POLIMASTER®

Innovating Radiation Detection Technologies Since 1992

GAMMA DOSIMETERS
PM1603A/PM1603B wrist
PM1604A/PM1604B for breast pocket

DESIGNED TO WORK IN EXTREME CONDITIONS

Dosimeters provide real-time environmental radiation monitoring. The instruments can be used independently or as a part of operational dosimetry system for everyday and emergency radiation control, and can be tailored to the specific needs of customers.

Dosimeters have two independent alarm thresholds within all dose equivalent rate (DER) and dose equivalent (DE) measurement ranges. Audible and visual alarms alert users when the preset thresholds have been exceeded.
All data accumulated and stored in non-volatile memory can be transmitted via infrared channel to a PC for further processing and analysis.

The instruments' hermetic, shockproof and water-resistant case and the fluorescent backlight on LCD screen allow for easy operation and precision even in the most harsh and unfavorable environments. The dosimeters are highly sensitive and can

Functions

PM1603A/PM1603B
- Measurement of the ambient DER of external gamma and X-ray radiation H*(10);
- Measurement of the ambient DE of external gamma and X-ray radiation H*(10)

PM1604A/PM1604B
- Measurement of the personal DER of external gamma and X-ray radiation Hp(10);
- Measurement of the personal DE of external gamma and X-ray radiation Hp(10)

PM1603A/PM1603B, PM1604A/PM1604B
- Measurement of DE accumulation time
- Indication of current time in hours, minutes and seconds
- Indication of day, month and year
- Using as alarm clock, timer and stop-watch

Application

- Emergency service
- Customs and border patrol
- Radiological and isotope laboratories
- Medical professionals
- Personnel of nuclear facilities
- Civil defense
- Fire rescue and police
- Mining

Features

- Wide range of DER and DE measurements
- Stable to dose up to 300 Sv
- Non-volatile memory
- Possibility of measurement of DE accumulation time
- Two thresholds in DER and DE range
- Audio and visual alarm
- PC communication by IR interface
- LCD display, electroluminescent backlight
- Rugged hermetic case
- Lightweight and small dimensions

ALARM

LOCATION

MEASUREMENT

IRDA

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SPECIFICATIONS

Detector	**Geiger-Muller tube**
DER indication range **- PM1603A/PM604A** **- PM1603B/PM1604B**	 **0.01 µSv/h - 6.5 Sv/h** **0.01 µSv/h - 13 Sv/h**
DE indication range	**0.01 µSv - 9.99 Sv**
Range of dose accumulation time	**1 - 9999 h**
Accuracy of DER measurement Within the range 1 µSv/h - 5 Sv/h for PM1603A/PM1604A 1 µSv/h - 10 Sv/h for PM1603B/PM1604B	 **±(15 + 0.02/H + 0.003 H)%** **±(15 + 0.02/H + 0.002 H)%** **H** is the dose equivalent rate, mSv/h
Accuracy of DE measurement within the range 1 µSv- 9.99 Sv	**± 15%**
DER and DE threshold range	**two thresholds for DER and two for DE**
Energy range **- PM1603A/PM1603B** **- PM1604A/PM1604B**	 **0.048 - 3 MeV** **0.048 - 6 MeV**
Energy response relative to 0.662 MeV (^{137}Cs) within the energy range 0.048 3 MeV	**± 30%**
Alarm type	**Audible**
Data recording	**1000 data points**
Communication with PC	**IRDA**
Power supply	**one CR 2032 battery**
Additional functions	**alarm clock, timer, stop watch, calendar**
Calendar mode	**day of the week, date, month, year**
Daily variation of watch at normal conditions	**± 0,5 s/day**
Battery lifetime	**9 months**
Battery discharge warning (partial and critical)	**indication on LCD**
Power supply	**one CR 2032 lithium battery**
Operating conditions **- temperature range** **- relative humidity**	 **from -20°C to +70°C** **up to 98 % at 35° C**
Case Protection Class	**IP67**
Dimensions **- PM1603A/PM1603B** **- PM1604A/PM1604B with a clip**	 **50 x 56 x 19 mm** **50 x 90 x 19 mm**
Weight (with battery), no more	**85 g**

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

CE ISO 9001

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