

Portal-S

STAINLESS-STEEL PORTAL MONITOR WITH LARGE PLASTIC SCINTILLATION DETECTORS



Working with radioactive materials carries the risk of contaminations. A check point for radioactivity enhances the safety of humans and the environment.

Large area plastic scintillation detectors in the pillars of the Portal-S measure ionising radiation. Light barriers and an automatic analysis guarantee an easy and fast control.

Adjustable alarm thresholds and display options allow an individual configuration according to your needs.

Benefits

- Fast and secure radiation monitor for humans and objects
- Robust stainless steel construction
- Large area plastic scintillation detectors
- System parameters freely programmable (password protected)
- One or two displays in the framework and/or external alarm
- Automatic background correction
- Lead-shielding for additional background reduction optional

Key Figures

5 kBq MDA → Cs-137 (5sec)

20 mm
→ Lead shielding option

66 cm
→ Wide pass through

Product Description

The Portal-S is a highly sensitive tool for a fast and secure radioactivity check of persons and objects. By starting and finishing the measurement automatically via two light barriers, passing through the Portal-S in walking speed is possible.

If the detected radiation is below the programmable alarm threshold, clearance is given. In case of strong contaminations clear and explicit acoustic and optical alarms are triggered. Additionally, an alarm signal can be forwarded into external systems.

Large area plastic scintillators measure the ionising radiation. It is possible to distinguish between high energy pulses and total pulses. A robust stainless steel framework protects the microprocessor based measurement electronics and the detectors. The continuously measured background is automatically subtracted from the measurement value. An additional lead-shielding allows to further lower the detection threshold (optional).

Performance Characteristics

- Fast and secure contamination measurements with two large area plastic scintillation detectors
- Continuous background correction
- Optical and acoustic alarm plus signal to external systems possible
- Alarm thresholds individually programmable (password protected)
- Alarm threshold programable in sigma above background: always the same error probability
- Different display options: bar graph, traffic light, measurement value
- Recurrent test for controlling the measurement system integrated
- Automatic control of the measurement via two light-barriers
- High energy pulses and total pulses measured
- Accessories (optional): integrated radon fan with air filter, lead shielding, transponder system

Product Specifications

Analysis and display of measurements	Microprocessor-controlled electronics
Weight	Approx. 300 kg on a 0.15 m ² base (400 kg with lead shielding)
Dimensions	Approx. 2.27 x 1.16 x 0.62 m (HxWxD)
Barrier-free passage size	66 x 210 cm (WxH)
Two large area plastic scintillation detectors	1200 x 125 x 50 mm (HxWxD)
Energy range	γ-Radiation over 100 keV
Detection threshold	5 kBq ¹³⁷ Cs; 3 kBq ⁶⁰ Co (with 20 mm lead (optional): 3 kBq ¹³⁷ Cs; 2 kBq ⁶⁰ Co)
Alarm	Acoustic and optical alarm at the portal plus external alarm output
Power supply	115-240V, 150 VA
Optional equipment	Transponder/ID control - Radon fan with air filter to reduce false alarms in special locations (e.g. in valleys)



Left: High energy pulses and total pulses per detector or summed up over both detectors, display as bar graph also possible

Right: Easy, user-friendly signals (message and pictograms configurable in advance)