



FEATURES

- ^{16}N monitoring when reactor power exceeds 25%
- Gross gamma energy monitoring when reactor power < 25%
- Spectrum stabilization against temperature and aging drifts
- 16 configurable windows over the measurement range
- 1024 channels analysis
- Available with or without display and local signaling
- Seismically qualified
- More than 500 SGLM channels in operation worldwide
- Defined for mild environment conditions

SGLM 201K Steam Generator Leak Rate Monitor

The SGLM 201K forms part of the RAMSYS product line. It has been developed for steam generator leak rate monitoring. The ^{16}N count rate is measured by a scintillation detector (NaI).

The detector is installed in close proximity to the main steam line and it is thermally insulated to protect it from sharp temperature transients. The conversion from ^{16}N count rate to volumetric activity is done utilizing coefficient established through Monte Carlo analysis.

The conversion from ^{16}N volumetric activity to leak rate (in GPD) is calculated using four correlations. The correlations are derived by thermohydraulic transport analysis based upon data provided by the user.

APPLICATIONS

- Barrier leak control
- Secondary circuit monitoring

RELATED MONITORS

- SGLM 202K: version with lead shield for WWER nuclear power plants

radiation monitoring
systems

A Mirion Technologies Division

Featuring:



PHYSICAL CHARACTERISTICS

- Radiation detected: gamma
- Detector: 3"x2" NaI(Tl) scintillator + PMT
- Energy range:
 - ¹⁶N window: 4.5 MeV to 7 MeV
 - Gamma window: 0.2 MeV to 2.2 MeV
- Measurement range:
- Leak rate: 0.1 to 5 000 l/h (6 to 31 700 GPD)
- Gamma: 0.5 to 100 000 cps
- Spectrum analysis: 1024 channels

ENVIRONMENTAL CHARACTERISTICS

- Long term temperature: +10°C to +40°C (+50°F to +104°F)
- Periodic temperature: -5°C to +55°C (+23°F to +131°F)
- MTBF: > 20 000 hours
- TID: 100 Gy (10⁴ rad)
- Protection index: IP65 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: 305 mm x 270 mm x 452 mm (12 in x 10.6 in x 17.8 in)
- Weight:
 - Processing unit: 8 kg (17.6 lb)
 - Detector: 17 kg (37.5 lb)
- Color: gray RAL 7030 (decontaminable paint)

ELECTRICAL CHARACTERISTICS

- Power supply: 230 Vac – 50 Hz or 120 Vac – 60 Hz
- Data link outputs: 1 RS232 and 2 isolated RS485
- Alarm relays: 3 SPDT relays
- I/O: 2 isolated analog outputs and 1 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: 3 lights (red, yellow, green)

REFERENCE STANDARDS

- Seismic: IEEE344 and IEC60980
- EMC: 2006/95/CE, 2004/108/CE, EPRI 102323, MIL STD 461 E, IEC61000-6-2 and IEC61000-6-4

VERSIONS

- 230 Vac or 120 Vac
- LPDU or LPU
- With or without RS485 junction box
- Detector cable length: from 20 m (65.6 ft) to 100 m (328 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
- USB converters
- Seismic qualified wall mounting bracket for LP(D)U
- Seismic qualified detector support



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