MIRION TECHNOLOGIES

RAMSYS™

GIM 202K™

Wide Range Gamma Area Monitor

Continuous monitoring of gamma dose rate under mild or post-accident environmental conditions.

FEATURES

- Wide measurement range
- Compact and reliable
- Available with or without display and local signalling
- Available under 10 CFR 50 App. B, ASME NQA-1 and IEC 61226 programs for safety related applications

DESCRIPTION

The GIM 202K monitor forms part of the RAMSYS product line. It has been developed to monitor kerma dose rate (in Gy/h or rad/h) or ambient equivalent dose rate H(*10) (in Sv/h or rem/h) in nuclear facilities under mild operating or post-accident conditions.

The very simple concept of its ionization chamber allows this monitor to have a great reliability of prime importance in the safety related applications.

GIM 202K™ WIDE RANGE GAMMA AREA MONITOR

PHYSICAL CHARACTERISTICS

- Radiation detected: gamma
- Detector: stainless steel ionization chamber (KG 220 SEF-Gy for Gy/h or KG 220 SEF-Sv for Sv/h)
- Energy range: 80 keV to 1.5 MeV according to IEC60532
- Energy range capability: up to 7 MeV (± 60%)
- Typical measurement range: 10^{-7} to 10^{+2} Gy/h or Sv/h (10^{-5} to 10^{+4} rad/h or rem/h)

ENVIRONMENTAL CHARACTERISTICS

- Normal temperature:
  - Processing unit: +5 °C to +40 °C (+41 °F to +104 °F)
  - Detector: -30 °C to +100 °C (-22 °F to +212 °F)
- Temperature limit:
  - Processing unit: -5 °C to +55 °C (+23 °F to +131 °F)
  - Detector: +120 °C (+248 °F) during 1 hour
- MTBF: > 50 000 hours
- TID:
  - Processing unit: 100 Gy (10^{+4} rad)
  - Detector: 2.5 10^{+5} Gy (2.5 10^{+7} rad)
- Protection index:
  - Processing unit: IP65 and IK07
  - Detector: IP65, IP67 and IK07

MECHANICAL CHARACTERISTICS

- Dimensions:
  - Processing unit: 390 mm x 196 mm x 187 mm (15.3 in x 7.7 in x 7.3 in)
  - Detector: 240 mm (9.5 in) x Ø 280 mm (11 in)
- Weight:
  - Processing unit: 8.5 kg (18.7 lb)
  - Detector: 23 kg (51 lb)
- Color: gray RAL 7030 (decontaminable paint)

ELECTRICAL CHARACTERISTICS

- Power supply: 230 Vac – 50 Hz or 120 Vac – 60 Hz
- Data link outputs: one RS232 (LPDU only) and two isolated RS485
- Alarm relays: three SPDT relays
- I/O: two isolated analog outputs and one isolated analog input (0/4-20 mA)

SIGNALING (APPLICABLE TO LPDU ONLY)

- Alphanumeric display: measurement, status…
- Sound alarm: buzzer 90 dBA at 1 meter
- Visual alarm: three lights (red, yellow, green)

REFERENCE STANDARDS

- Nuclear: IEC 60532
- Environmental: IEC/IEEE 60780-323
- Seismic: IEEE 344 and IEC 60980
- EMC: 2014/30/EU and 2014/35/EU, EPRI 102323, RG 1.180, IEC 61000-6-2 and IEC 61000-6-4

VERSIONS

- 230 Vac or 120 Vac
- Local processing and display unit (LPDU) or local processing unit (LPU)
- KG 220 SEF-Gy or KG 220 SEF-Sv
- With or without RS485 junction box
- Detector cable length: from 10 m (32.8 ft) to 70 m (229.6 ft)
- Junction box cable length: 2 m (6.56 ft), 5 m (16.4 ft) or 10 m (32.8 ft)

ACCESSORIES

- Calibration tools
- Software: MASS2™, RAMVISION™, SIMS2™ applications...
- Ethernet (LPDU version only)
- USB converters
- Seismic qualified wall mounting bracket

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