



Innovating Radiation Detection Technologies Since 1992

SURVEY METER PM1405



The **PM1405 Survey Meter** measures **beta radiation flux density** from contaminated surfaces and **ambient dose equivalent rate of gamma and X-ray radiation**.

Gamma and X-ray radiation dose equivalent measurement and alpha radiation flux density measurement can be optionally provided under customer's request.

The instrument alerts the user with **audible alarms** when **preset radiation thresholds are exceeded** and **registers with audio signal every detected count in a search mode**.

Application-specific user software allows for the remote control of the instruments connected to a PC through **USB interface** from any PC integrated into the network. This function allows an administrator to monitor and control operation of each instrument.



Features

- Dose rate measurement of gamma and X-ray radiation
- Measurement of beta particles flux density
- Search for beta, gamma and X-ray radiation sources mode
- Large LCD display with backlight
- Audible alarm
- Data logging capability
- PC communication via USB
- Universal power supply: two AA batteries or from PC via USB
- Lightweight and small dimensions

Optional

- Dose measurement of gamma and X-ray radiation
- Measurement of alpha particles flux density
- Search for alpha radiation sources
- Extended beta flux density measurement range $6.0 - 10^4 \text{ min}^{-1} \cdot \text{cm}^{-2}$

Applications

- First responders
- Custom and border patrol officers
- Radiological and radionuclide isotope laboratories
- Bank personnel
- Wide range of experts whose activity involves the monitoring of radiation sources

ALARM

LOCATION

MEASUREMENT



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SPECIFICATIONS

Gamma detector	Geiger-Mueller counter
Dose equivalent rate (DER) indication range	0.01 $\mu\text{Sv/h}$ - 130 mSv/h
DER measurement range	0.1 $\mu\text{Sv/h}$ - 100 mSv/h
Accuracy of DER measurement	$\pm(20 + K/X)\%$, where X - DER value in $\mu\text{Sv/h}$, K = 1.0 μSv
X-ray and gamma radiation energy range	0.05 to 3.0 MeV
Energy dependence relative to 0.662 MeV (^{137}Cs) in the energy range 0.06 - 3.0 MeV, not more than	$\pm 30\%$
Beta flux density indication range	0.1 - $10^4 \text{ min}^{-1} \cdot \text{cm}^{-2}$
Beta flux density measurement range	6.0 - $10^3 \text{ min}^{-1} \cdot \text{cm}^{-2}$
Accuracy of beta flux density measurement relative to ($^{90}\text{Sr} + ^{90}\text{Y}$)	$(20 + A/\phi)\%$, where ϕ - beta flux density, $\text{min}^{-1} \cdot \text{cm}^{-2}$, A = 60 $\text{min}^{-1} \cdot \text{cm}^{-2}$
Beta radiation energy range	0.1 to 3.5 MeV
Beta sensitivity relative to ($^{90}\text{Sr} + ^{90}\text{Y}$), not less than	3.5 counts$\cdot\text{cm}^2$
Communication with computer	USB interface
Power requirements	two AA batteries or external from PC via USB
Batteries lifetime	6 months typical
Environmental: - temperature range - relative humidity	-10 to +50°C up to 95 % at 35°C
Weight, max	290 g
Dimensions	148x80x38 mm

OPTIONAL SPECIFICATIONS AVAILABLE UNDER REQUEST

Beta flux density measurement range	6.0 - $10^4 \text{ min}^{-1} \cdot \text{cm}^{-2}$
Dose equivalent (DE) indication range	0.01 μSv - 10.0 Sv
DE measurement range	1.0 μSv - 10.0 Sv
Accuracy of DE measurement	$\pm 20\%$
Alpha flux density indication range	0.1 - $10^4 \text{ min}^{-1} \cdot \text{cm}^{-2}$
Alpha flux density measurement range	90 - $10^4 \text{ min}^{-1} \cdot \text{cm}^{-2}$
Accuracy of alpha flux density measurement on ^{239}Pu	$\pm(20 + A/\phi)\%$, where ϕ - alpha flux density, $\text{min}^{-1} \cdot \text{cm}^{-2}$, A = 60 $\text{min}^{-1} \cdot \text{cm}^{-2}$

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

