AMP-100 Area Monitoring Probe

50 uSv/h to 10 Sv/h (5 mR/h to 1,000 R/h)

High-range waterproof GM probe instrument

The AMP-100, or Area Monitor Probe, is a GM Tube-based rate meter. It has been designed specifically to be used in high dose rate fields .
The AMP-100's detector features linear response from 50 µSv/h to 10 Sv/h (5 mR/h to 1,000 R/h).
More importantly, since the probe's sensitive electronics are located far from the high field (25 to 350 feet away), they are not subject to destructive gamma exposure. Thus the probe head may be located near a filter cube, rad waste stream, resin tank, or even inside the fuel pool (to take advantage of waterproof characteristics) having a longer life expectancy.
The AMP-100 may be used in one of 2 ways: by locally reading the smoothed digital display via the hand-held meter, or by connecting the meter to a Remote Monitoring System (e.g. wired DDC 16 or wireless WRMPlus) and TeleMap

Applications

Real-time monitor applications. For example, the probe head may be placed directly into a filter cube or against a resin tank for the purpose of providing survey results.
Replacement of traditionally "difficult to calibrate" underwater instruments
Provides real-time, remote monitoring in geometries developed for extendible "pole" rate meters (TelePole, Teletector,etc.)
Local readout of hand-held meter allows for use as a portable survey instrument

Features

High range response from 50 µSv/h to 10 Sv/h (5 mR/h to 1,000 R/h).
Ruggedized construction, waterproof detector housing and cable
Quick-connect connectors allow customization of cable length and facilitate easy de-contamination
Built-in RS-232 connection for use with Area Monitor or WRM transmitter
"Smoothed" digital display offers accurate, stable readings
User-selectable internal alarm threshold

Technical Data

Technical Description

The Area Monitor Probe (AMP-100) is a high-range GM tube-based detector designed to be continuously used in areas where high exposure levels exists. The detector consists of three parts: the Meter box, which includes the detector's electronics, the display and operating pushbuttons; The Probe head, which contains the GM Tube; and the connecting cable, which is fitted with quick-connect-type connectors at each end. The AMP-100's connections and probe head feature watertight sealing to allow for use in underwater applications up to 20 meters deep.

Electrical characteristics

Power supply - 9 Volts, supplied by a 9 Volt alkaline battery, located in the meter case.
Optional 9 Volt AC adapter available
Battery life - approximately 50 hours of continuous use
Environmental conditions - temperature: 15 to 120°F (-10 to 50°C)
Relative humidity (meter): 10 to 95% RH (non-condensing)

Mechanical characteristics

Meter dimensions: 2.7" (6.9cm) wide, 4.7"(11.9cm) high, 1.25" (3.2cm) deep
Probe head length: 4.33" (110mm), diameter: 0.96" (24.5mm)
Standard cable length: 25 feet (7.62m)
Maximum cable length: 350 feet (107m)

Radiological characteristics

Detector: GM-tube (ZP-1301, or equivalent)
Detection range: 50 µSv/h to 10 Sv/h (5 mR/h to 1,000 R/h)
* Accuracy: ± 10%
* Energy range: 70 keV to 2 MeV
* Sensitivity: 0.3 cps per mR/hr

* Related to ^{137}Cs

ROTEM Model # BAK-0171 (uSv/h)
BAK-0161 (mRh)

ROTEM INDUSTRIES LTD.
Health Physics Instrumentation Dept.
P.O.Box 9046, Beer Sheva 84190, ISRAEL
Tel. +972-8-6571312, Fax. +972-8-6568005
E-mail. Sales@rotemi.co.il Web: www.rotemi.co.il

07/07/2014