ORTEC

RADEAGLET-R

Handheld isotope identification

Identify radioactive materials in the field. A handheld instrument for emergency response, security and environmental monitoring.



Detector type	Energy range, NaI	Spectrum channels
NaI(Tl) or $LaBr_3$(Ce), model dependent [1]	**NaI: 15 keV–3 MeV** [1]	**,048** [1]

Specifications

DETECTOR

Detector type	NaI(Tl) or $LaBr_3$(Ce), model dependent	[1]
Neutron detection	^{3}He detector in models with N suffix	[1]

PERFORMANCE

Energy resolution	At 662 keV, room temperature: NaI ≤7.2%; $LaBr_3$ ≤3.2%	[1]

MEASURING RANGE

Energy range, NaI	NaI: 15 keV–3 MeV	[1]
Energy range, GM dose measurement	GM: 45 keV–1.5 MeV	[1]
Dose-rate range	Total 20 nSv/h–1 Sv/h (NaI 20 nSv/h–250 µSv/h; GM >250 µSv/h–1 Sv/h)	[1]
Sensitivity (^{137}Cs gamma)	>1,600 cps per µSv/h	[1]
Dose-rate accuracy	NaI: ±10% for ^{137}Cs (662 keV), ^{241}Am (59 keV) and ^{60}Co (1172 and 1332 keV); GM: ±30% for ^{137}Cs (662 keV)	[1]
Thermal neutron sensitivity	1.6 cps/nv ±10%, unmoderated (models with ^{3}He detector)	[1]

ELECTRONICS & SIGNAL

Spectrum channels	2,048	[1]
verload threshold	≥1 Sv/h	[1]

COOLING

Storage	>16 GB (1,000,000 spectra)	[1]

SOFTWARE & DATA

Nuclide library	55 nuclides plus Beta+, neutrons, RGPu, RGPu-HS, WGPu and WGPu-HS: ^{228}Ac, ^{241}Am, ^{133}Ba, ^{140}Ba, Beta+, ^{207}Bi, ^{109}Cd, ^{115}Cd, ^{115}Pd, ^{141}Ce, ^{252}Cf (requires neutron detection), ^{57}Co, ^{60}Co, ^{51}Cr, ^{134}Cs, ^{137}Cs, ^{152}Eu, ^{155}Eu, ^{67}Ga, ^{68}Ga, ^{123}I, ^{125}I, ^{131}I, ^{132}I, ^{111}In, ^{192}Ir, ^{40}K, ^{140}La, ^{176}Lu, ^{177}Lu, ^{54}Mn, ^{99}Mo, ^{22}Na, ^{95}Nb, ^{147}Nd, neutrons, ^{237}Np, ^{144}Pr, ^{238}Pu, RGPu, RGPu-HS, WGPu, WGPu-HS, ^{226}Ra, ^{103}Ru, ^{125}Sb, ^{75}Se, ^{90}Sr, ^{99}Tc, ^{132}Te, ^{232}Th, ^{201}Tl, ^{232}U, ^{233}U, ^{235}U, ^{238}U, ^{131}Xe, ^{133}Xe, ^{133}Xe, ^{135}Xe, ^{95}Zr	[1]

CONNECTIVITY & INTERFACE

Display	3.5-inch colour TFT, 640 × 480	[1]
Communication	USB, Wi-Fi, Bluetooth and LAN; wireless dongles included	[1]

POWER & BATTERY

Battery life	>15 hours, standard operation at room temperature	[1]
Batteries	Rechargeable, exchangeable Li-ion	[1]

MECHANICAL

Detector dimensions	NaI: 50.8 × 25.4 mm; $LaBr_3$: 25.4 × 25.4 mm	[1]
Dimensions	90 × 280 × 110 mm (W × L × H)	[1]
Nominal weight	2SG models 1.5 kg; 2SG-N models 1.54 kg; 1LG and 1LG-P 1.46 kg; 1LG-N and 1LG-N-P 1.51 kg	[1]

ENVIRONMENT & RATINGS

perating temperature	–20 to +55 °C	[1]
IP rating	IP65 under IEC 60529	[1]
Humidity	0–95%, non-condensing	[1]

ORDERING & ACCESSORIES

Dose-rate range by model	Detector: NaI models 0.01–200 µSv/h, $LaBr_3$ models 0.01–350 µSv/h; GM: up to 1 Sv/h	[1]

GENERAL

Calibration	External ^{40}K source (start-up 165 s) or embedded ^{137}Cs source, 111 Bq (3 nCi) (start-up 145 s); $LaBr_3$ stabilises on an internal lanthanum peak	[1]
File formats	ANSI N42.42 (xml) and spe (IAEA), compatible with third-party analysis software	[1]

Models

Model	Gamma detector	Crystal dimensions	Neutron detection	GPS
RADEAGLET-R-1LG	$LaBr_3$(Ce) [2]	25.4 × 25.4 mm [2]	None [3]	Not included [3]
RADEAGLET-R-1LG-N	$LaBr_3$(Ce) [2]	25.4 × 25.4 mm [2]	^{3}He included [2]	Not included [3]
RADEAGLET-R-1LG-N-P	$LaBr_3$(Ce) [2]	25.4 × 25.4 mm [2]	^{3}He included [2]	Included [3]
RADEAGLET-R-1LG-P	$LaBr_3$(Ce) [2]	25.4 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLET-R-2SG	NaI(Tl) [2]	50.8 × 25.4 mm [2]	None [3]	Not included [3]
RADEAGLET-R-2SG-E	NaI(Tl) [2]	50.8 × 25.4 mm [2]	None [3]	Not included [3]

RADEAGLET-R-2SG-N	NaI(Tl) [2]	50.8 × 25.4 mm [2]	^{3}He included [2]	Not included [3]
RADEAGLET-R-2SG-N-E	NaI(Tl) [2]	50.8 × 25.4 mm [2]	^{3}He included [2]	Not included [3]
RADEAGLET-R-2SG-N-P	NaI(Tl) [2]	50.8 × 25.4 mm [2]	^{3}He included [2]	Included [3]
RADEAGLET-R-2SG-N-P-E	NaI(Tl) [2]	50.8 × 25.4 mm [2]	^{3}He included [2]	Included [3]
RADEAGLET-R-2SG-P	NaI(Tl) [2]	50.8 × 25.4 mm [2]	None [3]	Included [3]
RADEAGLET-R-2SG-P-E	NaI(Tl) [2]	50.8 × 25.4 mm [2]	None [3]	Included [3]

Model	Embedded calibration source	Energy resolution at 662 keV	Nominal weight	Energy range, NaI
RADEAGLET-R-1LG	Not included [3]	≤3.2 % FWHM, ambient room temperature [2]	1.46 kg [2]	–
RADEAGLET-R-1LG-N	Not included [3]	≤3.2 % FWHM, ambient room temperature [2]	1.51 kg [2]	–
RADEAGLET-R-1LG-N-P	Not included [3]	≤3.2 % FWHM, ambient room temperature [2]	1.51 kg [2]	–
RADEAGLET-R-1LG-P	Not included [3]	≤3.2 % FWHM, ambient room temperature [2]	1.46 kg [2]	–
RADEAGLET-R-2SG	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.5 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-E	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.5 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-N	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.54 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-N-E	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.54 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-N-P	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.54 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-N-P-E	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.54 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-P	Not included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.5 kg [2]	NaI: 15 keV–3 MeV [1]
RADEAGLET-R-2SG-P-E	Included [3]	≤7.2 % FWHM, ambient room temperature [2]	1.5 kg [2]	NaI: 15 keV–3 MeV [1]

Sources

[1] RADEAGLET-R - Rugged, High-Performance Handheld RIID
ORTEC (AMETEK) · product-page · Specifications tab, 'Model Specific Specifications'; Specifications tab, 'Specifications Common to All Models' - Physical; Specifications tab, 'Specifications Common to All Models' - Radiological Performance · checked 2026-10-16
https://web.archive.org/web/20261016000000/https://www.ortec-online.com/products/portable-radioisotope-ident...

[2] RADEAGLET-R (Ruggedized) Radioisotope Identification Device (brochure 25-0312)
RTEC (AMETEK) · brochure · p. 10, table 'Model Specific Technical Specifications'; p. 11, 'RADEAGLET-R Ordering Information' · checked 2026-10-16
https://edge.sitecorecloud.io/ametekinc1236b-ametekb19a-productiondcfa-1d17/media/Project/Ametek/ortec-onlin...

[3] ORTEC Product Guide
RTEC (AMETEK) · catalog · PDF p. 40 (printed p. 37), 'RADEAGLET-R Rugged Radioisotope Identification Device' · checked 2026-10-16
https://web.archive.org/web/20230405035438/https://www.ortec-online.com/-/media/ametekortec/product-guide/pr...

Every value is taken from the manufacturer’s own document; the number after the value refers to the source list. Always check against the latest datasheet before ordering.

The data comes from the manufacturer’s published documents. Manufacturers may change specifications; the current configuration and performance are confirmed in the quotation.