ELSE NUCLEAR

LUPIN BF3

Neutron rem counter for pulsed fields

Monitoring unit for neutron H*(10) with unusually good performance in pulsed radiation fields, for example around accelerators. The rem counter has a BF_3 proportional counter in a cylindrical moderator and built-in electronics that calculate the H*(10) rate every second and send it to a SATURN ratemeter. The LITE version is lighter and measures up to 20 MeV.



Detector type	Energy range	Weight
BF_3 proportional counter in a cylindrical moderator, with built-in power supply, signal management and control electronics [1]	**.025 eV–10 GeV (standard); .025 eV–20 MeV (LITE)** [2]	**18 kg; 15 kg (LITE)** [2]

Specifications

DETECTOR

Detector type	BF_3 proportional counter in a cylindrical moderator, with built-in power supply, signal management and control electronics	[1]

MEASURING RANGE

Energy range	0.025 eV–10 GeV (standard); 0.025 eV–20 MeV (LITE)	[2]
Dose-rate range	H*(10): 10 nSv/h–100 mSv/h	[2]
Neutron sensitivity	0.6 cps/(µSv/h)	[2]
Gamma sensitivity	<0.5 µSv/h at 50 mSv/h (662 keV)	[2]
Angular dependence	<20%	[2]
Energy response	Fits the ICRP74 conversion curve; unaffected by signal pile-up	[1]

ELECTRONICS & SIGNAL

Maximum H*(10) per burst in pulsed fields	2 µSv with underestimation ≤10%	[2]

CONNECTIVITY & INTERFACE

Communication	RS232 (default), RS485/422 for long distances, Ethernet up to 1 km	[2]

POWER & BATTERY

Power supply	Built-in power supply with signal management and control electronics	[2]

MECHANICAL

Dimensions	Ø250 × 425 mm	[2]
Weight	18 kg; 15 kg (LITE)	[2]

ENVIRONMENT & RATINGS

perating temperature	0–50 °C	[2]
IP rating	IP54 version available as an accessory	[2]

ORDERING & ACCESSORIES

ptions	LITE version, radiation-sensitive electronics in a separate rack, ultra-fast response (alarm in 50 ms), battery-operated version; on request traceable calibration (Am-Be), trolley, IP54 configuration and flight case	[2]

GENERAL

Gas filling pressure	Cylindrical BF_3 detector, 0.26 atm	[2]
Compatibility	SATURN ratemeter that displays the H*(10) rate and integrated values and compares them with alarm thresholds	[1]

Sources

[1] LUPIN BF3 Neutron Rem Counter for Pulsed Fields
ELSE NUCLEAR · product-page · Product page · checked 2026-10-16
https://www.elsenuclear.com/portfolio/lupin-bf3/

[2] LUPIN BF3 Neutron Rem Counter for Pulsed Fields (datasheet)
ELSE NUCLEAR · datasheet · p. 2, Technical Specifications; Datasheet · checked 2026-10-16
https://www.elsenuclear.com/wp-content/uploads/2025/05/DAT_LUPIN_EN_1.12.pdf

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.