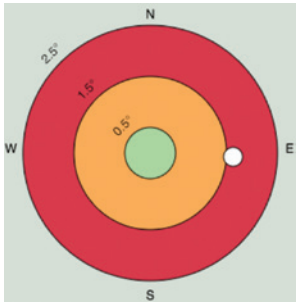
Trillium Horizon

We've taken the popular and proven Trillium 120QA technology, adding more utility to its already low self noise and outstanding broadband performance. The Trillium Horizon 120 is the first-ever instrument designed to ideally suit both direct bury and vault use cases. This lightweight, easy-to-deploy sensor can be direct buried at shallow depth or set on a pier. You'll have access to all the benefits of direct bury (including better performance and lower logistical costs) while still having the option of a vault install.

The Horizon is ideal for instrument pools; it gives you all the versatility you need with a smaller financial investment and less storage space required than purchasing both vault and direct-bury instruments.

When using the Horizon with our popular Centaur digitizer, you'll have access to a graphical virtual levelling bubble through the Centaur GUI. The virtual levelling bubble makes for easy levelling down a dark hole, or once buried, gives you the ability to check levelness at any time.



Graphical virtual leveling bubble accessible through the Centaur GUI

The Trillium Horizon:

- is designed for both shallow bury and vault installs
- is ideal for regional and teleseismic studies
- is highly portable and easy to deploy
- features a virtual bubble level for easy downhole levelling
- is stainless steel and resistant to the elements
- offers best-in-class power consumption
- is immersible to 10m (able to survive indefinitely in a flooded vault)
- has a top-mounted connector to facilitate direct bury
- has fully automatic mass centering

Our available accessories ensure fast and easy deployment.

- Sensor cables
- Transport case
- Alignment and levelling toolkit
- Insulating cover
- Lifting cable

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Nanometrics

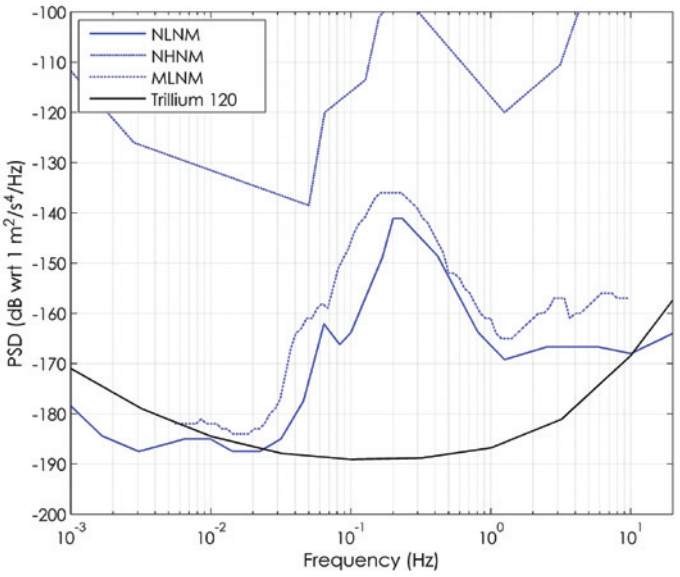
SPECIFICATIONS

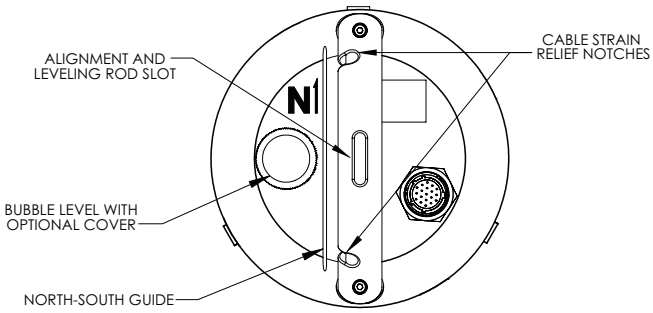
Trillium | Horizon

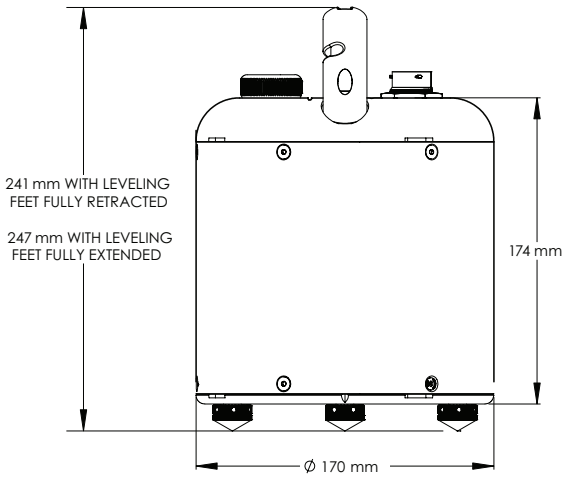
Specifications subject to change without notice.

PERFORMANCE	
Self-noise	See self-noise graph
Sensitivity	1200 V-s/m (reference User Guide for precise value)
Precision	±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 0.17 *g* above 10 Hz
Temperature	±45°C without recentering
INTERFACE	
Connector	19-pin UTS7-14D19P32
Velocity output	• Selectable XYZ (east, north, vertical) or UVW mode • 40 Vpp differential
Mass position output	Three independent voltage outputs
Calibration input	Single voltage input with one active-high control signal for all channels; calibration with XYZ or UVW; individual channels selectable via web interface
Control lines	Mass Center, Calibration Enable, XYZ/UVW mode
Serial port	RS-232 compatible serial IP (SLIP) Onboard web server standard HTTP For enhanced instrument control and status: automatic mass centering, UVW/XYZ mode, short/long period mode, firmware updates, temperature, mass position, case tilt, virtual bubble level, serial number and factory info
POWER	
Supply voltage	9 to 36 V DC isolated input
Power consumption	490 mW typical quiescent
Protection	• Reverse-voltage protected • Self-resetting over-current protection • No fuse to replace
TECHNOLOGY	
Topology	Symmetric triaxial
Feedback	Force balance with capacitive transducer
Mass centering	Automatic mechanical recentering, can be remotely initiated
LEVELING AND ALIGNMENT	
Bubble level	Removable and can be protected by optional cover
Virtual bubble level	Graphical bullseye level is available via Centaur digital recorder GUI
Alignment	Vertical scribe marks for (N and S); precision guide in cover for straight-edge, line, or laser level
PHYSICAL	
Diameter	170 mm
Height	174 mm 241 mm with handle and feet
Weight	9.8 kg
Handling	Detachable lifting handle included
ENVIRONMENTAL	
Operating temperature	–20 °C to 60 °C (Ultra-low temperature option available. Please contact Nanometrics.)
Storage temperature	–40 °C to 70 °C
Optional	Insulating cover available for 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
Water immersion	Rated to IP68 and NEMA 6P for prolonged submersion to 6 m

SELF-NOISE GRAPH







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