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FGJ

FARHAN GOSTAR JOONOB

Innovating Radiation Detection Technologies Since 1992

PERSONAL RADIATION DETECTORS

PM1703M/PM1703MA PM1703GN/PM1703GNA



These devices are used for detection and localization of radioactive sources.

The instruments' two operating modes enable the user both search for radioactive and nuclear materials as well as evaluate dose equivalent rate (DER).

Extremely sensitive scintillation counters allow detection even of the slightest amounts of gamma and neutron radiation emitting materials.



Audio, visual and vibration alarms alert user when gamma or neutron radiation thresholds have been exceeded. All data is stored in the detector's non-volatile memory. The stored information can also be transferred from the detector to a personal computer (PC) via infrared channel.

THE LATEST GENERATION IN RADIATION DETECTION FOR NON-TECHNICAL PERSONNEL

Ease of use and sensitivity make these watertight, robust monitoring tools essential for persons working in emergency services, customs and border patrol, police and for other specialists. Using of these devices doesn't require any special knowledge or intensive training.

Functions

- Searching for radioactive and nuclear materials using the method of impulse count analysis with alarms and visualization on the built-in LCD of the average gamma and neutron radiation count rate
- Measurement of gamma radiation ambient DER of gamma radiation $H^*(10)$

Applications

- Emergency service
- Customs and border patrol
- Civil defense and police
- Wide range of specialists whose activity is connected with detection and location of radioactive sources

Versions

- PM1703M, PM1703MA equipped with scintillation gamma detectors CsI(Tl)
- PM1703GN, PM1703GNA equipped with scintillation gamma detectors CsI(Tl) and neutron detectors Li₆(Eu)
The PM1703MA and PM1703GNA are more sensitive than PM1703M and PM1703GN

Features

- Highly sensitive CsI(Tl) and Li₆(Eu) scintillation detectors
- Non-volatile memory
- Audio, visual and vibrating alarm
- IRDA communication with PC
- LCD display, electroluminescent backlight
- Shockproof hermetic case
- Easy-to-use, two-button operation

ALARM

LOCATION

MEASUREMENT

IRDA

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PERSONAL RADIATION DETECTORS

PM1703M/PM1703MA PM1703GN/PM1703GNA

SPECIFICATIONS

	PM1703M/PM1703GN	PM1703MA/PM1703GNA
Detector gamma neutron (only for PM1703GN and PM1703GNA)	CsI(Tl) Li₆I(Eu)	CsI(Tl) Li₆I(Eu)
Gamma sensitivity , at least for ¹³⁷ Cs for ²⁴¹ Am	85 s⁻¹/(μSv/h) 100 s⁻¹/(μSv/h)	100 s⁻¹/(μSv/h) 200 s⁻¹/(μSv/h)
Neutron sensitivity (only for PM1703GN, PM1703GNA), at least for Pu-α-Be for thermal neutrons	0.035 counts x cm²/neutron 1.2 counts x cm²/neutron	0.07 counts x cm²/neutron 1.5 counts x cm²/neutron
Energy range of gamma radiation of neutron radiation (only for PM1703GN/GNA)	0.033 – 3.0 MeV from thermal to 14.0 MeV	0.033 – 3.0 MeV from thermal to 14.0 MeV
Dose Rate indication range	0.01 – 99.99 μSv/h	0.01 – 99.99 μSv/h
Gamma count rate indication range	1.0 – 7000 s⁻¹	1.0 – 7000 s⁻¹
Neutron count rate indication range (only for PM1703GN, PM1703GNA)	1.0 – 999 s⁻¹	1.0 – 999 s⁻¹
Accuracy of DER measurement at ¹³⁷Cs in the collimated radiation in the range from 0.1 to 70 μSv/h, no more	± 30 %	± 30 %
Alarm type	Audio, visual, vibration	Audio, visual, vibration
Data recording	1000 data points	1000 data points
Communication with PC	IRDA	IRDA
Drop test on concrete floor	0.7 m (without cover), 1.5 m (with cover)	0.7 m (without cover), 1.5 m (with cover)
Power supply	one AA battery	one AA battery
Battery life time	up to 1000 hours	up to 1000 hours
Battery discharge warning	indication on LCD	indication on LCD
Operating conditions temperature relative humidity	-30°C to 50°C up to 98% at 40°C	-30°C to 50°C up to 98% at 40°C
Environmental protection	IP65	IP65
Dimensions	72x32x87 mm	72x32x87 mm
Weight, no more	180 g	200 g

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



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