



# MiniSentry™ 2

TRANSPORTABLE GAMMA PORTAL MONITOR



## FEATURES

### Quick and Easy Setup and Operation

- Gamma portal monitor for rapid deployment and emergency response
- Quick and easy setup with automatic start-up and operation
- Simple clean/contaminated status indicator
- Very little training or expertise in radiation detection needed
- Weight less than 43 kg (95 lb)

### Flexible Solution

- Suitable for in- and outdoor operation in adverse weather conditions (IP54, -25°C to 50°C)
- Three different measurement modes available (walk-through, enter-wait, count-rate)
- Powered by battery (>65 hours autonomy<sup>1</sup>), USB or 100 / 240V
- Ready for connection of additional CSP probe (for example  $\alpha/\beta$  frisker probe SAB100 or neutron probe SN-S)
- Many options and accessories available

### State-of-the-art Radiological Performance

- Detection of 1  $\mu\text{Ci}$   $^{137}\text{Cs}$  (according to FEMA-REP-21)
- Based on high sensitivity plastic scintillation detectors with 2x 5.3 litres active volume
- Wide energy range: 30 keV – 2 MeV

## DESCRIPTION

The MiniSentry 2 is a portal monitor for screening of pedestrians or vehicles for gamma radiation. It is designed to be quickly set up and operated with very little training or expertise in radiation detection technology. This portable system is well-suitable for emergency scenarios and security applications.

The monitor provides intuitive clean/contaminated status indication via the integrated LCD screen, LEDs, loud-speaker and an optional LED light tower. The modern firmware is simple to use and provides at the same time a comprehensive password protected expert settings menu. Three different measurement modes (walk-through, enter-wait, count-rate) are available to support various applications. All measurement data can be easily exported to a Microsoft Excel-readable \*.csv files for further analysis. The background is automatically subtracted and constantly monitored if the light barrier does not sense a person or vehicle occupying the portal. Emphasis has been placed on self-diagnostics both on start-up and during operation to guarantee correct operation.

The MiniSentry 2 is designed to meet the requirements of the US Federal Emergency Management Agency (FEMA-REP-21) as well as the IEC 62244 standard

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## SPECIFICATIONS

### Radiological

- Two 182.9 x 7.6 x 3.8 cm (72 x 3 x 1.5 in.) gamma plastic scintillation detectors.  
Total detector volume: 10.6 litres (648.1 in.<sup>3</sup>)
- Detection performance exceeds FEMA-REP-21 and IEC 62244:2006
- **Minimum detectable activity:** <1 µCi Cs-137 at walking speed (in regular background of 100 nSv/h)
- **Energy range:** 30 keV to 2 MeV

### Mechanical

- **Dimensions (H x W x D):** 216 x 112 x 45 cm (85 x 44 x 17.8 in.) assembled
- **Pedestrian internal opening:** 203 x 76 cm (80 x 30 in.)
- **Weight:** 43 kg (95 lb), heaviest component: 16 kg (35 lb)

### Functional

- **Alarm indication:** green/red LED, LCD display and audible alarm (> 92 dB(A) at 30 cm, volume adjustable)
- **Measurement units:** cps, Bq, µCi, cpm, dpm
- **Measurement modes:** Walk-through, Enter-wait, Count-rate
- **Data export and import to USB stick:** export of measurement log files to Microsoft Excel-readable \*.csv. Export and import of parameter settings.

### Electrical

- **Battery:** Integrated rechargeable Li-ion battery 5300 mAh, 3.7V for approx. 13 h autonomous operation (depending on configuration). Built-in charger
- **Power Requirements:** 100 – 240 V or via USB (Type A) for continuous operation and charging of integrated battery
- **Occupancy sensor:** adjustable infrared light barrier

## ENVIRONMENTAL

- **Water and dust:** IP54
- **Operating temperature:** -25°C to 50°C (-13 °F to 122 °F)
- Weather resistant for outdoor operation in adverse weather conditions

## OPTIONS

- **Battery Extension Module (P/N: 108181):** Additional battery module to extend the time of autonomous operation to >65 hours.
- **Kit for Extended Passage Width (P/N: 108184):** Extends the passage width to 91.5 cm to allow for example the monitoring of persons in wheelchairs.
- **Vehicle Monitoring Kit (P/N: 108127):** This kit allows to extend the internal opening width of the MiniSentry 2 to 3.0 m. In this configuration the MiniSentry 2 is set-up without the top part of the monitor, and the two detector posts are free standing. A cable connection between the two detector posts is established for data transfer. The kit includes the required cable sets, cable protection and additional baseplates for the two detector posts.
- **Light tower (P/N: 108126):** Additional visual indication of contamination result in all directions by red/green lights.
- **Connector for CSP probe (P/N: 108124):** Adds a connector to the MiniSentry™ 2 to allow the connection of a CSP probe. Including mechanical holder for CSP probe.
- Any CSP probe, for example α/β frisker probe SAB-100 or neutron probe SN-S
- Hard transport case with wheels for easy storage and transportation (P/N: 108093)
- Upgrade Kits from previous MiniSentry are available (P/N: 108125)

## Certification and Compliance



- Meets the requirements of the 1995 FEMA standard for portal monitors (FEMA-REP-21), “Contamination Monitoring Standard for a Portal Monitor Used for Radiological Emergency Response”
- Designed according to IEC 62244:2006 “Radiation protection instrumentation – Installed radiation monitors for the detection of radioactive and special nuclear materials at national borders”<sup>2</sup>



Readout unit with  
Light tower

1- with optional battery extension module (P/N: 108181)  
2- MiniSentry™ 2 does not feature a speed measurement functionality.

