RadEye B20/B20-ER

For Alpha/Beta Surface Contamination

Applications

General radiation protection for:

- Homeland security
- Fire departments
- Emergency response
- Hospitals
- Nuclear power industry
- Pharmaceutical industry
- Universities

RadEye B20/B20-ER

The RadEye B20/B20-ER models are the best choice for contamination and dose rate measurements. They are modern, compact and measure alpha, beta, gamma and X-ray radiation.

The RadEye B20/B20-ER models can also be used for accurate dose rate surveys if used with correct energy compensated doserate filter (17 keV– 3 MeV).

For emergency response purposes alpha and beta contamination can be discriminated using another optional filter. The RadEye B20 will automatically switch to the proper measuring unit, if an auto detection filter is fitted to the face of the B20 detector. This automatic function helps to avoid accidental misuse.

The instrument is part of the growing RadEye family of high-end stand-alone meters, which are designed to exceed the most demanding user expectations.

B20 is for normal measurements, B20-ER is for high range measurements.

Features

- Lightweight (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

RadEye B20: # 4250685
RadEye B20-ER: # 425068510
Holster for RadEye B20/G20: # 425068519

RadEye B20/B20-ER

Surface Contamination/Gamma Survey

Application	Contamination αβγ	Contamination βγ	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 displayed at the LCD	No Code	(α 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

Automatic recognition of the filter by the RadEye's processor

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Detector	1 pancake GM-tube, window dia. 44 mm (1.7"); 1.8 – 2.0 mg/cm²
Measuring range (gamma dose rate) Uncompensated (662 keV) 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 (according to IEC 60846-1); with gamma energy filter H*(10) and H´(0.07)	17 keV – 3 MeV
Weight and maximum dimensions	300 g (0.7 lb.); 13 x 7 x 6 cm (5.2" x 2.8" x 2.4")
Alarm indication	LED, sound, vibrator

Excellent grip with gloves

Holster with neckband for RadEye B20/G20 versions, safety locking at the neckband: #425068519

RadEye B20/B20-ER

Gamma Surveys Including X-rays

First responder laboratory kit *

Pelican case # 425069011 containing:

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

Space for optional items:

- Data cable and desktop holder
- User manual
- Lutetium-Oxide test adapter
- RadEye B20/B20-ER
- Additional RadEye (PRD or N)
- Two removable energy filters

* Please order a RadEye B20 or B20-ER separately

Lutetium Test Adapter

High precision, low energy test adapter for performance verification # 425068571

- 9 g natural Lutetium-Oxide with 50 Bq/g (1.4 nCi/g)
- Due to half life of 37,000 million years of Lu-176, there are no error-prone half life corrections necessary by the user
- Extremely uniform activity content and surface emission rate
- Identical surface emission rate for each test source

New!

Extensions for RadEye instruments

Using the extensions, the hand is much less exposed if the RadEye B20/B20 ER comes close to a source.

For more information please see page 35.

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