CAMSYS

G64™

Area Gamma Monitor

The G64 area gamma monitor forms part of the CAMSYS product line. It is a compact, mains-powered, microprocessor-based radiation monitor, designed specifically for area and process monitoring in nuclear facilities. Its main functions are to display the gamma dose rate in the area and to warn local personnel in the event of an alarm situation. It can also function as an interlock monitor.

FEATURES

- Pseudo-logarithmic ratemeter averaging for good statistics at low level and fast response at high levels
- Removable detector unit for remote use
- Three user-set alarm levels across the full range
- Local signalling by audio and visual alarms
- Remote signalling by relays
- Displays on high visibility LCD, status, fault and alarm messages
- Interlock monitor functionality
- Front panel RS-232 port for configuration by local PC or optional iConfig PDA

DESCRIPTION

The G64 is intended for installed use but can also be used on a bench stand or wheeled trolley to provide temporary monitoring or to supplement permanently installed monitors during maintenance activities. The only requirements of the basic system are a G64 monitor, suitably mounted, and a mains power supply in the range 100-240 VAC. The standard G64 is supplied with a compact solid state detector for use in low to medium dose rate applications. The detector is directly mounted on top of the display/alarm unit. For remote monitoring applications, the detector assembly can be easily dismounted from the display/alarm unit and installed at distances of up to 100 m (328 ft) using a Remote Detector Kit. The user must simply ensure that connections between the detector and the G64 display/alarm unit are corrects, and that the detector is mounted using the wall mounting bracket supplied.

The G64 is also available in three other versions for additional applications:

- G64IC™: for high dose rate and high integrated dose applications
- G64SC™: intended for use with existing scintillation detectors
- G64GM™: intended for use with existing GM probes

G64 | **AREA GAMMA MONITOR**

PHYSICAL CARACTERISTICS

- Radiation detected: gamma
- Detector: solid state detector, ion chamber, scintillation or GM options
- Response time: < 6 seconds to 90% of final step change value
- Dynamic range: 0.1 µSv/h to 100 mSv/h (10 µR/hr to 10 R/hr)
- Energy response: 70 keV to 7 MeV ± 30% normalized to ^{137}Cs

ENVIRONMENTAL CHARACTERISTICS

- Operating temperature: 0°C to +40°C (+32°F to +104°F)
- Humidity range: up to 85%, non-condensing
- Protection index:
  - Solid state detector: IP65 when locally mounted, IP54 if remote
  - Display and alarm unit: IP54 (Cat 2)

MECHANICAL CHARACTERISTICS

- Dimensions:
  - Solid state detector: 85 mm x 75 mm x 60 mm (3.3 in x 2.9 in x 2.4 in)
  - Display and alarm unit: 445 mm x 175 mm x 100 mm (17.5 in x 6.9 in x 3.9 in)
- Weight:
  - Solid state detector: 0.5 kg (1.1 lb)
  - Display and alarm unit: 3.5 kg (7.7 lb)

ELECTRICAL CHARACTERISTICS

- Power supply: 100-240 VAC 35 VA Internal back-up battery (rechargeable) giving > 30 min backup
- Outputs:
  - Three fail-safe relays for faults and alarms, each with two sets of changeover contacts
  - RS232/RS485 interfaces & RS422 format pulse output.
  - Current loop (4-20 mA)

SIGNALING

- Red beacon: LED, flashing at 1 Hz for activity alarm
- Green beacon: LED, continuous illumination for normal operation; flashing at 1 Hz for system fault
- Sounder: separate tones for activity and fault alarms; various tones selected by the user

REFERENCE STANDARDS

- Radiological: IEC60532 installed dose rate meters, warning assemblies and monitors for X- and gamma radiations of energy between 50 keV and 7 MeV (2010)
- IEC61508 (SIL1)

VERSIONS

- G64: G64 area monitor with solid state detector (EU, UK and US versions)
- G64IC: high dose rate area monitor version with 10 m, 25 m or 50 m (33 ft, 82 ft or 164 ft) screened twisted pair cable from amplifier to G64 controller
- G64SC: cooling water monitor (excludes detector) with 10 m, 25 m or 50 m (33 ft, 82 ft or 164 ft) screened twisted pair cable from amplifier to G64 controller
- G64GM: Geiger Müller system (excluding detector), supplied with 10 m, 25 m or 100 m (33 ft, 82 ft or 330 ft) screened twisted pair cable from amplifier to G64 controller

ACCESSORIES

- Bench stand or trolley mountings
- Remote detector kits (10 m, 25 m or 100 m - 33 ft, 82 ft or 330 ft)
- Test pulse generator
- iConfig configuration software

Featuring:

CANBERRA

MIRION TECHNOLOGIES