

This product is available through:

**JRT Associates**

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800-221-0111

**New pocket size  
neutron radiation detector**

## RadEye N / NL

Personal Highly Sensitive  
Neutron Radiation Detector

### High sensitivity for neutron radiation

- Rapid warning of neutron radiation fields
- Applicable as an Area Monitor
- Exceeds the neutron response requirements of ISO 22188
- Ideal complement to passive and active neutron dosimeters

### 160g 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
- Ideal complement to Rem-Counters

### No spill-over from gamma radiation up to 10 mSv/h (1 R/h)

- Ideal for verification of neutron fields when dealing with unknown radiation sources
- No false "Neutron Alarm"
- Can be used in high gamma dose rate fields

### The RadEye N / NL is the ideal personal neutron radiation indicator for

- **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 and law enforcement officers**



**RadEye N: # 4250677**

**RadEye NL: # 4250678**



RadEye Area Monitor for neutron radiation

The new RadEye N / NL closes a gap in the classical product spectrum of the radiation measurement technology. Rem-Counters for neutron detection with a He-3 or BF<sub>3</sub> tube are usually heavy and bulky since fast neutrons have to be moderated in order to be detected and to provide the correct neutron dose rate response. Low energy neutrons with their lower biological impact however have to be suppressed to a large extent. Dropping the demand for energy compensated dose rate response, a device can be built with one fiftieth of the weight and comparable or even a higher neutron response as compared to a Rem-Counter.



The RadEye N/NL is normally worn in a holster. In order to use it as a hand held survey meter and to increase the efficiency for fast neutrons the RadEye N/NL can be put into an optional moderator with handle.  
# 425067110



## Features of RadEye N / NL

- Rugged and reliable
- Removable rubber sleeve for extra protection
- Large display for clear information
- Top alarm indication - can be operated in holster
- One hot and four advanced buttons - easy to use, no PC required
- Rechargeable batteries can be used - low cost of ownership
- 1600 data points (mean/max.) - allows retrospective analysis
- PC-software with real-time graph - perfect for tutorial and training
- Adaptable user interface - can be optimized to application / user group
- Earphone output for noisy environment
- Alarm relay output - for area monitor application

**New!**

**Calibration factors for selected work places with known neutron spectra can be entered. [mrem/h, μSv/h]**

**Users (e.g. service staff) who travel on commercial aircraft should use the RadEye NL, with a He-3 pressure of 2.5 bar. In this case both the neutron sensitivity and the background effect is only half as much as of the RadEye N.**

<b>Weight</b>	160 g (5.6 oz)
<b>Dimensions</b>	96 x 61 x 31 mm (3.8" x 2.4" 1.2")
<b>Detector</b>	He-3 tube with 10 bar filling pressure (RadEye N) He-3 tube with 2.5 bar filling pressure (RadEye NL)
<b>Sensitivity when worn at the body (RadEye N)</b>	approx. 0.3 cps per μSv/h (3 cps per mRem/h) for Cf-252, detects 0.01 μg Cf-252 in typically 2 - 3 s for 25 cm (10") distance
<b>Background</b>	approx 0.005 cps at 300 m above sea level (RadEye N)
<b>Gamma spill-over</b>	< 0.2 cps at 10 mSv/h (1 R/h) Cs-137 radiation
<b>Measuring units</b>	Count rate (cps) moving average over 10 s Mean value and peak value over any time period
<b>Operation time (2 AAA alkaline batteries)</b>	400 h (RadEye N), 500 h (RadEye NL)

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RadEye

Line	Part Number	Description
1.		<b>RadEye Pocket-sized Personal Radiation Detectors for Many Different Applications. For order quantities of 10+, a 5 % quantity discount is granted for all RadEye instruments (excluding accessories).</b>
2.	4250671	RadEye PRD, Pocket-sized personal radiation detector: NaI(Tl)-det. with PMT, gamma detection from 30 keV; energy compensated dose rate calculation (60 keV – 1.3 MeV); measuring range 1 µR/h – 25 mR/h; 1.5 cps per µR/h (Cs-137); 30 cps per µR/h for Am-241
3.	425067102	RadEye PRD-ER, Pocket-sized personal radiation detector with extended measuring range: NaI(Tl)-det. With PMT, gamma detection from 30 keV; ; measuring range 1µRem/h - 10 Rem/h (60 keV - 1.3 MeV); linearity +/- 20% for Cs-137, yellow
4.	425067104	RadEye PRD-ER, Pocket-sized personal radiation detector with extended measuring range: NaI(Tl)-det. With PMT, gamma detection from 30 keV; ; measuring range 1µRem/h - 10 Rem/h (60 keV - 1.3 MeV); linearity +/- 20% for Cs-137, black
5.	425067120	RadEye PRD, Pocket-sized personal radiation detector: NaI(Tl)-det. with PMT, gamma detection from 30 keV; H*(10) energy comp. dose rate calc. (60 keV – 1.3 MeV); meas. range 0,01 µSv/h – 250 µSv/h; 150 cps per µSv/h (Cs-137); 2000 cps per µSv/h (Am-241)
6.	425067122	RadEye PRD-ER, Pocket-sized personal radiation detector with extended measuring range: NaI(Tl)-det. with PMT, gamma detection from 30 keV; H*(10) energy comp. dose rate calc. (60 keV – 1.3 MeV); meas. range 0,01 µSv/h – 100 mSv/h; linearity +/- 20 % for
7.	4250674	RadEye G, Pocket-sized wide range survey meter: energy compensated GM-tube, 45 keV – 1.3 MeV; measuring range 5 µR/h – 10 R/h; high sensitivity: 17 cps per mR/h, 2 dose and dose rate alarm levels; black label
8.	425067401	RadEye G, Pocket-sized wide range survey meter: energy compensated GM-tube, 45 keV – 1.3 MeV; measuring range 5 µR/h – 10 R/h; high sensitivity: 17 cps per mR/h, 2 dose and dose rate alarm levels; yellow label
9.	4250676	RadEye G-10, Pocket-sized wide range survey meter: energy compensated GM-tube according H*(10): 45 keV – 1.3 MeV; measuring range 0,05 µSv/h – 100 mSv/h; high sensitivity: 1.7 cps per µSv/h; 2 dose and dose rate alarm levels; red label
10.	425067602	RadEye G-10, Pocket-sized wide range survey meter: energy compensated GM-tube according H*(10): 45 keV – 1.3 MeV; measuring range 0,05 µSv/h – 100 mSv/h; high sensitivity: 1.7 cps per µSv/h; 2 dose and dose rate alarm levels, white label
11.	4250677	RadEye N, Neutron pocket meter with excellent gamma rejection, He-3 tube with 10 bar, must not be taken on board of an airplane
12.	4250678	RadEye NL, Neutron pocket meter with excellent gamma rejection, He-3 tube with 2.5 bar, can be taken on board of an airplane
13.	4250683	RadEye AB100, 100 cm <sup>2</sup> alpha/beta discriminating scintillation detector, including hard shell transport case
14.	4250685	RadEye B20, Alpha, Beta, Gamma Surveymeter, measuring range up to 10 kcps, Beta and Gamma dose rate up to 2 mSv/h; 200 mRem/h; linearity +/- 10 %, including hard shell transport case

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## RadEye

Line	Part Number	Description
15.	425068510	RadEye B20-ER, Alpha, Beta, Gamma Surveymeter, extended measuring range up to 500 kcps, Beta and Gamma dose rate up to 100 mSv/h; 10 Rem/h, linearity +/- 10 %, including hard shell transport case
16.	4250686	RadEye G20 gamma survey meter with energy compensation according to exposure rate (R/h), measuring range up to 200 mR/h, including hard shell transport case
17.	4250687	RadEye G20-10, Gamma Survey Meter, from 17 keV, measuring range up to 2 mSv/h; 200 mRem/h, including hard shell transport case
18.	425068610	RadEye G20-ER gamma survey meter with energy compensation according to exposure rate (R/h), extended measuring range up to 10 R/h, including hard shell transport case
19.	425068710	RadEye G20-ER10, Gamma Survey Meter, from 17 keV, extended measuring range up to 100 mSv/h; 10 Rem/h, including hard shell transport case
20.	4250680	RadEye Area Monitor:(RadEye sold separately): Enclosure w/ transparent door; Car Adapter; AC/DC Adapter w/ 2 m cable & Bulgin connector; Red Light on enclosure top; RS 232 interface 9 pin D-SUB connector (watertight); Bulgin connector for ext. Alarm unit
21.	4250692	RadEye GX multi purpose survey meter for connection of external GM-detectors via MHV high voltage connector
22.	4250693	RadEye SX multi purpose survey meter for connection of external scintillation-detectors via MHV high voltage connector
23.	4250695	RadEye PX/NRD complete set (consisting of RadEyePX, NRD-H2 detector, Holding bracket and high voltage cable)
24.	4250694	RadEye PX survey meter for connection of external proposal counters via MHV high voltage connector
25.	4250697	RadEye HEC portable alpha/beta sampler changer

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## RadEye Accessories

Line	Part Number	Description
1.		<b>RadEye Accessories</b>
2.		Testadapters
3.	425067071	Test-Adapter RadEye PRD, 36 g Lu2O3
4.	425067072	Test-Adapter RadEye G, G-10, 200 kBq Ba-133
5.	425067075CS137	Test-Adapter RadEye G, G-10, 5 µCi Cs-137
6.	425068371	Test-Adapter RadEye AB100, 82g, Lu2O3
7.	425068571	Test-Adapter RadEye B20, 9 g Lu2O3
8.	4254948	Test-Adapter RadEye G20 and portable NBR-Detectors, 50 g Lu2O3
9.		Holsters and bags
10.	425067044	Safety lanyard and transparent plastic bag for RadEye PRD, N, NL, G and G-10 versions
11.	425067046	Holster for RadEye PRD, N, NL, G and G-10 versions. Sized to insert instrument with rubber shock protection.
12.	425067710	RadEye N/NL Rem-holster with Boron-inlet for dose rate measurement
13.	425068519	Holster for RadEye G-20 and B-20 versions. Sized to insert instrument with rubber shock protection.
14.	SM149142238	Holster for up to 2 RadEye B-20 energy filters
15.	SM149142246	Outdoor underwater pag WP-550
16.		Extension poles
17.	425067075	Short handle
18.	425067076	Aluminium extension, length 1.2 m
19.	425067077	Telescopic extension up to 4 m
20.	425067078	RadEye Adapter with connector to 425067075, 425067076, 425067077
21.	425067177	Telescopic extension up to 1.5 m (including holder for RadEye)
22.		Energy filter for RadEye
23.	425068581	Alpha Rejection filter for RadEye B20
24.	425068582	Gamma Filter for RadEye B20, H*(10) (deep dose equivalent) compensation
25.	425068583	Gamma Filter for RadEye B20, H'07 (shallow dose equivalent) compensation
26.		Data communication
27.	425067087	RadEye Btcomm battery cover
28.	425069951	User Software "RadEye.Exe"
29.	425069952	Calibration Software "Cal-RadEye.Exe"
30.	4254026	Data cable USB for FH 40 G or RadEye desktop holder 425067060

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## RadEye Accessories

Line	Part Number	Description
31.	4254029	Data cable RS 232 for FH 40 G and RadEye desktop holder
32.	SM168535225	RS 232 Adapter cable, 9 pin, 5 m, fits to docking station 425067065 and area monitor 425067080
33.	SM168535251	RS 232 to USB adapter for data cable 4254029, docking station 425067065 and area monitor 425067080
34.		Wall, vehicle, bike, instrument adapters
35.	425067059	Flat mounting kit, including plates for screw- and adhesive mounting; fits to docking station 425067065 or desktop holder 425067060
36.	425067060	Desktop holder for RadEye (data cable not included)
37.	425067061	Goose neck screw-mounting kit, fits to docking station 425067065 or desktop holder 425067060
38.	425067062	Pivot arm screw-mounting kit, fits to docking station 425067065 or desktop holder 425067060
39.	425067063	Knuckle joint screw-mounting kit, fits to docking station 425067065 or desktop holder 425067060
40.	425067064	Goose neck mounting kit with suction cup for instantaneous attachment to the windshield, fits to docking station 425067065 or desktop holder 425067060
41.	425067079	RadEye bike holder
42.	425069501	Adapter for RadEye PX/NRD combination
43.	425522005	Holder with vacuum cap and goose neck
44.		Other
45.	425067073	RadEye holder for second RadEye mounted to moderator (425067110)
46.	425067110	RadEye N/NL Moderator
47.	425067193	RADEYE SAFETY KIT FOR PRD / PRD-ER
48.	425068010	Additional External Alarm Unit consisting of: 5 m cable with Bulgin connector fitting to connector at 4250680; Small box with latching relay and acknowledge button; 5 m cable between box and horn+strobe; Red strobe + horn with wall mount holder
49.	42506901001	Sample changer for RadEye B20
50.	42506901002	Brass sample holder for RadEye PRD (material analysis of steel samples)
51.	425069011	First Responder laboratory Kit for RadEye B20 and B20-ER, including sample changer 42506901001, various dishes, gloves, spatula and filters
52.	KT162245107	MHV right angle plug for GX/SX/PX
53.		Earphone/Headphone
54.	425067034	Battery compartment lid with inductive charging circuitry
55.	425067037	Earphone for RadEye series
56.	425067042	Headset for RadEye

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## RadEye Accessories

Line	Part Number	Description
57.		Chargers
58.	425067065	Docking station ("car adaptor") with charging circuitry (8-30 V DC, cigarette lighter plug), alarm relay and RS 232 interface. 2 ea. AAA NiMH rechargeable batteries included
59.	425067066	AC/DC converter for AC-supply of docking station 425067065 (100 – 240 V AC; 15 V DC, 600 mA), US, UK, EU connector
60.	425067080	Inductive charger (11.5 - 15 V DC) with coiled cable and cigarette lighter plug; requires special battery compartment lid 425067034
61.	425067083	Inductive charger AC-table version
62.		Extended Depot Service Warranties
63.	RADEYEPRD-DS3	3 Year Extended Depot Service Warranty for the RadEye-PRD
64.	RADEYEN-DS3	3 Year Extended Depot Service Warranty for the RadEye-N
65.	RADEYEG-DS3	3 Year Extended Depot Service Warranty for the RadEye-G