



RADIATION PORTAL MONITOR YANTAR-2L

FIXED-SITE SYSTEM FOR DETECTION OF RADIOACTIVE MATERIALS IN VEHICLES

INTENDED USE

Automatic detection of gamma radiation sources carried through the search area in various types of vehicles including railway cars and trucks.

APPLICATION

Highly sensitive to gamma radiation, Yantar-2L was specially designed to monitor raw materials, products and scrap waste at metallurgical production facilities, but also enjoys wide use at waste disposal plants, enterprises for the extraction and processing of nuclear materials, nuclear power plants and other civil and military objects.

KEY FEATURES

- Operating mode - continuous, automatic
- Increased sensitivity to gamma radiation
- Sound and visual alarms
- Settable detection thresholds
- 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-2L consists of two metal pillars mounted along the lane opposite each other. Each pillar contains two gamma detectors and electronics units. They are equipped with sound and light alarming devices, as well as performance status indicators.

Occupancy sensors ensure reliable detection of vehicles in the search area even in extreme weather conditions.

The pillars, detectors and electronic units are climatically protected well enough to withstand harsh environments.

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





YANTAR-2L

SPECIFICATIONS

Detection channels	gamma
Gamma detectors	plastic scintillators
Detection thresholds (detection with probability of no less than 0.5 at a confidence level of 0.95) for a search area width of 6 m and speed of up to 8 km/h	2200 kBq (^{241}Am) 120 kBq (^{137}Cs) 60 kBq (^{60}Co)
False alarm rate	0.001
Ingress protection	IP54
Environmental	-40 to +50 °C, 95 %
Dimensions	(2557×852×300) mm (1 pillar)
Weight, max	250 kg (1 pillar)
Power supply	(85-265) V, (47-63) Hz, max 70 V·A
Run time on the built-in batteries, min	10 hours
Installation place	outdoor
Objects	vehicles, including railway cars

CERTIFICATION

- Registered in the State Register of Measuring Instruments under No 20689-07
- Complies with the requirements of the Technical Regulations of the Customs Union on safety of low voltage equipment (TR CU 004/2011), Technical Regulations of the Customs Union on electromagnetic compatibility of technical means (TR CU 020/2011)



By 2024, over 8200 Yantar radiation monitors of various modifications have been produced and put into operation.