



# G64

## Area Gamma Monitor



Nuclear  
Power



Healthcare



Homeland  
Security  
& Defense



Labs and  
Education



Industrial and  
Manufacturing

## OVERVIEW

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.

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 standard G64 is supplied with a compact solid state detector for use in low to medium dose rate applications, but it 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

## KEY 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

## RELATED MONITORS

- iCAM: alpha beta air monitor

## PHYSICAL CHARACTERISTICS

- 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  $\mu$ Sv/h to 100 mSv/h (10  $\mu$ R/hr to 10 R/hr)
- Energy response: 70 keV to 7 MeV  $\pm$  30% normalized to  $^{137}\text{Cs}$ .

## 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
- Horizon environmental surveillance and monitoring software

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## CANBERRA

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