



RADIATION MONITOR RM-1SN

DETECTION OF FISSILE AND RADIOACTIVE MATERIALS CARRIED BY PEDESTRIANS AND IN BAGGAGE

INTENDED USE

RM-1SN is used for automatic detection of gamma and neutron radiation sources carried by pedestrians through the search area. The monitor provides detection of hazardous radioactive agents of gamma and neutron radiation at transport infrastructure facilities, offices and institutions, as well as enhances anti-terrorist protection of facilities and crowded areas.

KEY FEATURES

- Operating mode – continuous, automatic
- Sound and visual alarms
- Settable thresholds for each detection channel
- Automatic classification of alarms into three safety categories set by the operator
- 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
- Embedded automatic selftest system
- Access to the radiation monitor 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

RM-1SN consists of a pillar mounted along the search area boundaries. The pillar contains gamma and neutron detectors and electronics units, and has light and sound alarm devices.

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

The monitor occupancy sensors ensures reliable detection of objects in the search area.

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





RM-1SN

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 0.8 m, height of 2 m and speed of up to 5 km/h	45 kBq (^{133}Ba) 54 kBq (^{137}Cs) 27 kBq (^{60}Co) 10,500 neutron/s (^{252}Cf)
False alarm rate, max	0.001
Ingress protection	IP54
Environmental	-30 to +50 °C, relative humidity 100 % at 40 °C
Dimensions	(1600×325×232) mm
Weight, max	80 kg
Power supply	(187-242) V, (50±1) Hz, max 20 V·A
Installation place	indoor
Objects	pedestrians, baggage

CERTIFICATION

- Complies with the requirements for the functional properties of technical means of ensuring transport security, approved by the Decree of the Russian Federation Government dated September 26, 2016 No. 969
- 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 2023, over 8000 RM radiation monitors of various modifications have been produced and put into operation.