



RADIATION PORTAL MONITOR YANTAR-2P2

FIXED-SITE SYSTEM FOR DETECTION OF FISSILE AND RADIOACTIVE MATERIALS CARRIED BY PEDESTRIANS AND IN CARS

INTENDED USE

Automatic detection of gamma and neutron radiation sources carried by pedestrians, in cars or forklifts through the search area.

APPLICATION

High sensitivity, reliability, ease of use and maintenance allow the Yantar-2P2 radiation monitors to be successfully operated at pedestrian and vehicle checkpoints of various purpose, configurations and throughput.

KEY FEATURES

- Operating mode - continuous, automatic
- Sound and visual alarms
- Settable thresholds for each detection channel
- Possibilities of expansion and connection of external devices
- Generation of "dry contact" in case of an alarm event
- Automatic registration of events in a non-volatile archive
- Storage and output of archive data to external devices (when connected)
- Embedded automatic selftest system
- Access to the system parameters via RS-485 interface (optional Ethernet)
- Generation of video information on the target object (when video surveillance sets are connected)
- Service life is 12 years

DESIGN

Yantar-2P2 consists of two metal pillars mounted opposite each other at the search area boundaries. The pillars contain gamma and neutron detectors and electronics units. The monitor side panels have sound and light alarming devices that set off when the detection threshold is exceeded.

Lead shields used for gamma detectors serve to enhance gamma detection efficiency.

Occupancy sensors, which are a pair of emitter and receiver, indicate presence of the object in the search area.

The radiation monitors transfer data to the control panel or a PC with the application specific software installed.





YANTAR-2P2

SPECIFICATIONS

Detection channels	gamma and neutron
Gamma detectors	plastic scintillators
Neutron detectors	^3He counters
Detection thresholds (detection with probability of no less than 0.5 at a confidence level of 0.95) for a search area width of 5 m and height of 3 m and object speed of up to 10 km/h	340 kBq (^{133}Ba) 410 kBq (^{137}Cs) 210 kBq (^{60}Co) 14,000 neutron/s (^{252}Cf)
False alarm rate	0.001
Ingress protection	IP54
Environmental	-50 to +50 °C, 95 %
Dimensions	(1851×583×300) mm (1 pillar)
Weight, max	170 kg (1 pillar)
Power supply	(85-265) V, (47-63) Hz, max 50 V·A
Run time on the built-in batteries, min	10 hours
Installation place	indoor, outdoor under canopy
Objects	pedestrians, baggage, cars, forklifts

CERTIFICATION

- Registered in the State Register of Measuring Instruments under No 16756-10
- Complies with the Customs Union Technical Requirements "Safety of Low Voltage Equipment" (CU TR 004/2011) and "Electromagnetic Compatibility of Technical Means" (CU TR 020/2011)

By 2022, over 8000 Yantar radiation monitors of various modifications have been produced and put into operation.

