

High-range waterproof GM probe instrument

AMP-100 Area Monitoring Probe

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

Radiation Detection Division

Health Physics

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



Features

High range response from 50 μ Sv/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

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

Technical Data

Display LCD readout showing:

- Four digits for accurate and

- Detector failure

- Low battery

- Overflow

- Threshold

Audio Internally mounted piezo-electric element used for "chirp" and alarm functions

Measuring range 0.05 mSv/h to 10 Sv/h (0.005 R/h to 1000 R/h)

Display range 10 nSv/h to 10 Sv/h (0.001 R/h to 1000 R/h)

Controls - ON/OFF push-button

- RESET push-button

- SPEAKER push-button

Power Source One 9-volt cell battery or external 9V power suppl

Providing 50 hours minimum continuous operation

and automatic battery check under full load

Detector Energy compensated GM tube (ZP1301 or equivalent)

Sensitivity (137Cs) 300 cps/R/h

Accuracy ±10% of reading within the measuring range

Energy range 70 keV to 2.0 MeV Energy dependence ±20% related to 137Cs

Angular dependence Less than ±20% for 45° from centerline indicator

Temperature range Operation: -10°C to +50°C (15°F to 122°F)

Storage: -20° C to $+60^{\circ}$ C (-5° F to 140° F)

Humidity range 40% to 95% RH (non condensing)

Casing Meter: Aluminum

Detector: Aluminum, waterproof to 20 meters

Dimensions Meter: 12 cm x 7.2 cm x 3.4 cm (4.72" x 2.83" x 1.34")

Detector: 2.45 cm x 14.3 cm (0.96" x 5.71") without cable

Weight Meter: 340 g (0.76 lbs) including battery

Detector: 131 g (0.29 lbs) without cable

Cable length Standard: 25 feet Maximum: 350 feet

Part # AMP-100 (μ Sv/h) (incl. 9m cable) BAK-0171

AMP-100 (mR/h) (incl. 9m cable) BAK-0161

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