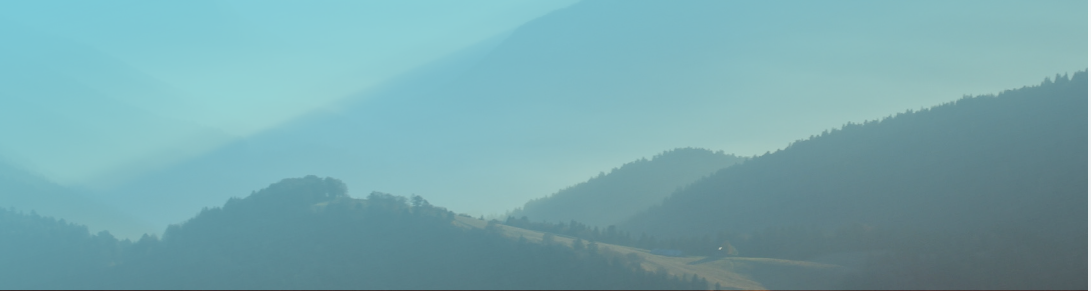
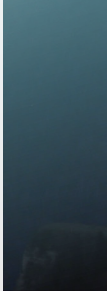




TRILLIUM 120QA

LOW-POWER VAULT SEISMOMETER

Nanometrics' commitment to investment in technology has led to an updated version of the proven Trillium 120QA Vault Seismometer. The latest generation Trillium 120QA maintains all of the performance and capabilities of the previous generation while reducing power consumption by over 50% as well as making it even smaller and lighter.

Local, Regional & Teleseismic Studies

The Trillium 120QA is ideal for local, regional, and teleseismic studies having a response flat to velocity from 120 seconds to 150 Hz with exceptionally low self-noise. Operators will appreciate the low-power consumption, automatic mass centering, and robust no-mass lock design inherent in all Trillium seismometers.

A Highly Integrated Station Solution

When using the T120QA with our popular Centaur digitizer, you'll have access to a digital leveling bubble through the Centaur GUI. The virtual leveling bubble makes for easy leveling in tight spaces and gives you the ability to check levelness at any time.

Also Available:

Trillium 120 Borehole, Trillium 120 Posthole, Trillium 120 Slim Posthole, and Trillium Horizon 120 for downhole or vault installations.

TrilliumQA

Benefits:

- Ultra-low power consumption (230 mW)
- Robust aluminum pressure vessel designed for vault installations
- Ideal for regional and teleseismic studies
- Light weight and easy to deploy
- Automatic mass centering can be remotely initiated

TECHNICAL SPECIFICATIONS TRILLIUM 120QA

Specifications subject to change without notice. Refer to User Guide for detailed and comprehensive specifications.

TECHNOLOGY

Topology: Symmetric triaxial
Feedback: Force balance with capacitive transducer
Mass centering: Automatic mechanical recentering, can be remotely initiated

PERFORMANCE

Self-noise: See self-noise graph
Sensitivity/model T120-QA-SV2-2000: (Nominal) 2000 V•s/m; (Actual) 1999.1 V•s/m ±0.5%
Sensitivity/all other models: (Nominal) 1200 V•s/m; (Actual) 1202.5 V•s/m ±0.5%
Accuracy: ±0.5% relative to User Guide specification
Bandwidth: -3 dB points at 120 s and 150 Hz
Clip level:

- 16.6 mm/s up to 10 Hz and 0.12 *g* above 10 Hz (Standard Model)
- 10.0 mm/s up to 20 Hz and 0.12 *g* above 10 Hz (2000 V/s/m Model)

Dynamic Range:

- 168 dB @ 1 Hz (Standard Model)
- 164 dB @ 1 Hz (2000 V/s/m Model)

Temperature: ±45°C without recentering

POWER

Supply Voltage: 9 to 36 V DC isolated input
Power Consumption: 230 mW typical quiescent
Protection:

- Reverse-voltage and over-voltage protected
- Self-resetting over-current protection

INTERFACE

Connector: 19-pin UTS7-14D19P32
Velocity Output: 40 V peak-to-peak differential

- Selectable XYZ or UVW mode

Mass Position Output: Three independent ±4 V outputs
Calibration Input: Single voltage input with one active-high control signal for all channels; calibration with XYZ or UVW
Control Lines: Mass Center, Calibration Enable, XYZ/UVW mode
Serial Port:

- RS-232 compatible serial IP (SLIP) with onboard HTTP web server to select sensor operating modes, and to access state-of-health, virtual level bubble, firmware updates and metadata
- Plug-and-Play automated workflow interface to select sensor operating modes, and to access state-of-health, virtual level bubble and metadata

PHYSICAL

Diameter: 171.5 mm
Height: 175 mm, not including connector and feet

- 205 mm, including connector and feet

Weight: 5.3 kg

LEVELING AND ALIGNMENT

Bubble level: Factory Installed
Digital bubble level: Graphical bullseye level is available via Centaur digital recorder GUI
Digital tiltmeter: Reports case tilt from vertical for easy installation and remote troubleshooting when using Centaur digital recorder
Alignment: North line on cover and vertical scribe marks for N and S on base

ENVIRONMENTAL

Operating Temperature: –20°C to +70°C
Storage Temperature: –40°C to +70°C
Optional: Insulating cover available for best performance, with quick and convenient installation
Humidity: 0% to 100%
Shock:

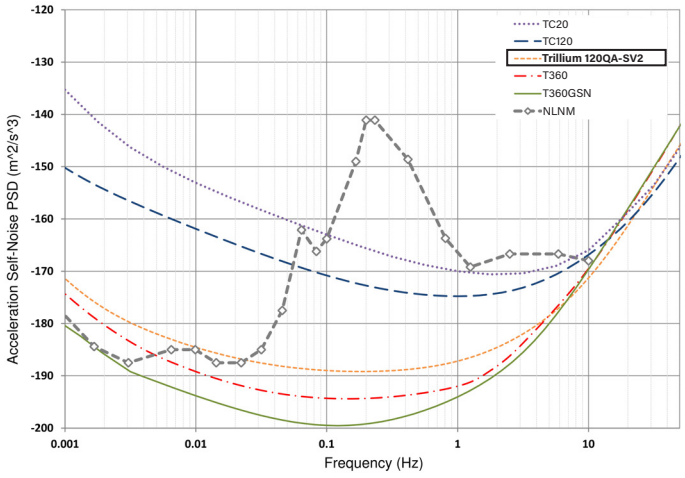
- 20 *g* half sine, 5 ms without damage, 6 axes
- no mass lock required for transport

Ingress Protection: Rated to IP68 and NEMA 6P to 2 m for prolonged immersion

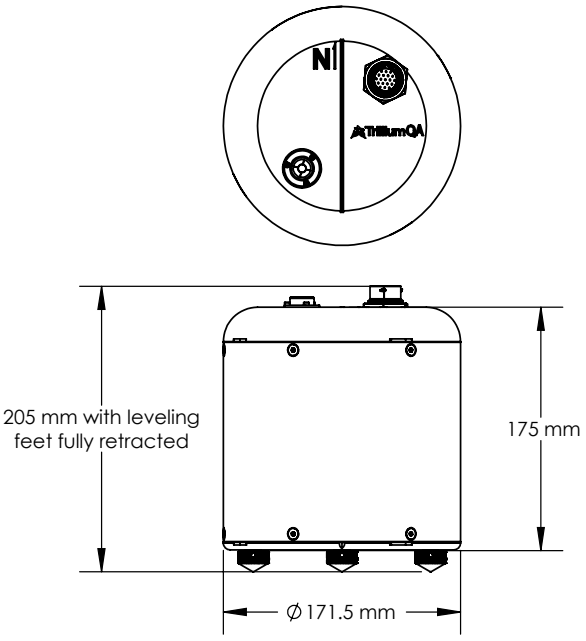
AVAILABLE MODELS

T120-QA-SV2: Standard Model
T120-QA-SV2-2000: 2000 V/s/m Model

SELF-NOISE GRAPH



Seismometer self-noise plotted against NLNM (after Peterson, 1993) and MLNM (after McNamara and Buland, 2004)



Contact a product expert Toll Free: 1 855 792 6776 | sales_mkt@nanometrics.ca

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Listening to the Earth

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