

Compact Dosimeter PM1604

Geiger detector for measurement of gamma radiation dose

Main features:

- **continuous dose rate measurement**
- **digital dose and dose rate display**
- **audible alarm warning**
- **data storage**
- **PC communication**
- **digital clock functions**
- **simple operation**
- **compact and lightweight**
- **shockproof, hermetic housing**



The PM1604 is a very compact professional electronic dosimeter with shockproof hermetic case, continuously displaying dose rate from 1 $\mu\text{Sv/hr}$ to 5 Sv/hr (option for 10 Sv/hr max in PM1604B model) and accumulated dose on a backlit LCD ($H^*(10)$ ambient dose); includes audible alarm to warn the user in case dose or dose rate thresholds are exceeded, and flashing LCD signal at maximum reading. Accumulated dose and dose rate measurement histories can be stored in the device's nonvolatile memory and downloaded to a PC through a standard IrDA (infra-red) port for dose accounting and control. The instrument additionally features standard digital clock functions including calendar (day, date, month, year), alarm and stopwatch, and is water resistant to a depth of 1m. A clip is incorporated onto the rear of the device to enable the user to wear the dosimeter on a pocket, belt, etc. Two versions are available, PM1604A and PM1604B; the PM1604B version has a higher maximum dose rate measurement range (see specifications below).

Specifications:

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| Detector | Geiger-Muller tube |
| Dose rate measurement range - PM1604A - PM1604B | 1 $\mu\text{Sv/h}$ - 5.0 Sv/h 1 $\mu\text{Sv/h}$ - 10.0 Sv/h |
| Dose rate indication range - PM1604A - PM1604B | 0.01 $\mu\text{Sv/h}$ - 6.50 Sv/h 0.01 $\mu\text{Sv/h}$ - 13.0 Sv/h |
| Dose measurement range | 1.0 μSv - 9.99 Sv |
| Dose accumulation time | 1 - 9999 h |
| Dose rate accuracy (H = dose equivalent rate, $\mu\text{Sv/h}$) | $\pm (15 + 0.02/H + 0.003H) \%$ |
| Dose accuracy | $\pm 15\%$ |

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| Energy range | 0.048 - 3 MeV |
| Energy response over full energy range | ± 30% |
| Water resistant to depth | 1 m |
| Maximum permissible radiation intensity, survival after 5 mins at exposure to dose rate of: - PM1603A - PM1603B | 50 Sv/h 100 Sv/h |
| Calendar mode | day of the week, date, month, year |
| Functions | alarm clock, timer, stop watch |
| Adjustable timer periods range Stop watch periods range | 1 s - 23 h 59 min 59 s 0.1 s – 23 h 59 min 59 s |
| Daily variation of watch at normal conditions | ± 0.5 s/day |
| Power supply | One CR 2032 Lithium battery |
| Battery lifetime | 9 month |
| Battery discharge control | Pictogram on LCD |
| Operating conditions: -temperature range -relative humidity (at 35°C) -pressure | -20 to +70 °C up to 98% 84 - 106.7 kPa |
| Degree of protection provided by housing | IP67 |
| Dimensions: | 50 x 56 x 19 mm |
| Weight (with battery) | 85 g |