



Innovating Radiation Detection Technologies Since 1992

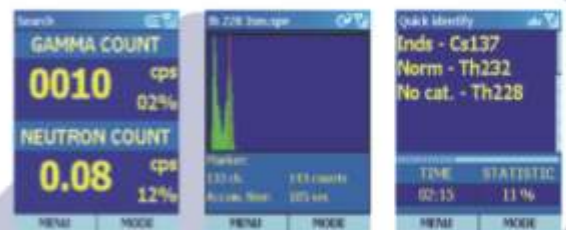
SPECTROSCOPIC PERSONAL RADIATION DETECTORS

PM1703MB / PM1703GNB

GAMMA / GAMMA-NEUTRON MODELS

The family of Polimaster's Gamma and Gamma-Neutron Spectroscopic Personal Radiation Detectors (SPRDs) which utilize advanced search algorithms and can be used for detection and primary radionuclide identification of the radioactive sources even by the non-trained personnel.

The SPRDs are designed to detect the slightest amounts of the gamma and neutron radiation emitting materials and evaluate their danger to general public by isotope identification. The PM1703MB Gamma and PM1703GNB Gamma-Neutron models are equipped with a CsI(Tl) (for gamma detection and spectra accumulation) and a LiI(Eu) (for neutron detection) scintillation detectors to alert the user that the radiation levels have exceeded the preset threshold values.



ALARM

LOCATION

MEASUREMENT

IDENTIFICATION

Features

- CsI(Tl) and LiI(Eu) scintillation detectors
- Easy-to-use, two-buttons operation
- Doesn't require any special knowledge
- Bluetooth & IRDA communication
- Audible, light and vibration alarms
- Non-volatile memory
- Shockproof hermetic case
- Low EMI interference from portable radio and cell phones

Application

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

Versions

- PM1703MB - gamma
- PM1703GNB - gamma-neutron

Options

Radionuclide identification using Bluetooth® communication with external Pocket PC and Polimaster proprietary identification software

IRDA





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	PM1703MB	PM1703GNB
Detector - gamma - neutron	CsI(Tl) —	CsI(Tl) Li ₆ (Eu)
Sensitivity for ¹³⁷ Cs, no less	100 (s ⁻¹)/(μSv/h) (1.0 (s ⁻¹)/(μR/h))	100 (s ⁻¹)/(μSv/h) (1.0 (s ⁻¹)/(μR/h))
for ²⁴¹ Am, no less	200 (s ⁻¹)/(μSv/h) (2.0 (s ⁻¹)/(μR/h))	200 (s ⁻¹)/(μSv/h) (2.0 (s ⁻¹)/(μR/h))
Energy range - gamma - neutron	0.033 – 3.0 MeV —	0.033 – 3.0 MeV from thermal to 14.0 MeV
Dose Rate - gamma - neutron	0.01 – 99.99 μSv/h (1 – 9999 μR/h) —	0.01 – 99.99 μSv/h (1 – 9999 μR/h) 1 – 999 s ⁻¹
Accuracy (at ¹³⁷Cs)	±30% (in range 0.1 – 70 μSv/h (10 – 7000 μR/h))	±30% (in range 0.1 – 70 μSv/h (10 – 7000 μR/h))
Response time	0.25 s	0.25 s
Radionuclide identification Special nuclear materials (SNM)	²³³ U, ²³⁵ U, ²³⁷ Np, Pu	²³³ U, ²³⁵ U, ²³⁷ Np, Pu
Medical radionuclides	¹⁸ F, ⁶⁷ Ga, ⁵¹ Cr, ⁷⁵ Se, ⁸⁹ Sr, ⁹⁹ Mo, ^{99m} Tc, ¹⁰³ Pd, ¹¹¹ In, ¹²³ I, ¹³¹ I, ¹⁵³ Sm, ²⁰¹ Ti, ¹³³ Xe	¹⁸ F, ⁶⁷ Ga, ⁵¹ Cr, ⁷⁵ Se, ⁸⁹ Sr, ⁹⁹ Mo, ^{99m} Tc, ¹⁰³ Pd, ¹¹¹ In, ¹²³ I, ¹³¹ I, ¹⁵³ Sm, ²⁰¹ Ti, ¹³³ Xe
Naturally occurring radioactive materials (NORM)	⁴⁰ K, ²²⁶ Ra, ²³² Th and daughters, ²³⁸ U and daughters	⁴⁰ K, ²²⁶ Ra, ²³² Th and daughters, ²³⁸ U and daughters
Industrial radionuclides	⁵⁷ Co, ⁶⁰ Co, ¹³³ Ba, ¹³⁷ Cs, ¹⁹² Ir, ²²⁶ Ra, ²⁴¹ Am	⁵⁷ Co, ⁶⁰ Co, ¹³³ Ba, ¹³⁷ Cs, ¹⁹² Ir, ²²⁶ Ra, ²⁴¹ Am
Standards compliance	ITRAP/IAEA requirements, ANSI N42.32, ANSI N42.33(1), ANSI N42.34, IEC 62401	ITRAP/IAEA requirements, ANSI N42.32, ANSI N42.33(1), ANSI N42.34, IEC 62401
Alarm type	visual, audio, vibration	visual, audio, vibration
Data recording	1000	1000
Environmental protection	IP65	IP65
Drop test on concrete floor	1.5 m (4.9 ft) 0.7 m (2.3 ft) without cover	1.5 m (4.9 ft) 0.7 m (2.3 ft) without cover
Power supply	one AA battery	one AA battery
Battery life time	up to 1000 hours	up to 1000 hours
Operating temperature	-30°C to 50°C (-22°F to 122°F)	-30°C to 50°C (-22°F to 122°F)
Size (without cover)	75 x 35 x 98 mm (2 15/16" x 1 3/8" x 3 7/8")	75 x 35 x 98 mm (2 15/16" x 1 3/8" x 3 7/8")
Weight	200 g (7.05 oz)	230 g (8.1 oz)
Low battery warning	LCD	LCD

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

