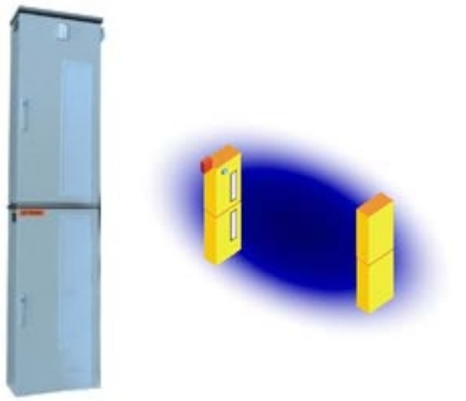
Radiansa
Consulting

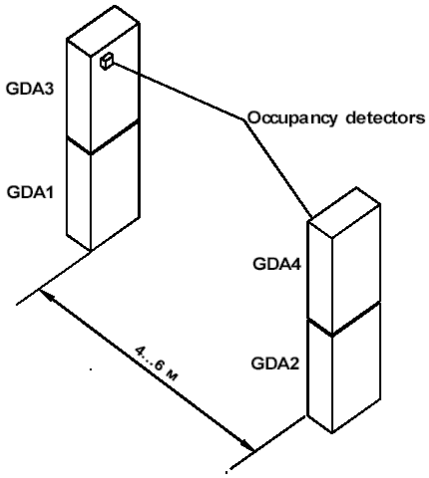
Portal Monitor PM5000A-01H

Entrance monitoring system for detection of radioactive materials

Main features:

- truck and bus monitoring
- 2 pillar gamma detection system
- 2 gamma detectors per pillar
- large volume plastic scintillators
- continuous 24 hour operation
- occupancy sensor
- visual and audible alarms
- expandable, modular system
- back-up power supply
- count rate display on LCD
- data storage
- PC communication





The PM5000A-01H is a high sensitivity two-pillar gamma monitor consisting of 4 gamma detector assemblies (GDA modules) used to monitor trucks and buses for radioactive material. Power supply, control and analysis electronics are incorporated into the GDA modules; an occupancy sensor detects the presence of a vehicle in the detector range. The gamma radiation level in counts per second is displayed on an LCD panel; in the event of radiation levels exceeding the preset threshold (based on local background radiation levels) visual and audible alarms are activated. Alarm information (time, activated GDA and count rate) are stored for subsequent downloading to a PC. The monitor operates continuously 24 hours a day without personnel operation or interference. In the event of interruption of the power supply, the monitor is powered from a built-in battery and performs all functions for a minimum of 8 hours. The built-in battery is re-charged automatically.

Specifications:

Detector technology	4 x plastic scintillator units, 34 liters total volume, coupled to photomultiplier tubes
Vehicle velocity	8 km/h (maximum 20 km/h)
Distance between pillars, no more than	6 m
Temperature range, °C	-30 to +50
Relative humidity at 35 °C and lower	up to 95%
Atmospheric pressure, kP	from 84 to 106.7
Audible alarm level	no less than 80 dB at a distance of 1 m from alarm unit
Visual alarm signal	red light activated
Power consumption	no more than 75W
GDA module dimensions	1200 x 600 x 300 mm (per module)
Weight	115kg (per pillar)
Occupancy detector dimensions	110 x 65 x 50 mm

Minimum detectable amounts of nuclear and radioactive materials	
Am-241	1.8 Mbq (49 μCi)
Cs-137	0.21 Mbq (5.7 μCi)
Co-60	0.12 Mbq (3.2 μCi)
U-238	1300 g
U-235	80 g
Pu-239	2.3 g