PORTIA Portal Monitor for Radiation Detection

Features

- Detection of gamma ray emitted by any radioactive source from laundry, waste, packages, vehicles or pedestrians
- Sensitive to photons from 60 to 3000 keV
- Optional lead shielding for low background
- Weather resistant stainless steel enclosure for outdoor operation (optional)
- Walk–by or walk through operation
- Modular architecture allows easy expansion and integration
- Fully automated measurements and continuous background monitoring
- Light weight design for emergency response applications
- Suited for permanent or temporary installations
- Quick and easy setup with automatic start-up and operation
- Integrated controller with data logging and RS-232C, wireless or Ethernet output
- Visual and audible alarm
- Excellent price / performance ratio

Description

The PORTIA system is designed to detect the presence of any gamma ray above 60 keV in packages, waste, vehicles, laundry and persons.

It is designed to be quickly set or stationary use; it can be optimized for many applications and tailored to your needs. From stand alone units to Ethernet based networked systems with 2,4 or more detectors.

contact information

Benelux / Denmark Canberra NV/SA Z1. Research Parc 80 B-1731 Zellik Belgium T: + 32 2 481 8530
E: info.be@canberra.com www.canberra.com/be
PORTIA Portal Monitor for Radiation Detection

Basic Configuration The RSP
The RSP (Radiation Sensitive Panel) comprises a single, large plastic scintillator sensitive to gamma rays, mounted in a cabinet containing the Control Unit and the Alarm & Status indicators. The RSP has Separate HVPS and intelligent tube base processing electronics.

Fixed and Temporary Security /Expandable in many ways
Several detection modules can be connected in any configuration to achieve the necessary geometric efficiency.

The simplicity of this design results in a safe, reliable and configurable system to meet multiple detection applications. The visual and audio alarm can be removed and there are threaded steel connections on the backside for mounting RSP’s on the aluminum profiles of your choice. The lightweight aluminum construction in an configuration makes the system transportable.

Outside use
The system has in house climate control to operate under all weather conditions. The cabinet is weather resistant stainless steel. To optimize performance a black 2,5 mm plastic window is used.

Fixed and Temporary Security /Expandable in many ways

Working with and without occupancy sensors
When using the Portia for Homeland security applications where people are passing by you don’t want a sensor. A straightforward algorithm with user definable parameters is used to optimize for the application.

Easy set up and Operation
The Portia can be operated with very little training or expertise in radiation detection technology. After an alarm the blue reset button has to be pressed and the data are automatically stored in the system.

Portia Parameter Set-up
The software enable users to completely set up the Portia from a PC. Once setup is complete, the user can then download information to the Portia via RS-232C serial I/O Alternatively up to 50 log data, like alarms can be uploaded.

contact information
Benelux / Denmark Canberra NV/SA Z1. Research Parc 80 B-1731 Zellik Belgium T: + 32 2 481 8530 E: info.be@canberra.com www.canberra.com/be
## PORTIA Portal Monitor for Radiation Detection

### Specifications

**Detector:** Plastic Scintillator of 40 x 60 x 5 cm with integrated Photomultiplier Tube, Single Channel Analyzer and TTL output

**Energy range:** 60 keV to 3 MeV

**Sensitivity**
- 36 kBq Cs-137 can be detected
- 22 kBq Co-60 can be detected
  
  \[ T = 2 \text{ sec} \]
  \[ > 3 \text{ sigma} \]
  
  *distance 1 meter source Portia*

- 35 kBq Am-241 can be detected
  
  \[ T = 2 \text{ sec} \]
  \[ > 3 \text{ sigma} \]
  
  *at contact of Portia*

**Occupancy sensor:** Adjustable infra-red motion sensor (option)

**Indications**
- Red for alarm, orange for fault and green for system OK, audio alarm on tower can be removed as well as the red light alarm

**Dimensions Radiation sensitive Panel:** 100 by 50 by 17,5 cm (H x W x D)

**Enclosure rating:** IP44 (anchoring with 4 x M10 bolts)

**Weight:** +/- 40 kg without optional Lead-shielding (1 cm; +/- 100 kg)

**Operating temperature:** -20°C to +40 °C

### Options

- 1 cm Lead Shielding
- Outdoor use
- IR sensors
- Steel platform to anchor
- 2,4,6 panels working together
- Customized frame (or without frame)

**Standard systems comes with:**
- aluminum frame as shown
- Set-up software
- Users Manual

---

**contact information**

Benelux / Denmark Canberra NV/SA Z1, Research Parc 80 B-1731 Zellik Belgium T: + 32 2 481 8530
E: info.be@canberra.com www.canberra.com/be