

## Pager/Dosimeter PM1621

Geiger detector for measurement of gamma and X-ray radiation

Main features:

- **vibration and audible alarms**
- **data storage**
- **PC communication**
- **simple operation**
- **compact and lightweight**
- **shockproof, watertight housing**
- **belt clip**



High sensitivity pager/dosimeters measuring dose and dose rate (Hp(10) equivalent dose) from photon radiation from high-energy gamma rays down to low-energy X-rays (10 keV). The PM1621 is a low cost device designed specifically for non-technical personnel, suitable for a range of applications including personal dose measurement and control, environmental surveys and detection of radioactive sources. The detector is a Geiger-Müller tube, with a dose rate measurement range of 0.01  $\mu\text{Sv/hr}$  - 0.2 Sv/hr (2 Sv/hr maximum option in the PM1621A) displayed on a backlit LCD. The instrument incorporates both dose rate and accumulated dose alarms and flashes a warning in the event of reaching maximum instrument dose. Data including dose histories and alarm events are stored in a non-volatile memory and can be downloaded to a PC via an IrDA-channel.

### Specifications:

Detector	Geiger-Müller tube
Dose equivalent rate measurement range (DER) Hp(10): - PM1621 - PM1621A	0,1 $\mu\text{Sv/h}$ - 0,1 Sv/h 0,1 $\mu\text{Sv/h}$ - 1 Sv/h
Dose equivalent rate indication range (DER) Hp(10): - PM1621 - PM1621A	0,01 $\mu\text{Sv/h}$ - 0,2 Sv/h 0,01 $\mu\text{Sv/h}$ - 2,0 Sv/h
Dose equivalent rate threshold range	Within all DER measurement range
Dose equivalent measurement range Hp (10) Dose equivalent indication range Hp (10)	1 $\mu\text{Sv}$ - 9.99 Sv 0.01 $\mu\text{Sv}$ - 9.99 Sv
Maximum permissible intrinsic relative error of DER measurement (H - dose equivalent rate in $\mu\text{Sv/h}$ )	$\pm(15+0.0015/H+0.01H)\%$
Maximum permissible intrinsic relative error of DE measurement	$\pm 15\%$
Energy range	10.0 keV - 20.0 MeV

Energy response relative to 0.662 MeV (Cs-137) within the full energy range	±30%
Time of response at discontinuous variation of DER (according to IEC 61526), no more than	5s - at increase 10s - at decrease
Coefficient of variation	<15%
Survival after momentary influence of maximum permissible gamma radiation: - PM1621 - PM1621A	1 Sv/h 10 Sv/h
Additional functions	PC communication (IrDA)
Drop test on concrete floor	0.7 m
Power supply	One battery PANASONIC POWER LINE LR6 AA
Battery lifetime (at natural conditions)	12 months
Battery discharge indication (partial and critical)	LCD indication
Operating conditions: - temperature - LCD indication - relative humidity - pressure	from - 40 up to +60 °C from - 20 up to +60 °C up to 98% at 35°C from 84 up to 106,7 kPa
Degree of protection provided by housing	IP67
Dimensions	87x72x35 mm
Weight (with battery), no more than	150 g