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.







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



Safety locking at the neckband



Application	$\begin{array}{c} \text{Contamination} \\ \alpha\beta\gamma \end{array}$	Contamination $\beta\gamma$	Dose Rate H*(10)	Dose Rate H'07
Autodetection Filter	No Filter	Alpha Blocker 425068581	H*(10)Filter 425068582	H'07 Filter 425068583
RadEye B20 / B20-ER				
Filter Code dis- played at the LCD	No Code	($lpha$ Blocker)	(H*(10))	(H'07)
Related Units	cps cpm Bq/cm² Bq dpm dps	cps cpm Bq/cm² 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 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*



Order no. 425069011

RadEye B20 / B20-ER - scope of delivery



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

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 Display resolution:	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 0,01 μSv/h			
Measuring range (contamination):	0 - 10 kcps RadEye B20 0 - 500 kcps RadEye B20-ER			
2π 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			

thermoscientific.com

© 2012 Thermo Fisher Scientific Inc. All rights reserved. Windows is a registered trademark of Microsoft Corporation in United States and other countries. All other trademarks are the property of Thermo Fisher Scientific Inc. and its subsidaries. Results may vary under different operating conditions. Thermo Fisher Scientific makes no warranties, expressed or implied, in this product summary. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representatives for details.

Europe, Africa Middle East & Countries Not Listed		USA, Canada, Mexico, Central & SouthAmerica	
	+49 (0) 9131 998-226 9 (0) 9131 998-172 fax	27 Forge Parkway Franklin, MA 02038 USA info.eid@thermofisher.com	+1 (508) 553 1700 +1 (800) 274 4212 US toll-free +1 (508) 520 2815 fax
China 7th Floor, Tower West, Yonghe Plaza No. 28 Andingem E. Street, Beijing, 100007 China info.eid.china@thermofisher.com	+86 10 8419 3588 +86 10 8419 3581 fax	India Plot No. C -327, T.T.C. Industrial Area, Pawne Navi Mumbai 400 705, India info.eid.india@thermofisher.com	+91-22-41578800 +91-22-41578801 fax
Singapore 11 Biopolis Way, Helios, Units #12-07/08 Singapore 138667 info.eid.singapore@thermofisher.com	+65 6478 9728 +65 6478 9505 fax	United Kingdom Bath Road, Beenham, Reading RG7 5PR United Kingdom customerservice.eid.beenham@thermofisher	+44 (0) 118 971 5042 44 (0) 118 971 2835 fax r.com

