



AREA RADIATION MONITORING

AMP-300™

Very high range waterproof gamma detector



FEATURES

- Wide range response from 1 mSv/h to 300 Sv/h (0.1 R/h to 30,000 R/h)
- Ruggedized construction, waterproof detector housing and cable
- Quick-connect connectors allow customization of cable length and facilitate easy decontamination
- Built-in communication port for connection to AWM WRM2™ Transmitter
- “Smoothed” digital display offers accurate, stable readings
- User-selectable internal alarm threshold

APPLICATIONS

- Real-time monitor applications in high dose rate areas. For example, the probe head may be placed directly into a filter cubicle or against a resin tank for the purpose of providing live time survey results
- Replacement of traditionally “difficult to calibrate” underwater instruments
- Local readout of hand-held meter allows for use as a portable survey instrument

DESCRIPTION

The AMP-300 unit, or Area Monitor Probe, is a dose rate meter that has been designed specifically to be used in very high dose rate fields.

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.

SPECIFICATIONS

The Area Monitor Probe (AMP-300) is a high-range silicon diode based detector designed to be continuously used in areas where very high exposure levels exist.

The detector consists of three parts: the Meter box, which includes the detector's electronics, display and pushbuttons; the Probe head, which contains the energy compensated silicon diode detector; and the connecting cable, which is fitted with a quick-connect-type connector at one end. The AMP-300 unit's connections and probe head feature watertight sealing to allow for use in underwater applications up to at least 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 °F to 120 °F (-10 °C to 50 °C)
- Relative humidity (meter): 10 to 95% RH (non-condensing)
- Conforms to CE requirements
- EMC conformity

Mechanical Characteristics

- Meter dimensions: 12 x 7.2 x 3.4 cm (4.72 x 2.83 x 1.34 in.) (H x W x D)
- Detector dimensions: 2.45 Dia. x 14.3 cm (0.96 Dia. x 5.71 in.)
- Standard cable length: 82 ft (25 m)
- Maximum cable length: 350 ft (107 m)

Radiological Characteristics

- Expected detector lifetime: 65 h at 1000 R/h
- Detector: energy compensated Silicon diode
- Detector sensitivity: 8.33 cps per R/hr
- Detection range ($\pm 10\%$): 0.1 R/h to 30,000 R/h