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Innovating Radiation Detection Technologies Since 1992

PERSONAL COMBINED RADIATION DETECTOR/DOSIMETER PM1703MO-1



The energy-compensated detector PM1703MO-1 combines in one package the functions of the personal radiation detector using CsI(Tl) based detector and precise accumulated dose and dose rate measurement using GM tube based dosimeter. The small size of the unit can easily fit on the utility belt or on the vehicle dash board. At the same time PM1703MO-1 offers the highest performance of an instrument of this type currently available on the market and meets requirements of ITRAP/IAEA, IEC 60846, IEC 62401, ANSI N42.32 and ANSI N42.33 standards.



The range of the possible use applications varies from the health physics needs and the personnel acute dose monitoring to the security applications and area monitoring.

Currently PM1703MO-1 is available in two versions:

PM1703MO-1 (IAEA version)

This customization fulfills all requirements of International Atomic Energy Agency (IAEA) users and widely used for radiation security of international events.

PM1703MO-1 (USA version)

The model features expanded dose rate measurement range and large LCD for better result readings. Accessories. Additionally, the PM1703MO-1 (USA version) is equipped with the optional vehicle charger/mounting cradle for easy placement on the dash board. At the user request instrument can be equipped with wide belt clip to fit on the utility belts up to 2 1/4" wide.



ALARM



LOCATION



MEASUREMENT

IRDA

Features

- Easy to use, two-buttons operation
- Doesn't require any special knowledge.
- Two independent detectors: small-sized GM tube and highly sensitive CsI(Tl) scintillation detector
- Audible 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



PERSONAL COMBINED RADIATION DETECTOR/DOSIMETER

PM1703MO-1

SPECIFICATIONS

	PM1703MO-1 (USA)	PM1703MO-1 (IAEA)
Detector - gamma search - gamma measurement	CsI(Tl) GM tube	CsI(Tl) GM tube
Sensitivity - for ^{137}Cs , $\pm 20\%$ - for ^{241}Am , no less	100 (s⁻¹)/(μSv/h) (1.0 (s⁻¹)/(μR/h)) 70 (s⁻¹)/(μSv/h) (0.7 (s⁻¹)/(μR/h))	100 (s⁻¹)/(μSv/h) (1.0 (s⁻¹)/(μR/h)) 130 (s⁻¹)/(μSv/h) (1.3 (s⁻¹)/(μR/h))
Energy range - for gamma	0.033 - 3.0 MeV	0.033 - 3.0 MeV
Time of measurement	0.25 s	0.25 s
Dose Rate	0.01 μSv/h - 10 Sv/h (1 μR/h - 1000 R/h)	0.01 μSv/h - 10 mSv/h (1 μR/h - 1000 mR/h)
Dose	0.01 μSv - 9.99 Sv (1 μR - 999 R)	-
Accuracy (at ^{137}Cs)	$\pm(20+K/H)\%$ in measurement range 0.1 μSv/h - 10 Sv/h (10 μR/h - 1000 R/h), where H - dose rate value in mSv/h; K - coefficient 0.005 mSv/h (H - dose rate value in mR/h; K - coefficient 0.5 mR/h)	$\pm(15+K1/H+K2*H)\%$ in measurement range 0.1 μSv/h - 10 Sv/h (10 μR/h - 1000 R/h), where H - dose rate value in μSv/h; K1 - coefficient 0.0045 μSv/h, K2 - coefficient 0.0015 (μSv/h)⁻¹
Alarm type	visual, audio, vibration	visual, audio, vibration
Data recording	2000	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 standard or rechargeable 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)	72 x 32 x 87 mm (2 13/16" x 1 1/4" x 3 7/16")	72 x 32 x 87 mm (2 13/16" x 1 1/4" x 3 7/16")
Weight	200 g (7.05 oz) 240 g (8.5 oz)	200 g (7.05 oz) 240 g (8.5 oz)
Low battery warning	LCD	LCD
Overload indication - gamma	OL	OL

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

**ITRAP/IAEA requirements, ANSI N42.32,
ANSI N42.33 (1), ANSI N42.33 (2),
IEC 60846, IEC 62401**

