TRILLIUM COMPACT HORIZON
VAULT & DIRECT BURY SEISMOMETER

We've taken the proven Trillium Compact and made it even smaller and lighter, with no compromise in ruggedness or performance. This true broadband seismometer is ideal for both shallow direct burial and vault applications, where minimal size, weight and power are essential.

Performance and Versatility
The ultra-portable Trillium Compact Horizon maintains every aspect of the Trillium Compact performance while being the smallest and lightest model ever produced. At just over 1 kg, it is 1/3 of the weight of the direct-bury Trillium Compact Posthole.

The updated design now meets a broader range of use cases, featuring a corrosion proof titanium housing that can be shallow buried up to 10 m depth.

The Result of Continuous Improvement
The innovative Trillium Compact Horizon is the result of continuous research and engineering that has produced ground-breaking advances in performance, size, weight and power in several new instruments, including the Trillium SlimPH and the Trillium 360 GSN for the Global Seismographic Network.

Nanometrics' commitment to ongoing product development is demonstrated across our instrument portfolio and has resulted in this improved version of our most compact seismometer.

Suite of Low-Power Instrumentation
When paired with the Nanometrics' Low-Power Pegasus Data Acquisition System, a Compact Horizon station uses less than 400 mW of power.

The exceptionally low power consumption significantly reduces battery requirements and extends experiment durations even further.

Benefits:
- Designed for both shallow bury and vault installs
- Highly portable and easy to deploy
- Offers best-in-class power consumption
- Immersible to 10 m (able to survive indefinitely in a flooded vault)
- Top-mounted connector to facilitate direct bury
- Compatible with existing Trillium Horizon cables

Ask us about our ultra-low temperature options
TECHNICAL SPECIFICATIONS TRILLIUM COMPACT HORIZON
Specifications subject to change without notice

TECHNOLOGY
Topology: Symmetric triaxial
Feedback: Force balance with capacitive transducer
Mass centering: Not required

PERFORMANCE
Self-noise: See self-noise graph
Nominal Sensitivity: 750 V-s/m (reference User Guide for precise value)
Precision: ±0.5% relative to User Guide specification
Bandwidth/120s: -3 dB points at 120 s and 108 Hz
Bandwidth/20s: -3 dB points at 20 s and 108 Hz
Off-axis Sensitivity: ±0.5%
Clip level: 26 mm/s up to 10 Hz and 0.17 g above 10 Hz
Oper. Tilt Range/120s: ±2.5°
Oper. Tilt Range/20s: ±10°
Parasitic Resonances: None below 200 Hz
Dynamic Range: > 152 dB @ 1 Hz

LEVELING AND ALIGNMENT
Leveling: Locking feet included
Physical Bubble Level: Accessory included
Digital Bubble Level: Graphical bubble 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

INTERFACE
Connector: 19-pin UT57-14D19P32
Velocity Output: 40 V peak-to-peak differential
Selectable XYZ or UVW mode
Mass Position Output:
• Three independent ±4 V outputs
• Three channel mass positions available through serial port
Calibration Input:
• Single voltage input and one active-high control signal to enable all three channels
• Remote calibration in XYZ or UVW mode
• Independent channel selection by serial port
Control Lines:
• Calibration供电 or Long/short period mode, XYZ/UVW mode
Serial Port: RS-232 compatible serial IP (SLIP)
Onboard web server standard HTTP
For enhanced instrument control and status: UVW/XYZ mode, short/long period mode, firmware updates, temperature, mass position, case tilt, digital bubble level, serial number and factory info

POWER
Supply Voltage: 9 to 36 V DC isolated input
Power Consumption/120s: 180 mW typical
Power Consumption/20s: 195 mW typical
Protection:
• Reverse-voltage and over-voltage protected
• Self-resetting over-current protection

PHYSICAL
Diameter: 85.5 mm
Height: 101 mm - case height
138 mm - including handle
Weight: 1.1 kg
Housing: Titanium

ENVIRONMENTAL
Operating Temperature:
• –20°C to 60°C (Ultra-low temperature option available. Please contact Nanometrics.)
Storage Temperature:
• –40°C to 70°C
Shock:
• 100 g half sine, 5 ms without damage, 6 axes
• no mass lock required for transport
Magnetic:
• Insensitive to natural variations of the earth's magnetic field
Weather Resistance:
• Rated to IP68
Water Immersion:
• 10 m

SELF-NOISE PERFORMANCE PLOT

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

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