

## Wristwatch Dosimeter PM1603

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 PM1603 is a fully functional Geiger-Müller based electronic dosimeter built into a digital wristwatch with shockproof hermetic case, continuously displaying dose rate from 1  $\mu\text{Sv/hr}$  to 5 Sv/hr (option for 10 Sv/hr max) 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 non-volatile memory and downloaded to a PC through a standard IrDA (infra-red) port for dose accounting and control. The instrument features all standard digital watch functions including calendar (day, date, month, year), alarm and stopwatch, and is water resistant to a depth of 1m. Two versions are available, PM1603A and PM1603B; the PM1603B version has a higher maximum dose rate measurement range (see specifications below).

### Specifications:

Detector	Geiger-Muller tube
Dose rate measurement range - PM1603A - PM1603B	1 $\mu\text{Sv/h}$ - 5.0 Sv/h 1 $\mu\text{Sv/h}$ - 10.0 Sv/h
Dose rate indication range - PM1603A - PM1603B	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 $\mu\text{Sv}$ - 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	$\pm 15\%$

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