

RadEye B20/ER

Multi-Purpose Survey Meter



The Thermo Scientific RadEye™ B20 / B20-ER models are the next generation line of improved quick survey and precision scaler measurement meters. These modern and compact survey meters measure alpha beta, gamma and X-ray surface contamination.

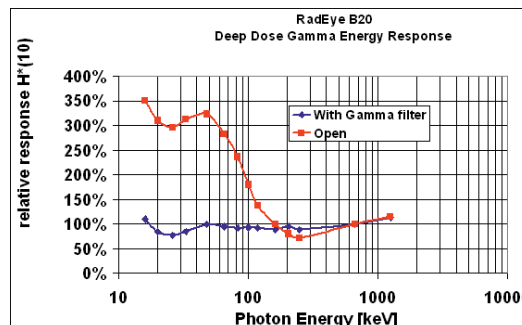
In addition these pocket-sized instruments can also be used for accurate dose rate surveys, if used with optional energy compensated filters (17 keV – 3 MeV). For emergency response applications, the alpha and beta contamination measurements can be discriminated using the optional alpha blocker filter.

The RadEye B20 will automatically switch to the proper measuring unit, if any auto detection filter is fitted to the face of the B20 detector. This automatic function helps to avoid accidental misuse and to quickly change from one measurement to the next.

These instruments are part of the growing RadEye family of high-end stand-alone meters, which are designed to exceed the most demanding user experience.

Features of RadEye B20

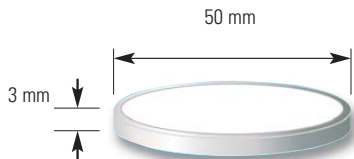
- Light Weight (300 g), excellent grip with and without gloves
- Rugged and compact design, thick rubber protective cover
- Low cost of ownership with > 500 h operation time with 2 AAA batteries – rechargeable NiMH-cells can be used
- Menu-driven user interface results in low training cost and immediate familiarity
- Huge internal data memory for both scaler results and continuous data recording
- Bright backlit LCD display – plain text messages - different languages can be selected
- Easy adaptation to different tasks by supervisor configuration, calibration, selection of measuring units
- Versatile operation modes:
 - Scaler / Timer with preset count and preset time for sample measurements
 - Continuous ratemeter mode for frisker operation
 - Dose rate mode
- Audible indication: single pulse or chirper mode proportional to count rate
- Earphone output for operation in loud environment
- A table of up to 15 nuclides can be loaded for display in Bq or dpm



Specifications

Main Applications	Civil Defence, Fire Brigades, Hospitals, Nuclear Industry, Pharmaceutical Industry
Detector	1 pancake GM-tube, window, dia. 44 mm (1.7"), 1.8 – 2.0 mg/cm ²
Measuring Range (gamma dose rate) Uncompensated or with opt. energy filter	0 - 2 mSv/h [0 - 200 mrem/h] RadEye B20 0 - 100 mSv/h [0 - 10 rem/h] RadEye B20-ER
Measuring Range (contamination)	0 - 10 kcps RadEye B20 0 - 500 kcps RadEye B20-ER
2 π Efficiency (ref. to 50 mm diameter without rubber sleeve)	Am-241: 28%; Co-60: 25%; Sr/Y-90: 36%; C-14: 19 %
Energy Range (with gamma energy filter)	17 keV – 1.3 MeV according to H*(10) or H'(0.7)
Weight and maximum dimensions	300 g (0.7 lb); 13 cm x 7 cm x 6 cm (5.2" x 2.8" x 2.4")
Alarm indication	LED, sound, vibrator

Accessories



Beta/gamma test adapter for RadEye B20 and B20-ER (9 g Lu₂O₃):

Typical net count rate for RadEye B20: 6 cps

Energy Filters

- Removable energy filter for directional dose equivalent H'(0.07) (shallow dose) from 20 keV.
- Removable energy filter for ambient dose equivalent H*(10) (deep dose) in Sv/h or rem/h from 17 keV.
- Removable alpha-rejection filter for quick estimation of alpha contamination in emergency response situations.



First Responder Laboratory Kit



Pelican Case Containing:

- Sample changer for use with the RadEye B20
- Sample planchets with different lip heights
- Disposable gloves, spatula
- 50 mm filters

Space for:

- RadEye B20
- Data cable
- User manual
- Lutetium-Oxide test adapter
- Additional RadEye (PRD or N)

