cars and trucks
Operating temperature	From -30 °C to +55 °C
Relative humidity	93% (non-condensing)
Other capabilities	Traffic light control, automatic checking of the system status
Detection treshold	37 kBq for 137Cs at 662 keV for each detector and a source at a distance of 0.5 m from the middle of the total length of the detector

Product application

- Emergency situations caused by terrorist attacks or incidents in nuclear facilities
- Events with high concentrations of population
- Detection of illicit transportation of nuclear materials
- Cargo contamination control
- Metal recycling factories and scrapyards
- Other homeland security tasks

V202603