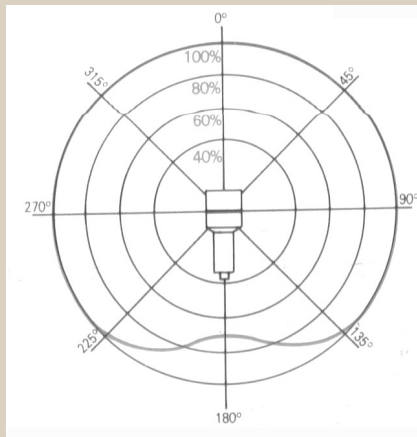


IC-10 Ion Chamber

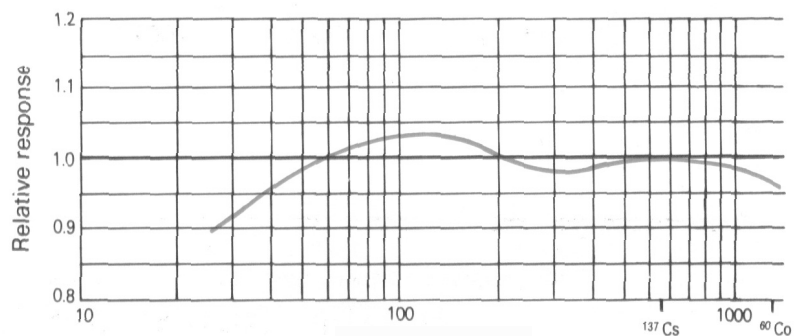
The IC10A is a rugged ion chamber detector designed for accurate and highly stable field measurements. The detector is used for measuring exposure rates of gamma, X-ray, and beta radiation over a wide range (1 μ Sv/hr to 250mSv/hr , 0.1 mR/hr to 25R/hr).

Combined with the RAM DA 2000 monitors or MediSmarts System, the IC10A makes an excellent choice for maintaining the highest safety standards in a wide variety of applications including, radiochemistry, nuclear medicine, transport and storage, radiotherapy, research laboratories and health physics.

The detector contains an ionization chamber and electronic circuits, producing an output as a square wave signal, with a frequency that is proportional to the measured field. The IC10 has two gain ranges and a special offset zeroing capability.



Angular Dependence
Reference source ^{137}Cs closed cover



Photon Energy Response
Relative to ^{137}Cs



Specifications

Measuring Range: 1 μ Sv/hr to 250mSv/hr (0.1 mR/hr to 25R/hr)

Display Range: 1 μ Sv/hr to 250mSv/hr (0.1 mR/hr to 25R/hr)

Gamma Sensitivity: 0.04 pA/mR/h

Accuracy: \pm 15% of reading within measuring range

Gamma Energy Dependence: Better than \pm 20% at 20keV to 1.2MeV (related to ¹³⁷Cs)

Angular Dependence: Less than \pm 5% (for \pm 120° of front direction, related to ¹³⁷Cs)

Ion Chamber Volume: 500 cc

Chamber Wall and Cover Thickness: 300mg/cm² (tissue equivalent)

End Window Thickness: 7 mg/cm²

Response Time: Scale	Time	Range
0.1 μ Sv/hr to 10 μ Sv/hr	12 sec	low
10 μ Sv/hr to 100 μ Sv/hr	8 sec	low
100 μ Sv/hr to 2mSv/hr	4 sec	low
0.1mSv/hr to 220mSv/hr	2 sec	high

Input Signals: Offset/operation – control, High/low - range control

Output Signals: TTL pulses, Detector status: ID, chamber voltage malfunction

Temperature Range: Operation: -10°C to +50°C (15°F to 122°F),
Storage: -20°C to +60°C (-5°F to 140°F)

Humidity Range: 40% to 95% RH (non condensing)

Dimensions: Chamber: 11.7cm (4.6") length, 8.9cm (3.5") diameter

Handle: 14.3cm (5.6") length, 5.2cm (2") diameter

Weight: 470g (1lb)

Chamber: Polypropylene

Handle: Aluminum, splash proof.

Chamber: Polypropylene

Max. cable length: 10 meters

Ordering Information

IC-10A - Ion Chamber (Flat Response) detector #3-0070

IC-10X (for x-ray machines) detector #3-0070-02

ROTEM INDUSTRIES reserves the right to change specifications without advance notice

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