

VERY LOW RANGE ENVIRONMENTAL GAMMA COUNTER

Model Series ~ LoGAM
LoGAM-E/W ~ LoGAM-D-E/W

FEATURES:

- NO HIGH-PRESSURE ION CHAMBER
- OKAY FOR ANY SHIPMENT
- REPLACES LARGE "HAZARDOUS" PIC (PRESSURIZED ION CHAMBER) DETECTORS
- RUGGED, COMPACT, LIGHTWEIGHT TRIPOD MOUNTED
- REAL TIME, IN-LINE, CONTINUOUS
- EASY CALIBRATION
- DATA ARCHIVE & RETRIEVAL
- FULL SCADA COMPATIBILITY RS232
- IP64



APPLICATION:

- Drift Free Measurement of environmental gamma levels
- **LoGam Series** monitors detect very small changes in ambient radiation levels to same or better than traditional PIC chambers
- Now you can legally ship your equipment for use in other locations or for calibration and maintenance.

PROBLEM:

CURRENT REGULATIONS and Environmental concerns demand ever lower levels of Gamma Flux measurement. Ion chambers have a wide range for higher level measurements. In the past they have been adapted to see background and below only by using large 10-14" diameters with high pressures of 10 to 20 atmospheres which in turn makes them hazardous to ship.

PIC (pressurized ion chambers) instruments have filled this need for very low-level Gamma Flux measurement. Their size and the high pressure of the PIC instruments was inconvenient yet tolerated for lack of something better. The current near prohibition of shipping the PIC (pressurized ion chambers) have precluded overlooking what was, in the past, a mere inconvenience.

Technical Associates has solved the requirement for obtaining very low environmental Gamma Flux detection with the non-hazardous LoGAM Series.

SOLUTION:

The **LoGAM Series Continuous Real Time** monitors solve this problem.

- Data is analyzed and displayed in units of micro R/hr or micro Sv/h.
- Data is continuously updated. It also accumulates to give better statistics. every minute, every hour and every day.
- Longer update times correspond with greater precision and increased sensitivity.
- Measurements of radiation concentration logged are 24 hr/day, 7 day/week.
- Shipping and portability are no longer a problem as it is with the more hazardous and unwieldy PIC



TECHNICAL ASSOCIATES

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instruments.

ENVIRONMENTAL GAMMA MONITORS

DESCRIPTION:

LoGAM Series is an industrial radiation measurement system. It includes detector and electronics for measuring of Gamma field strength. The pre-amps are plug in modules allowing change or addition of functions at a later date, and allow rapid repair by module replacement in the field. The modular system is covered by TA's unique exchange warranty system in addition to the full one year warranty.

Principal Detectors in this system Gamma flux is measured using a cluster of energy compensated long life T-1150 GM tubes. The energy range is 60 KeV to 3 MeV.

SENSITIVITY:

The **LoGAM Series** Gamma monitors will detect changes of less 10% of ambient terrestrial and cosmic radiation, over a wide temperature range.

The standard sensitivity version measures as low as 1 μ R/h (.01 μ Sv/h) with good stability.

SIZE:

The tripod mounted sensor is compact, measuring 7" [178mm] diameter x 14" [356mm] long, excluding power supply module. The total package weighs only 18 lbs [8.2 kg].

ENVIRONMENTAL:

The sensor package is waterproof and operates from -17°C to +50°C without drift in zero and change in span sensitivity.

REMOTE CAPABILITY:

The standard **LoGAM Series** monitors are AC operated but can be installed in remote locations. Data can be stored at the site of the **LoGAM Series** monitor on compact flash memory cards or transmitted in real-time via optional RF link.

DATA: Analysis-Display & Archive

- Historical data is easily displayed on-screen (and/or printed out on the optional graphics printer) in tabular or graphical format, showing quantitative information as well as trends.
- Data is recorded frequently so time-resolution is excellent.
- Ethernet and USB ports (with security) make it easy to archive and further analyze data.
- Continuous, Reliable Data: – **YES**, False Alarms: – **NO**
- Each alarm activates fail-safe relays. Relay contacts are available to user. (on AC power models)
- User friendly specialized software.
- Data is interfaced with a USB or Ethernet port.
- Full SCADA compatibility and CADA.



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OPTIONS: MODBUS or other protocols.

| MODEL | DESCRIPTION | POWER |
|-----------|---|--------------------|
| LoGAM-E | Environmental Range (4-Decades) 1-10,000 uR/Hr (.01 – 100 uSv/h) | 110 VAC 220 VAC |
| LoGAM-W | Wide Range (7 – Decades) 10 uR/Hr – 100 R/Hr (0.1 uSv/h – 1Sv/h) | 110 VAC 220 VAC |
| LoGAM-D-E | Detection Head from LoGAM-E includes; Detector Analyzer Logic RF Transmitter | 12 V DC |
| LoGAM-D-W | Detection Head from LoGAM-W includes; Detector Analyzer Logic RF Transmitter | 12 V DC |

SPECIFICATIONS:

Ambient Temperature: 0° F - 120 ° F (wider temperatures ranges optional)
Optional Cooling System: Cooler model **Cool-33** for detector is used in case of higher ambient temperatures.

MEASUREMENT RANGE

LoGam-W: 10uR/h to 100R/hr (0.1 uSv/h to 1 Sv/h)
LoGam-E: 1 -10,000 µR/h (0.01–100µSv/h wider
OPTIONAL: and/or higher ranges
Resolution And Accuracy (Span): 10 µR/h [0.1 µSv/h]
Stability And Drift: Better than ±10 µR/h (±0.1 µSv/h)
Display: Graphic LCD with backlight

DATA ACQUISITION:

Communication Link: RS232 Serial Transmission / USB Port
Software: Complete user-friendly data analysis, display and storage

POWER:

Power For Remote Use: Li-Ion rechargeable battery pack, operates for 8 hrs with display off. (full charge). Recharges in 4 hours at 7.5V, 1A
Power Supply Module: **Input:** 100-240VAC, 50-60Hz. **Output:** 7.5VDC, 3A max



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OPTIONAL:

Internal NiMH battery, 6 cells, 9.5Ah.
HPIC will operate for 24 hrs at full charge recharges in 8 hrs.

ENVIRONMENTAL:

Temperature, Humidity:

0° C to +50° C, 99% RH

Enclosure Rating:

IP64, sealed against dust and water spray

DIMENSIONS AND WEIGHTS:

Sensor Housing:

5" [127mm] Diameter x 12.6" [320mm] Long

Sensor Front Panel:

6.6" [168mm] Diameter x 0.5" [12mm] Thick

Mounting Plate:

25" [635mm] L x 7" [178mm] W x 0.5" [12mm] Thick

Weight:

12.5 lbs [5.7 kg]

Adjustable Height:

38" to 63" [96.6cm to 160cm] 9 lbs [4.1 kg]

Power Supply Module:

4.8" [122mm] H x 6.3" [160mm] W x 9.4" [239mm] L 5.5 lbs. [2.5 g]

OPTIONS: Choose one of the following,

Radio Network:

1500ft [450M] up to 20miles [32.2km]

Local Data Storage:

Data recording media; as appropriate

Shielding And Collimators:

Accomplishes background reduction



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