LUDLUM

RDS Alpha-Beta Probe

Alpha/beta probe for surface contamination

Probe for the RDS Base Unit that measures alpha and beta surface contamination simultaneously, with a ZnS(Ag) scintillator on a thick plastic scintillator. It carries its own calibration and has a removable protective grate that can be decontaminated.



Active area	Energy range	Count-rate range
100 cm² [1]	**Alpha 3–8 MeV [1]**	**0–1.5 Mcpm [1]**

Specifications

DETECTOR

Detector type	ZnS(Ag) scintillator on a thick plastic scintillator	[1]
Active area	100 cm²	[1]

PERFORMANCE

Background rate	In a 10 µR/h field: alpha < 3.0 cpm, beta < 300 cpm	[1]

MEASURING RANGE

Energy range	Alpha 3–8 MeV	[1]
Count-rate range	0–1.5 Mcpm	[1]
Gamma sensitivity	> 35 cps per µGy/h	[1]

POWER & BATTERY

Power supply	Supplied by the RDS Base Unit	[1]

MECHANICAL

Dimensions	11.6 × 3.7 × 3.8 in	[2]
Housing material	Anodised aluminium	[1]

ENVIRONMENT & RATINGS

Operating temperature	−30 to 50 °C	[1]
Storage temperature	−50 to 60 °C	[1]
Humidity	3–100% relative humidity	[1]
IP rating	IP54 (a contaminated Mylar window should be replaced)	[1]

GENERAL

Cross talk	Alpha to beta (Am-241) < 15%; beta to alpha (Sr-90/Y-90) < 1%	[1]
Standards met	ANSI N42.17 and N42.34; MIL-STD 461F, 1686C and 810G	[1]

NATO Stock Number (NSN)	6665-01-671-4479	[1]

Sources

[1] **RDS Alpha-Beta Probe data sheet (V040005)**
Ludlum Measurements · datasheet · p. 2, Radiological; p. 2, Radiological – Detection Range; p. 2, Radiological – Measurement Range · checked 2026-11-16
https://www.ludlum-slc.com/alpha-betaprobe_v040005/

[2] **Ludlum RDS Alpha-Beta Probe**
Ludlum Measurements · product-page · Specifications – Dimensions · checked 2026-11-16
https://www.ludlum-slc.com/alpha-beta-probe/

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.