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Radiation measurements for your safety

COMBINED CHEMICAL AGENT AND GAMMA RADIATION DETECTOR PM2012M PM2012MB





RADIATION AND CHEMICAL MONITORING

Purpose

The devices of PM2012M series are two-in-one instruments featuring chemical detector and gamma radiation detector in one unit.

The devices are designed to detect chemical warfare agents and toxic compounds and differentiate between organophosphorus and arsenic-containing compounds, as well as continuously monitor radiation background, measure gamma dose and dose rate and provide audible, visual alarms when preset thresholds are exceeded.

The combined detectors are invaluable for first responders, police officers, military, and customs and border patrol services in the day-to-day monitoring of public safety as well as in special HazMat operations. The devices can be used as personal detectors, monitors for surveying contaminated areas, or as fixed-installed detectors.

PM2012M series includes **two models**:

Model	Dose measurement range	Bluetooth
PM2012M	1 µSv – 9.99 Sv	✕
PM2012MB	1 µSv – 14.9 Sv	✓

Functions

- Continuous monitoring of the radiation background
- Detection of vapors of toxic substances in the atmosphere in minimal concentrations
- Detection and difference between organophosphorus (GD, GB, VX, etc.) and organoarsenic (Lewisite, and Lewisite like) compounds, including indication of chemical agent concentration
- Precise measurement of gamma dose and dose rate
- Provision of audible, visual alarms when the preset radiation or chemical alarm thresholds are exceeded

Features

- Impact-resistant housing
- Non-volatile memory
- Communication with PC via USB and Bluetooth (PM2012MB)
- Clock-calendar as an auxiliary mode

Application

- First-responders
- Customs and border control
- Radiation monitoring services
- Security and law enforcement agencies





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Specifications

Gamma detector	GM tube
Chemical detector	IMS with ^{63}Ni source
Dose rate measurement range	1 μSv/h –10 Sv/h
Dose rate measurement accuracy • PM2012M • PM2012MB	 ±(15+0.02/ Ḣ) %, ±(10+0.02/ Ḣ +0.002/ Ḣ) %, where Ḣ is the measured dose rate in mSv/h
Dose measurement range • PM2012M • PM2012MB	 1.0 μSv – 9.99 Sv 1.0 μSv – 14.9 Sv
Dose measurement accuracy	±15 %
Dose accumulation time indication resolution • PM2012M • PM2012MB	 1 h 1 min
Energy range	60 keV – 3 MeV
Chemical detector response time: • organophosphorus compounds • arsenic-containing compounds	 (5±1.5) × 10^{-5} mg/l for 10 s (3±0.9) × 10^{-4} mg/l for 15 s
Response time at a rapid increase in the concentration of PTV FOS and MSV created by simulators, no more	15 s
Aftereffect time at a rapid decrease in the concentration of PTV FOS and MSV created by simulators, no more	30 s
Battery lifetime	150 h
Ingress protection	IP55
Operating temperature	from –10 °C to 50 °C
Power	one LR20/D battery 1.5V vehicle power supply 9-36 VDC 220VAC
Chemical agent concentration indication on analogue bar: • one segment • two segments • three segments	 close to threshold level 75-99% threshold level reached/exceeded 100-124% threshold level highly exceeded 125% and up
Dimensions	66 × 47 × 195 mm
Mass (with batteries)	≤ 770 g
Mass (in package)	≤ 5.5 kg

Design and specifications of the product can be changed without further notice.

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