POLIMASTER®

Innovating Radiation Detection Technologies Since 1992

PERSONAL COMBINED RADIATION DETECTOR/DOSIMETER

PM1703MO-1 PM1703MO-1BT PM1703MO-2

The PM1703MO family instruments combine functionality of both Personal Radiation Detector and Dosimeter in the one package.

The highly sensitive CsI(Tl) based detector ensures prompt gamma radiation detection and source location and together with GM tube detector enables precise dose rate measurement.

Instruments may have additional registration modes of specific activity and surface activity of the ^{134}Cs, ^{137}Cs radionuclides in different liquids, food, bulk solids, soil, etc by the special order.

The stored operation history can be transferred from instrument's nonvolatile memory to a personal computer via infrared interface.

The PM1703MO-1 and PM1703MO-2 meet 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.

The small size of the unit can easily fit on the utility belt or on the vehicle dash board.

PM1703MO-1 (USA version)

The model features expanded dose rate measurement range and large LCD for better result readings.

Special version **PM1703MO-1BT** can exchange data with mobile devices via Bluetooth 4.0 wireless connection.
The PM1703MO-1 is equipped with the optional vehicle charger/mounting cradle for easy placing on the dash board.

PM1703MO-2 (IAEA version)

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

ALARM

LOCATION

MEASUREMENT

IRDA

Application

- First responders
- Customs and Border Patrol
- Police
- Emergency response teams
- Law enforcement
- HazMat teams
- Security guards

Features

- Easy to use, two-buttons operation
- Does not require any special knowledge or intensive training
- Two independent detectors: small-sized GM tube and highly sensitive CsI(Tl) scintillation detector
- Visual, audio and vibration alarms
- Special app for iOS (iPod, iPhone, iPad) and for Android mobile devices (free download is available from the App Store or Google Play for using with PM1703MO-1BT)
- Non-volatile memory
- Shockproof hermetic case
- Low EMI interference from portable radio and cell phones

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SPECIFICATIONS

	PM1703MO-1 PM1703MO-1BT	PM1703MO-2
Detector - gamma search - gamma measurement	**CsI(Tl)** **GM tube**	**CsI(Tl)** **GM tube**
Sensitivity - for ^{137}Cs, ±20 % - for ^{241}Am, no less	**85 (s^{-1})/(μSv/h) (0.85 (s^{-1})/(μR/h))** **100 (s^{-1})/(μSv/h) (1.0 (s^{-1})/(μR/h))**	**85 (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)**	**-**
Maximum permissible intrinsic relative error of DER measurement in measurement range	**±(20+ K_1/H+K_2)% in measurement range 0.1 μSv/h - 10 Sv/h (10 μR/h - 1000 R/h),** where H - dose rate value in mSv/h (mR/h) K_1 - coefficient 0.0025 mSv/h (0.25 mR/h) K_2 - coefficient 0.002 $(mSv/h)^{-1}$ (0.2 $(mR/h)^{-1}$)	**±30% in measurement range 0.1 μSv/h - 10 Sv/h (10 μR/h - 1000 R/h)**
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 500 hours** (Bluetooth connection PM1703MO-1BT)	**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, no more than	**200 g. (7 oz.)**	**250 g. (8.8 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

North and South 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 Str. 4, LT-13264 Didziasalis,
Vilnius region, Republic of Lithuania
Phone: +370 5 210 2323
Fax: +370 5 210 2322
polimaster@polimaster.lt
www.polimaster.eu

Asia, Africa, Australia and Oceania
Polimaster Ltd.
51, Skoriny St.,
Minsk, 220141, Republic of Belarus
Phone: +375 17 396 3675
+375 17 268 6819
Fax: +375 17 264 2356
polimaster@polimaster.com
www.polimaster.com

Japan
Polimaster Japan K.K.
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