

# RadEye NL

Personal Neutron Radiation Detector



*detection*  
*radiation*

## High sensitivity for neutron radiation

- Rapid warning of neutron radiation fields
- Applicable as an Area Monitor
- Ideal complement to passive and active neutron dosimeters

## Lightweight with low power technology

- Always ready for use - can be worn and operated in its holster
- Hands free operation with no restriction of personal mobility
- Rapid scanning of changing field intensities
- Detection of neutron shielding deficiencies and source presence
- Use as a dose rate meter for neutron surveys when inserted into moderator
- Ideal complement to Rem-Counters

## No spill-over from gamma radiation up to 10 R/h

- Ideal for verification of neutron fields when dealing with unknown radiation sources
- No false "Neutron Alarm"
- High degree of gamma rejection eliminates false neutron readings in elevated gamma backgrounds

The Thermo Scientific™ RadEye™ NL delivers portability for neutron measurements primarily for nuclear facilities such as power plants and particle accelerators. Historically, spherical or cylindrical Remcounters have been used which are heavy and bulky. And in some applications, the cumbersome nature of Remcounters can make them infeasible or possibly even dangerous depending on the application.

The Radeye NL is a small lightweight pager which can be conveniently carried in the hand, worn in a holster, or used with a telescopic extender for intensity measurements of low energy neutrons. After insertion into a 2 kg "Rem-Shoe" with handle, energy compensated neutron dose rate response is provided with semispherical acceptance angle.

## FEATURES

- Significantly faster response time as compared to traditional neutron meters
- Rugged and reliable
- Large display for clear information
- Top alarm indication visible in holster
- Simple four button design
- Calibration factors modifiable with PC software
- 1600 data points with mean/max readings for offline analysis
- Adaptable user interface - can be optimized to application / user group
- Earphone output for noisy environment
- Alarm relay output - for area monitor Application

- Users of industrial neutron sources, e.g. in geology and material testing
- Operators and users of accelerators in medical science and research
- Radiation protection staff and inspectors of nuclear facilities
- First responders



RadEye Area Monitor for neutron radiation

# RadEye NL

## SPECIFICATIONS

Part Number	Description
4250678	RadEye NL
Weight	160 g (5.6 oz)
Dimensions	3.8" x 2.4" 1.2") (96 x 61 x 31 mm)
Detector	He-3 tube with 2.5 bar filling pressure
Sensitivity in Moderator	Cf-252 0.19 cps/ $\mu$ Sv/h
	AmBe 0.15 cps/ $\mu$ Sv/h
	16.5 MeV 0.03 cps/ $\mu$ Sv/h
Sensitivity when worn at the body	1.5 cps/mrem/h for Cf-252
Gamma spill-over	< 0.2 cps at 100 mSv/h (10 R/h) Cs-137 radiation
Measuring units	Count rate (cps) moving average over 10 s Mean value and peak value over any time period
Data display and recording	Linear and ADF-Ratemeter (Advanced Digital Filter) Mean and Peak value over any selected time period
Water/Dust Rating	IP65
Drop Distance on Concrete	1.5m
Operation time (2 AAA alkaline batteries)	500 h



The RadEye NL is normally worn in a holster. In order to use it as a handheld survey meter and to increase the efficiency for fast neutrons, the RadEye NL can be put into an optional moderator with handle. And a RadEye G-10 can be added for combined gamma and neutron dose rate measurements.



RadEye NL Moderator.  
Part # 425067114

Holster for RadEye PRD, NL, G and G-10 versions.  
Sized to insert instrument with rubber shock protection.  
Part # 425067046

RadEye Rem-holster with boron-inlet for  
dose rate measurement.  
Part # 425067710

RadEye holder for second RadEye  
mounted to moderator.  
Part # 425067073

