

Thermo Scientific RadEye B20 / B20-ER

Multi-Purpose Survey Meter

Thermo Scientific RadEye instruments for contamination and dose rate measurements are the perfect solution for:

- First Responders
- Homeland Security
- Fire Service
- Emergency Response Personnel
- Hospitals
- Nuclear Industry
- Pharmaceutical Industry



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 doserate 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.



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Can be operated with gloves



Holster for RadEye B20 versions. Order no: 425068519

Features and benefits of RadEye B20 and RadEye B20-ER

- 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
- IR PC Interface or Bluetooth as option
- Advanced Windows Software is available as option

Neckband with holster for RadEye B20 versions. Order no: 425068518



Safety locking at the neckband



<i>Application</i>	Contamination $\alpha\beta\gamma$	Contamination $\beta\gamma$	Dose Rate $H^*(10)$	Dose Rate $H'07$
<i>Autodetection Filter</i>	No Filter	Alpha Blocker 425068581	$H^*(10)$ Filter 425068582	$H'07$ Filter 425068583
<i>RadEye B20 / B20-ER</i>				
<i>Filter Code displayed at the LCD</i>	No Code	(α Blocker)	($H^*(10)$)	($H'07$)
<i>Related Units</i>	cps cpm Bq/cm ² Bq dpm dps	cps cpm Bq/cm ² Bq dpm dps	Sv/h rem/h	Sv/h rem/h

Lutetium Test Adapter

High precision, low energy test adapter for performance verification: Order no: 425068571

- 9 g natural Lutetium-Oxide with 50 Bq/g (1.4 nCi/g)
- Lu-176: half life 37,000 million years. No error prone half life correction by the user
- Extremely uniform activity content and surface emission rate
- Identical surface emission rate for each check source



Extension for RadEye Instruments

Extension with professional and durable design: Order no: 425067177

- High quality
- Durable material selection
- Reach up to 1.5 m / 5 ft.
- Four adjustable segments
- Handle with convenient grip
- Weight: 630 g
- Max. length: 1520 mm / ~ 5 ft.
- Min. length: 460 mm / ~ 18"



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 paper filters

Space for:

- Data cable and desktop holder
- User manual
- Lutetium-oxide test adapter
- RadEye B20 / B20-ER
- Additional RadEye (PRD or N)

*Please order a RadEye B20 or B20-ER separately

Order no. 425069011

RadEye B20 / B20-ER - scope of delivery



The RadEye B20 / B20-ER comes in a black plastic case, which also offers space for accessories like filters and test adapter.

RadEye B20: 4250685

RadEye B20-ER: 425068510

Technical Specification for RadEye B20 / B20-ER

Detector	1 pancake GM-tube, window dia. 44 mm (1.7"); 1.8 – 2.0 mg/cm ²
Measuring range according IEC 60846-1	0,2 µSv/h - 2 mSv/h [20 µrem - 200 mrem/h] RadEye B20 0,2 µSv/h - 100 mSv/h [20 µrem/h - 10 rem/h] RadEye B20-ER
Display resolution:	0,01 µSv/h
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 filters H*(10) or H'(0.07))	17 keV – 3 MeV according to IEC 60846-1
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

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