POLIMASTER®

Innovating Radiation Detection Technologies Since 1992

PERSONAL RADIATION DETECTORS

PM1401MA/PM1401GNA GAMMA/GAMMA-NEUTRON

These detectors are highly efficient first responders' "pocket type" radiation detection instruments.

For Professionals in Law Enforcement and Homeland Security.

PM1401MA/PM1401GNA meets requirements of ITRAP/IAEA, ANSI N42.32 standard.

PM1401MA/PM1401GNA are the most sensitive gamma/gamma-neutron monitors,which are capable to detect the smallest amounts of radioactive and nuclear materials including the weapon ones.

The use of the PM1401MA/PM1401GNA may prevent inland illicit trafficking of radioactive sources and prevent terrorist actions with radioactive and nuclear materials.

ALARM

LOCATION

MEASUREMENT

IrDA

Features

- Fast response
- Easy two-buttons operation
- Gamma dose rate indication with reference to background
- Neutron count rate indication with reference to the neutron background
- Non-volatile memory for Storage of operation history
- PC communication via IR interface
- Waterproof,shock-resistant aluminium case
- Small size and light weight
- Optional extension pole

Application

- First responders
- Customs and Border Patrol
- Police
- Emergency teams
- Law enforcement
- HazMat teams
- Security guards

Versions

- PM1401MA-gamma
- PM1401GNA-gamma-neutron
- Options: radionuclide identification using Bluetooth communication with external Pocket PC or smartphone with software PoliIdentify™

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SPECIFICATIONS

	PM1401MA	PM1401GNA
Detector **- gamma** **- neutron**	**Cs(Ti)** **-**	**CsI(Tl)** **He-3 counter**
Sensitivity: - gamma for ^{137}Cs, no less **- neutron for Pu-a-Be, no less** **- for thermal neutron, no less**	**100 cps/(μSv/h)** **-** **-**	**100 cps/(μSv/h)** **0.1 counts cm^2 / n** **1.0 counts cm^2 / n** (with moderator) **7 counts cm^2 / n**
Energy range **- for gamma** **- for neutron**	**0.06 - 3 MeV**	**0.033 - 3 MeV** **0.025 eV - 14 MeV**
Time of measurement	**0.25 s**	
Range of n coefficient (number of mean square deviations of current background) **Step**	**from 1 to 9.9** **0.1**	
Detection of gamma radiation sources (Ba-133) at a distance of 0.2 m, velocity of 0.5 m/s	**55 kBq**	
Detection of **- standard sample Pu^{239}** **- standard sample U^{235}** **(at distance of 0.2 m, velocity of 0.5 m/s, background < 0.25 μSv/h**	**0.3 g** **10 g**	
Measurement range of dose equivalent rate (DER) of photon radiation H*(10)	**0.05 - 40 μSv/h**	**0.01 - 70 μSv/h**
Accuracy of DER registration to **^{137}Cs** in collimated radiation	**±(20 +1/H)%,** **H - DER value in μSv/h**	**±30%**
Count time: **- in background mode** **- in search mode**	**36 s** **2 s**	
Meet requirements of ITRAP Program: detection with no less than 99% probadility within 3 s for Cs-137, Am-241, Co-60, with the dose rate (at background < 0.2 μSv/h, false alarm < 1per 10 hour)	**1 μSv/h**	
Additional functions	**PC communication mode**	
Drop test on concrete floor	**0.7 m**	
Power supply	**One AA battery**	
Battery lifetime	**1000 h**	
Battery discharge warning	**indication on LCD**	
Operating conditions: **- temperature range** **- relative humidity (at 35° C)**	**- 30 ... +50° C** **up to 98%**	
Protection degree of case	**IP65**	
Dimensions	**57 x 110 x 32 мм**	**57 x 183 x 34 мм**
Weight	**270 g**	**398 g**

Design and specifications of the device can be changed without further notice. **ITRAP/IAEA, ANSI N42.32, ANSI N42.33 (1)** CE ISO 9001

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