



PERSONAL RADIATION DETECTOR

PM1703MA-II

PM1703MA-II BT



A new generation gamma PRD with improved search algorithm and NORM suppress function

The instrument is used for detection and localization of gamma radioactive sources and measurement of dose equivalent rate (DER).

The implemented suppress NORM algorithm allows to define the category of detected radiation material providing the light alarm which differentiates the danger level: **green** – Natural Occurring Materials (NORM), **red** – other radionuclides types (IND, NUC, MED).

In the search mode the instrument displays the current value of gamma radiation in counts per second.

The instrument measures the current dose rate in $\mu\text{Sv/h}$ or $\mu\text{rem/h}$ with indication on LCD in $\mu\text{R/h}$ in the measurement mode, and in numerical range from 0 to 9 in additional measurement mode "Mode0...9".

The audio, visual and vibration alarms alert the user about gamma radiation thresholds excess. The events history is stored in the instrument non-volatile memory. The stored data can be transferred from the detector to a PC via USB or Bluetooth (PM1703MA-II BT).

Device can exchange data with mobile devices in real time via Bluetooth 4.0. Free mobile app **POLISMART** is available at App Store and Google Play.

The instrument is user-friendly, highly sensitive, waterproof and shockproof. No special training to operate with the instrument is required.



ALARM

LOCATION

MEASUREMENT

Functions

- Search for radioactive and nuclear materials
- Audio, visual and vibration alarms
- Measurement of gamma radiation personal DER

Applications

- Emergency service
- Customs and border patrol
- Civil defense and police

Features

- Highly sensitive CsI(Tl) scintillation detector
- Compliance with ITRAP/IAEA, ANSI N42.32, ANSI N42.42 and IEC 62401
- PC communication via USB and Bluetooth (PM1703MA-II BT)
- Shockproof hermetic case IP65
- Lightweight less than 200 g
- Long lifetime from one AA battery
- User-friendly, two-buttons operation
- Low operation cost
- High operational availability





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SPECIFICATIONS

| | |
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| Detector | CsI(Tl) SiPM |
| Gamma sensitivity , at least for ¹³⁷ Cs for ²⁴¹ Am | 100 cps per μSv/h (1 cps per μrem/h) 500 cps per μSv/h (5 cps per μrem/h) |
| Energy range | 0.033 – 3.0 MeV |
| Dose Equivalent Rate (DER) range | 0.01 μSv/h – 300 μSv/h (1 μrem/h – 30 mrem/h) |
| Accuracy of DER measurement at ¹³⁷Cs in the collimated radiation in the range from 0.1 to 300 μSv/h, no more | ± 30 % |
| Gamma count rate indication range | 1.0 – 9999 cps |
| Response time | 0.25 s |
| Alarm type | audio, visual, vibration |
| Communication with PC | USB Bluetooth 4.0 (PM1703MA-II BT) |
| Data recording | 2000 data points |
| Power supply | one AA size alkaline or rechargeable battery |
| Battery lifetime | no less 1000 hours no less 500 hours (in Bluetooth mode) |
| Battery discharge warning | indication on LCD |
| Environmental protection | IP65 |
| Drop test on concrete floor | 0.7 m |
| Operating conditions • temperature • relative humidity | -40°C to 50°C (-40°F to 122°F) up to 98% at 35°C (95°F) |
| Dimensions, no more | 87x72x32 mm (3 27/64 X 2 53/64 X 1 17/64 in) |
| Weight, no more | 200 g (7.05 oz) |

The instrument complies with the requirements of ITRAP/IAEA, ANSI N42.32, ANSI N42.42 and IEC 62401.

The instrument design and specifications of can be changed without further notice.

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Quality management system
ISO 9001

- Customer focus
- Customer satisfaction
- Continuous improvement
- System/process effectiveness

ID 15 100 148764

www.tuev-thueringen.de

North America

Polimaster Inc.
44873 Falcon Place, Suite 128
Sterling, VA 20166, USA
Phone: +1 703 525 5075
Fax: +1 703 525 5079
info@polimaster.us
www.polimaster.us

Europe

Polimaster Europe UAB
Ezero g. 4, Didziasalio k.
Nemezio sen., Vilniaus r.
LT-13264 Republic of Lithuania
phone: +370 5 210 2323
fax: +370 5 210 2324
polimaster@polimaster.eu
www.polimaster.eu

Asia, Africa, Latin America, Australia and Oceania

Polimaster Ltd.
51, Skoriny St., Minsk
220141 Republic of Belarus
phone: +375 17 3963675, +375 17 2686819
fax: +375 17 264 2356
polimaster@polimaster.com
www.polimaster.com

Japan

Polimaster Japan Co., Ltd.
AUBE2 5-177 Kuratsuki
Kanazawa, Ishikawa Prefecture
920-8203 Japan
phone: +81 076 201 8623
fax: +81 076 201 8624
pacific@polimaster.jp
www.polimaster.jp