POLIMASTER

PERSONAL RADIATION DETECTORS

PM1401M/PM1401GN
GAMMA/GAMMA-NEUTRON

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

For Professionals in Law Enforcement and Homeland Security

The PM1401M /PM1401GN 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 PM1401M /PM1401GN may prevent inland illicit trafficking of radioactive sources and prevent terrorist actions with radioactive and nuclear materials.

CE

IRDA compatible

CERTIFICATE AUSTRIAN RESEARCH CENTERS SEIBERSDORF ITRAP

ALARM

LOCATION

MEASUREMENT

ISO 9001

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

- PM1401M - gamma
- PM1401GN - gamma-neutron
- Options: radionuclide identification using Bluetooth communication with external Pocket PC or smartphone

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PERSONAL RADIATION DETECTORS
PM1401M/PM1401GN

	PM1401M (PM1703)	PM1401GN
Detector - gamma - neutron	CsI(Tl) -	CsI(Tl) He-3 counter
Sensitivity **- gamma** for Cs-137, no less **- neutron** for Pu-α-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	0.033 - 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 0.2m, velocity of 0.5 m/s	55.0 kBq	
Detection of - standard sample of Pu^{239} - standard sample of 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 Ḣ*(10)	0.05 - 40 μSv/h	0.01 - 40 μSv/h
Accuracy of DER registration to Cs-137 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% probability within 3s for Cs-137, Am-241, Co-60, with the dose rate (at background < 0.2 μSv/h, false alarm < 1 per 10 hours)	1 μSv/h	
Additional functions	PC communication mode	
Drop test on concrete floor	0.7 m	
Power supply	One AA battery	
Battery lifetime	800 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 97 x 32 mm	57 x 185 x 34 mm
Weight (with battery), no more than	270 g	365 g

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

www.polimaster.com **www.gamma-neutron-pager.com** **www.polismart.com**

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