

# AMP-100 Area Monitoring Probe

50  $\mu\text{Sv/h}$  to 10  $\text{Sv/h}$  ( 5  $\text{mR/h}$  to 1,000  $\text{R/h}$ )

**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  $\mu\text{Sv/h}$  to 10  $\text{Sv/h}$  (5  $\text{mR/h}$  to 1,000  $\text{R/h}$ ).

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 WRMPPlus) and TeleMap



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## 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  $\mu\text{Sv/h}$  to 10  $\text{Sv/h}$  (5  $\text{mR/h}$  to 1,000  $\text{R/h}$ ).

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

**ROTEM**  
ROTEM ELECTRONICS LTD. 111 SHAPING ROAD, SHENZHEN, CHINA

## 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 exist. 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  $\mu$ Sv/h to 10 Sv/h (5 mR/h to 1,000 R/h)

\* Accuracy:  $\pm$  10%

\* Energy range: 70 keV to 2 MeV

\* Sensitivity: 0.3 cps per mR/hr

\* Related to  $^{137}\text{Cs}$

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



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07/07/2014

