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peo MEDICAL

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Polimaster

Polimaster is a global provider of radiation monitoring solutions, offering advanced dosimetry and detection technologies tailored for the medical field. Their instruments assist healthcare professionals in maintaining safety and compliance in environments where radiation exposure is a concern.

In clinical settings, Polimaster's personal dosimeters provide real-time monitoring of radiation exposure, enabling medical staff to manage and minimize their dose during procedures involving ionizing radiation. These devices offer immediate feedback through visual, audible, and vibration alarms, ensuring prompt awareness of exposure levels.

Polimaster's solutions are designed to integrate seamlessly into medical workflows, supporting tasks such as dose tracking and exposure management. Their commitment to innovation and user-centric design ensures that healthcare providers have reliable tools to uphold radiation safety standards.

Enhance your radiation safety protocols with Polimaster's trusted monitoring solutions, designed to support the unique needs of medical professionals.

DETECTORS & MISCELLANEOUS

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RadFlash® Electronic Personal Dosimeter

DETECTORS

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RadFlash® Electronic Personal Dosimeter

PERSONAL DOSIMETRY

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PM1604B Electronic Personal Dosimeter

Dosimeters perform monitoring and measurement of personal dose equivalent and personal dose equivalent rate in the wide energy range – from the natural background level up to 5-10 Sv/h (500-1000 R/h). Instruments are stable to dose up to 300 Sv, have two thresholds in DER and DE ranges, have non volatile memory for data storage. Hermetic, water-resistant and shockproof case and the fluorescent backlight on LCD screen allow to use instruments in harsh and extreme conditions.

PM1604A and PM1604B dosimeters are recommended for emergency services, customs and border patrol, radiological and radioisotope laboratories, medical professionals, personnel of nuclear facilities, civil defense, firefighters and police.

Operation Principle

PM1604A and PM1604B models are energy-compensated personal dosimeters of pocket size that measure personal dose equivalent (DE) and personal dose equivalent rate (DER) of both gamma and X-ray radiation. Dosimeters have two alarm thresholds. If the preset dose and dose rate thresholds are exceeded, instruments immediately alert the user through an audible alarm. Dosimeters store up to 1000 events in non-volatile memory and transmit all recorded data via an infrared channel to a PC for further processing and analysis.

Dosimeters may be used independently or as a part of a system for efficient and emergency monitoring of personnel and people at production facilities and other sites, where there is a risk of exposure to external X-ray and gamma radiation.

Modifications

Dosimeter is manufactured in two modifications: PM1604A and PM1604B. PM1604B has extended range of DER measurement.

PM1604A Electronic Personal Dosimeter

Dosimeters perform monitoring and measurement of personal dose equivalent and personal dose equivalent rate in the wide energy range – from the natural background level up to 5-10 Sv/h (500-1000 R/h). Instruments are stable to dose up to 300 Sv, have two thresholds in DER and DE ranges, have non volatile memory for data storage. Hermetic, water-resistant and shockproof case and the fluorescent backlight on LCD screen allow to use instruments in harsh and extreme conditions.

PM1604A and PM1604B dosimeters are recommended for emergency services, customs and border patrol, radiological and radioisotope laboratories, medical professionals, personnel of nuclear facilities, civil defense, firefighters and police.

Operation Principle

PM1604A and PM1604B models are energy-compensated personal dosimeters of pocket size that measure personal dose equivalent (DE) and personal dose equivalent rate (DER) of both gamma and X-ray radiation. Dosimeters have two alarm thresholds. If the preset dose and dose rate thresholds are exceeded, instruments immediately alert the user through an audible alarm. Dosimeters store up to 1000 events in non-volatile memory and transmit all recorded data via infrared channel to a PC for further processing and analysis.

Dosimeters may be used independently or as a part of a system for efficient and emergency monitoring of personnel and people at production facilities and other sites with external X-ray and gamma radiation sources.

Modifications

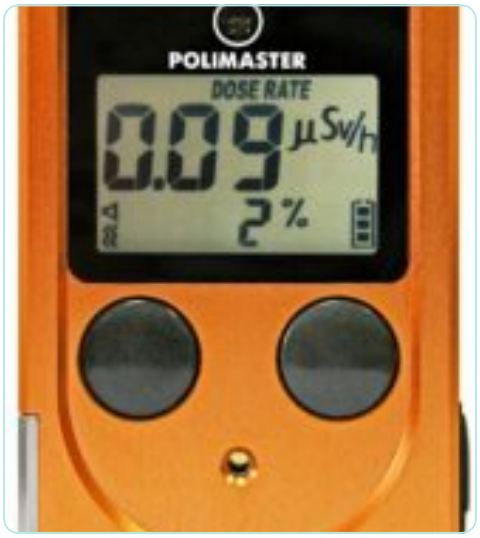
PM1604B- modification has extended DER measurement range.

PM1605BT Personal Radiation Monitor/Dosimeter

PM1605BT electronic dosimeter is equipped with a Geiger-Mueller counter for extended measurement of the **ambient dose equivalent** and **ambient dose equivalent rate**. Instruments are able to search, detect and locate radioactive sources, alert the user with audible, visual and vibration alarms, transmit stored data to a PC or smartphone.

The dosimeter is designed to withstand **extreme environmental conditions** such as limited visibility, raised noise, high temperatures, exposure to sea water, shock and falls. Control panel with two big buttons allows the using of protective gloves while operating the instrument.

The instruments are recommended for personal radiation protection of first responders, HAZMAT teams, civil defense, firefighters and the other divisions who deal with radiological emergencies.



Operation principle

PM1605BT ambient dosimeter continuously controls the dose and dose rate threshold levels and alerts the user with audible, visual and vibration alarms when the threshold levels are exceeded. The instruments are able to search, detect and locate radioactive sources.

The instrument is supplied with the user software for downloading measurement history to a PC, maintaining the personnel exposure database and adjusting the settings of the dosimeter. PM1605BT is compatible with **Polismart**® Android app via Bluetooth, which allows to monitor the instrument readings in real-time, download and transfer the history and adjust the instrument settings.

Features

- IP68 case for operation in extreme environmental conditions
- Highly visible LEDs on the front and top panels for alarms indication
- Removable clip for secure fastening to a belt or a pocket
- Large buttons suitable for use with protective gloves
- Operating temperature from –30 °C to 65 °C
- Ambient dose equivalent rate up to 10 Sv/h
- Ambient dose equivalent up to 100 Sv
- Bluetooth and USB communication
- Battery lifetime at least 9 months
- Large and easy-to-read LCD

Applications

- HAZMAT and CBRNe teams
- Emergency services
- First responders
- Firefighters
- Police and security
- Paramedics

PM1610B X-Ray and Gamma Radiation Personal Dosimeter

PM1610 series of electronic personal dosimeters (EPDs) are intended for measurement of the personal dose equivalent Hp(10) and personal dose equivalent rate $\dot{H}p(10)$. The dosimeters are suitable for multiple applications providing the measurement of X-ray (continuous and pulsed) and gamma radiation in the wide energy range.

PM1610B model has an extended dose measurement range up to 20 Sv and improved accuracy of the dose rate measurement. Instead of a rechargeable battery, this model is **powered by AAA (LR03) battery** which is easy to replace, affordable and safe to handle.

PM1610 dosimeters have unique features for operation in workplaces requiring the use of personal protective equipment or a harsh environment, including a shockproof rubberized case, a high contrast display with a fluorescent backlight, and two big buttons for easy use even while wearing protective gloves.

Operation principle

PM1610 EPDs allow the setting of two dose rate alarm thresholds and two dose alarm thresholds. The instruments continuously control the threshold levels and alert the user with audible, visual and vibration alarms when the threshold levels are exceeded. PM1610 automatically records and stores in its non-volatile memory up to 7500 dose rate and dose measurement history events.
EPD is supplied with the user software for downloading measurement history to a PC, maintaining personnel exposure database and adjusting the settings of the dosimeter. PM1610B dosimeters are also compatible with **PM530 Automated Personal Dosimetry System** for maintaining the instrument history database and monitoring personnel exposure.

Features

- Easily replaceable long-life AAA battery: at least 480 hours
- Extended energy range: from 20 keV to 10 MeV
- Wide dose and dose rate measurement ranges
- Measurement of pulsed photon radiation
- Simple navigation with two large buttons
- Audible, visual and vibration alarms
- USB communication with PC
- Shockproof hermetic case
- Small and lightweight

Applications

- Customs and border control
- Healthcare professionals
- Nuclear power plants
- Emergency services
- Police and security
- Industrial facilities
- First responders

PM1610A X-Ray and Gamma Radiation Personal Dosimeter

PM1610 series of electronic personal dosimeters (**EPDs**) are intended for measurement of the personal dose equivalent Hp(10) and personal dose equivalent rate Ḣp(10). The dosimeters are suitable for multiple applications providing the measurement of X-ray (continuous and pulsed) and gamma radiation in the wide energy range.

PM1610A model has an **extended dose measurement range of up to 20 Sv** and improved accuracy of the dose rate measurement.

PM1610 dosimeters have unique features for operation in workplaces requiring the use of personal protective equipment or a harsh environment, including a shockproof rubberized case, a high contrast display with a fluorescent backlight, and two big buttons for easy use even while wearing protective gloves.

Operation principle

PM1610 EPDs allow the setting of two dose rate alarm thresholds and two dose alarm thresholds. The instruments continuously control the threshold levels and alert the user with audible, visual and vibration alarms when the threshold levels are exceeded. PM1610 automatically records and stores in its non-volatile memory up to 7500 dose rate and dose measurement history events.
The dosimeter is manufactured in two models: the basic **PM1610**model and the **PM1610A**model with an extended dose measurement range of up to 20 Sv and improved accuracy of the dose rate measurement. EPD is supplied with the user software for downloading measurement history to a PC, maintaining personnel exposure database and adjusting the settings of the dosimeter. PM1610 dosimeters are also compatible with **PM530 Automated Personal Dosimetry System** for maintaining the instrument history database and monitoring personnel exposure.

Features

- Long-life rechargeable battery: at least 650 hours
- Extended energy range: from 20 keV to 10 MeV
- Wide dose and dose rate measurement ranges
- Measurement of pulsed photon radiation
- Simple navigation with two large buttons
- Audible, visual and vibration alarms
- USB communication with PC
- Shockproof hermetic case
- Small and lightweight

Applications

- Customs and border control
- Healthcare professionals
- Nuclear power plants
- Emergency services
- Police and security
- Industrial facilities
- First responders

Important: During long-term storage, the instrument battery may gradually discharge even when the instrument is switched off. Over time, deeply discharged batteries may experience a decrease in capacity. To prevent this, Polimaster recommends periodically charging the battery, at least once every six months.

PM1610 X-Ray and Gamma Radiation Personal Dosimeter

PM1610 series of electronic personal dosimeters (**EPDs**) are intended for measurement of the personal dose equivalent *Hp(10)* and personal dose equivalent rate *Ḣp(10)*. The dosimeters are suitable for multiple applications providing the measurement of X-ray (continuous and pulsed) and gamma radiation in the wide energy range.

PM1610 dosimeters have unique features for operation in workplaces requiring the use of personal protective equipment or a harsh environment, including a shockproof rubberized case, a high contrast display with a fluorescent backlight, and two big buttons for easy use even while wearing protective gloves.

Operation principle

PM1610 EPDs allow the setting of two dose rate alarm thresholds and two dose alarm thresholds. The instruments continuously control the threshold levels and alert the user with audible, visual and vibration alarms when the threshold levels are exceeded. PM1610 automatically records and stores in its non-volatile memory up to 7500 dose rate and dose measurement history events.
The dosimeter is manufactured in two models: the basic **PM1610** model and the **PM1610A** model with an extended dose measurement range of up to 20 Sv and improved accuracy of the dose rate measurement. EPD is supplied with the user software for downloading measurement history to a PC, maintaining personnel exposure database and adjusting the settings of the dosimeter. PM1610 dosimeters are also compatible with **PM530 Automated Personal Dosimetry System** for maintaining the instrument history database and monitoring personnel exposure.

Features

- Long-life rechargeable battery: at least 650 hours
- Extended energy range: from 20 keV to 10 MeV
- Wide dose and dose rate measurement ranges
- Measurement of pulsed photon radiation
- Simple navigation with two large buttons
- Audible, visual and vibration alarms
- USB communication with PC
- Shockproof hermetic case
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Applications

- Customs and border control
- Healthcare professionals
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- Emergency services

- Police and security
- Industrial facilities
- First responders

RadFlash® Electronic Personal Dosimeter

The Ultimate Protection

Only the best instant monitoring and alerts provide the safety professionals deserve. The RadFlash electronic personal dosimeter gives you immediate feedback, high precision, and unmatched flexibility. It’s the perfect tool for minimizing risk and maximizing confidence.

Features

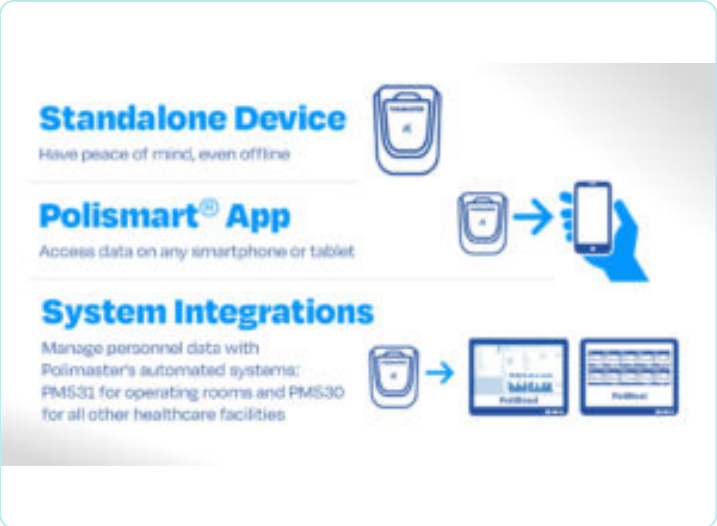
- Independent alarm thresholds for both dose and dose rate
- Automatic calculation of the safe stay time in the Polismart® app
- Miniature, lightweight design
- Intuitive single control button
- Bluetooth integration
- Wireless charging
- Optional integration with PM530 or PM531 automated personal dosimetry systems

Real-Time Data at Your Fingertips

With RadFlash, the instant your radiation exposure increases, you know it. Continuous monitoring and custom alerts provide immediate, precise feedback, empowering you to react in-the-moment to changes in your exposure environment.
The dosimeter is capable of solving a wide range of personal dose monitoring tasks, including measurement of personal dose equivalent *Hp(10)* and personal dose equivalent rate $\dot{H}p(10)$ of X-ray (continuous and pulsed) and gamma radiation.

Hassle-Free Flexibility

RadFlash adapts to your needs and your unique situation. Unlike other electronic personal dosimeters, while it can function as a stand-alone device, it also has the capability to be integrated into a real-time dosimetry system, offering additional benefits and functionalities. Or you can pair it with the Polismart® App to view readings and manage settings from any phone or tablet. To simplify data management and ensure the safety of all personnel, you can also use it with the Polimaster automated personal dosimetry system.



Who Can Benefit?

- Medical personnel, including radiologists, surgeons, anesthesiologists, nurses, physician's assistants, technicians, and medical physicists
- Laboratory researchers and operators
- Customs and security officers
- All professionals who work under the risk of X–ray and gamma radiation exposure

PM1703GNA-II/BT Personal radiation detector

The PM1703-II series personal radiation detectors (PRDs) are highly sensitive and rugged devices that can detect and locate even trace amounts of radioactive materials.

Equipped with a clip for multiple carrying options and easy to operate even for non-specialists, PRDs became the perfect fit as radiation beepers for public security services, including border controls, rescue teams, police and anti-terrorist units that need to quickly search for radioactive materials in public places.

PM1703GNA-II models are gamma neutron PRDs equipped with a high-sensitivity scintillator for measuring the personal dose rate up to 300 µSv/h.

PM170

Working principle

PM1703GNA-II models are gamma neutron PRDs equipped with a high-sensitivity scintillator for measuring the personal dose rate up to 300 µSv/h. While ensuring high-quality detection for any scenario, the PM1703-II PRD provides confidence in personal safety by continuously monitoring the measured dose equivalent rate and alerting the user with visual, audible and vibrating alarms when preset radiation thresholds are exceeded.

Operating history is stored in the instrument's non-volatile memory (up to 2000 data points), protecting data even if the battery is removed. The stored data can also be transferred to a PC via USB. The storage data format is designed to comply with ANSI N42.42.

The PRD has a special operating mode "Mode 0…9" specifically designed for monitoring the gamma radiation dose rate within a numerical range. This mode is particularly user-friendly, making it easier for non-professionals to understand and navigate.

Polimaster PRDs offer a significant advantage with their NORM suppression algorithm. This algorithm distinguishes alarm signals when there is an increase in the natural gamma background values and detection of naturally occurring radioactive materials (NORM). When NORMs are detected, a green indicator light is displayed. However, if other types of radionuclides (IND, NUC, MED) are detected, a red indicator light and an audible alarm will be activated. This feature provides clear and distinct indications based on the specific type of radiation being detected.

Models

- PM1703GNA-II PRD is a basic model.
- PM1703GNA–II BT PRD is additionally equipped with a Bluetooth module that enables communication with smartphones for advanced control via the free Polismart® Android app.
- PM1703GNA–II MBT PRD/Dosimeter is additionally equipped with a Bluetooth module and a Geiger-Mueller counter for comprehensive measurement of the personal dose rate up to 200 mSv/h and the personal dose up to 10 Sv.

Functions

- NORM suppression algorithm for distinguishing color-coded alarms triggered by natural or man-made radiation materials
- Special scale mode from 0-9 with unitless dose indication for ease of use and minimal training
- Free Polismart® iOS and Android app for advanced control
- USB and Bluetooth communication (PM1703GNA-II BT).
- Long life alkaline or rechargeable battery
- Acoustic, visual and vibrating alarms
- Shockproof hermetic housing IP65

Applications

- Customs and border control
- HAZMAT and CBRNe teams
- Steel and recycling industry
- Waste management locations
- Counter-terrorism teams
- Homeland security
- First responders
- Special forces
- Public safety