

The Thermo Scientific MP 320 is a lightweight, portable neutron generator suited for field or laboratory applications.

Thermo Scientific MP 320

Lightweight, Portable Neutron Generator



Features

- Digital control, operation, diagnostics
- 10^8 n/s, 250 Hz to 20 kHz pulse rate
- Easy systems integration
- Low power, less than 50 watts

The Thermo Scientific MP 320 is a very lightweight portable neutron generator suited for the most demanding field or laboratory applications. It has very low power requirements and may be operated from battery or vehicle power sources. It is available with either a Deuterium-Tritium (DT) or a Deuterium-Deuterium (DD) neutron tube.

Applications

- Explosive detection
- Buried land mines
- Chemical weapons
- UXO analysis
- Drug detection
- *In-Vivo* body composition
- Minerals mining and exploration
- Bulk materials (coal, cement)

Thermo Scientific MP 320 Neutron Generator

Technical Specifications

Neutron Yield	1.0E+08 n/s
Neutron Energy	14 MeV
Typical Lifetime	1,200 hours @ 1x10 ⁹ n/s
Pulse Rate	250 Hz to 20 kHz, continuous
Duty Factor	5% to 100%
Minimum Pulse Width	5 µsec
Pulse Rise Time	Less than 1.5 µsec
Pulse Fall Time	Less than 1.5 µsec
Maximum Accelerator Voltage	95 kV
Beam Current	60 µamps
Power Supply	Integral
Neutron Module	12.07 cm x 57.15 cm (4.75 in x 22.5 in)
Control Module	Integral, digital
Safety Features	Keylock: on/off Emergency: on/off Normal-open and normal-closed interlocks Pressure switch
Total Weight	12 kg (26.46 lb)
Remote Control	RS-232/RS-485

General Specifications

Software	Open source text or GUI
Electronics	Radiation tested to 80,000+ hours equivalent
Configuration	OEM-type available
Analysis Methods	Inelastic scattering, thermal capture, delayed activation
Generator Characteristic	Pulsed output, 250 Hz to 20 kHz, or continuous

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