BALTIC SCIENTIFIC INSTRUMENTS

Bringing Solutions

Gamma Dose Rate Monitor GDRM

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DESCRIPTION

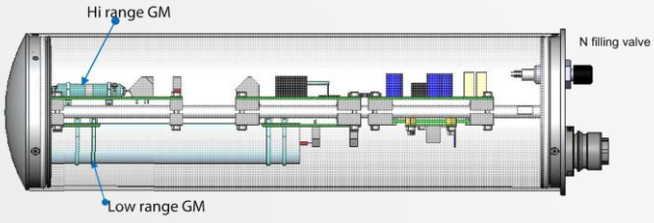
The Gamma Dose Rate Monitor GDRM is designed to measure dose rates that may result from accidental releases at nuclear power plants (NPPs). It is suitable for both indoor and outdoor monitoring and can also be used as an auxiliary component of a Radiation Monitoring Station, for example, as part of the AirTrack-Mobile system.
The equivalent dose rate is measured using a proprietary, dead-time–independent method. Dose rate values from two separate channels (Low Range and High Range) are combined to calculate an overall dose rate, taking into account the statistical precision of each measurement. The individual channel dose rates, the calculated overall dose rate, and their associated statistical uncertainties are made available for further processing via dedicated data protocols.

FEATURES

- Two energy compensated Geiger-Mueller counter tubes:
  - Wide dose rate measurement range
  - Dead-time independent operations
- Rugged outdoor housing with IP67 protection, UV and heat-resistant (up to +90°C)
- Two threshold (warning and alarm) for dose rate and dose
- Supports connection to external alarm device
- Remote data transfer and control
- Automatic self-diagnostics

PURPOSE

- Continuous automatic measurement of local dose rate and local dose in gamma radiation fields



Parameter	Value
Radiation Type	X and Gamma - from 35 keV to 2 MeV
Measured quantities	Ambient dose equivalent rate H*(10), Ambient dose equivalent H*(10). Not for pulsed radiation fields
Measuring range, dose rate	0.04 mkSv/h ÷ 2.5 Sv/h (up to 100 Sv/h)
Relative error (reference Cs-137)	< 20%
Integration time	10 s … 6.55 · 105 s (configurable)
Overexposure	50 Sv/h over 5 min without decrease in counting rate
Maximum dose	10 Sv
Response time	≤ 8 s (1 µSv/h … 10 mSv/h, peak finder activated) ≤ 2 s (10 mSv/h … 5 Sv/h, peak finder activated)
Data interfaces	RS 485, RS 232, option USB
Operating temperature	−40 °C to +70 °C
Power supply	10.6 ÷ 30 VDC, 1.5 W
Protection	IP67 (including connector and filling valve)
Enclosure	Ø 100 x 400 mm
Weight	< 1.7 kg

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Gamma-rays