

# RADIATION METER

PCE-RAM 100



- » **α, β, γ radiation**
- » **accumulated radiation dose**
- » **pulse counting in cps and cpm**
- » **data logger with 32 GB memory**
- » **adjustable alarm**
- » **graphical measurement history**
- » **audible radiation pulse**

The radiation meter offers comprehensive measurement functions for α, β and γ radiation and is the test instrument of choice for professional radiation measurements. With the ability to precisely record the accumulated radiation dose and count the radiation in both cps (counts per second) and cpm (counts per minute), the radiation meter provides accurate and reliable measurement data at all times. The integrated data logger with 32 GB memory saves the measured values and allows them to be analysed in detail. The measurement history is shown graphically on the TFT colour display. Individual alarm limits can also be set in the radiation meter: a warning message appears if a certain radiation value or a defined radiation dose is exceeded.

Another feature of the radiation meter is the acoustic radiation pulse output. Each detected radiation pulse is made audible by a sound, which provides immediate feedback on the radiation activity in the environment. This function can also be deactivated. The integrated data logger can record up to 10 million measuring points at the touch of a key or after entering a start time.

This radiation meter combines precision, ease of use and innovative technology - an indispensable tool for the safe handling of radioactive materials.

## Specification

| Radiation       |                           |
|-----------------|---------------------------|
| Measuring range | 0 ... 1500 µSv/h          |
| Resolution      | 0,001 µSv/h               |
| Accuracy        | <10 % of Rd (<1000 µSv/h) |
| Radiation       |                           |
| Measuring range | 0 ... 150 mrem/h          |
| Resolution      | 0,001 mrem/h              |
| Accuracy        | <10 % of Rd (<100 mrem/h) |
| Radiation       |                           |
| Measuring range | 0 ... 9,9 Sv              |
| Resolution      | 0,1 Sv                    |
| Accuracy        | <10 % of Rd (<100 µSv)    |
| Radiation       |                           |
| Measuring range | 0 ... 167000 cps          |
| Resolution      | 1 cps                     |
| Accuracy        | <10 % of Rd               |
| Radiation       |                           |
| Measuring range | 0 ... 9999999 cpm         |
| Resolution      | 1 cpm                     |
| Accuracy        | <10 % of Rd               |

| General technical data                   |                                                                                                                                                                                                                                              |
|------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measuring functions                      | MIN, MAX, Average value                                                                                                                                                                                                                      |
| Display type                             | TFT colour display                                                                                                                                                                                                                           |
| Display size                             | 2,8 Inch                                                                                                                                                                                                                                     |
| Storage medium                           | Internal memory                                                                                                                                                                                                                              |
| Storage capacity                         | 32 GB                                                                                                                                                                                                                                        |
| Memory capacity (additional information) | 10 million measuring points                                                                                                                                                                                                                  |
| Storage interval from                    | 1 s                                                                                                                                                                                                                                          |
| Storage interval to                      | 12 h                                                                                                                                                                                                                                         |
| Interface                                | USB-C                                                                                                                                                                                                                                        |
| Sensor                                   | Geiger-Müller counter tube (metallic)                                                                                                                                                                                                        |
| Sensor additional information            | Stainless steel housing with hallogen filling<br>- Measuring length = 38.1 mm<br>- Measuring diameter = 9.1 mm<br>- Window = 1.5 ... 2.5 mg/m²                                                                                               |
| Operating time                           | 12 h                                                                                                                                                                                                                                         |
| Operating time additional information    | depending on display brightness and data logger settings                                                                                                                                                                                     |
| Automatic power-off from...to            | 1 ... 15 min.                                                                                                                                                                                                                                |
| Alarm                                    | optical                                                                                                                                                                                                                                      |
| Alarm modes                              | Radiation, radiation dose, number of pulses                                                                                                                                                                                                  |
| Sensitivity                              | α-rays from 4 MeV<br>β-rays from 0.2 MeV<br>γ-rays from 30 keV                                                                                                                                                                               |
| Selector diaphragm                       | Alpha + Beta + Gamma (without filter)<br>Beta + gamma (aluminium foil (approx. 0.1 mm) shielding alpha rays)<br>Gamma (aluminium shield (approx. 3 mm) shields alpha rays, beta radiation from approx. 2 MeV, attenuates gamma approx. <7 %) |
| Menu language                            | German, English (GB), English, French, Spanish, Italian, Danish, Portuguese, Turkish, Polish, Russian, Chinese, Dutch, Japanese                                                                                                              |
| Protection class (device)                | IP52                                                                                                                                                                                                                                         |
| Power supply                             | 5 V DC, 500 mA (USB)                                                                                                                                                                                                                         |
| (Rechargeable) battery                   | 1 x 3,7 V LP785060 , Lithium polymer battery                                                                                                                                                                                                 |
| Capacity                                 | 2500 mAh                                                                                                                                                                                                                                     |
| Performance                              | 9,25 Wh                                                                                                                                                                                                                                      |
| Operating conditions                     | -20 ... 65 °C , 10 ... 95 % RH                                                                                                                                                                                                               |
| Storage conditions                       | -20 ... 65 °C , 10 ... 95 % RH                                                                                                                                                                                                               |
| Dimensions ( L x W x H )                 | 208 x 85 x 37 mm                                                                                                                                                                                                                             |
| Weight                                   | 280 g                                                                                                                                                                                                                                        |