

# TRILLIUM COMPACT COMPACT POSTHOLE SEISMOMETER

Don't let your seismometer limit you. The Trillium Compact Posthole is a small, ruggedized, waterproof member of the industry-leading family of Trillium seismometers.

## Forget complex deployments

At just 3.3 kgs (or just over 7 lbs) and with the installation convenience comparable to a geophone, the Trillium Compact PH is the obvious choice for those who don't want their experiments to be limited – by a complex deployment of bulky instrumentation, by the overburden, by the effects of moisture, by thermal instability, by high power consumption or by installation technique.

## No vault required

Its corrosion, scratch and chip-resistant stainless steel enclosure, waterproof connector and rating to IP68 for full submersion in water makes the Trillium Compact PH ideal for direct burial, even in arid, polar or wet environments.

## Ultra-low power consumption

Both variants of the Trillium Compact PH – the 120s and 20s – boast ultra-low power consumption, at <180 mW and <195 mW respectively. And its optional transport case doubles as a thermal insulating cover for surface deployments.

## A highly integrated station solution

When using the Trillium Compact PH 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 down a dark hole, or once buried, gives you the ability to check levelness at any time.

## Also available:

- Trillium Compact Horizon, Meridian Compact Posthole and Trillium Cascadia



 **Trillium**  
**CompactPH**

The Trillium Compact PH is rugged enough to be buried directly in an ice shelf, light enough for easy portability on a volcano, and intuitive enough to be deployed in minutes.



*Polar Certified Model  
available for operating  
temperatures down to -50°C*

# TECHNICAL SPECIFICATIONS TRILLIUM COMPACT PH

Specifications subject to change without notice

## TECHNOLOGY

**Topology:** Symmetric triaxial  
**Feedback:** Force balance with capacitive transducer  
**Mass Centering:** Not required

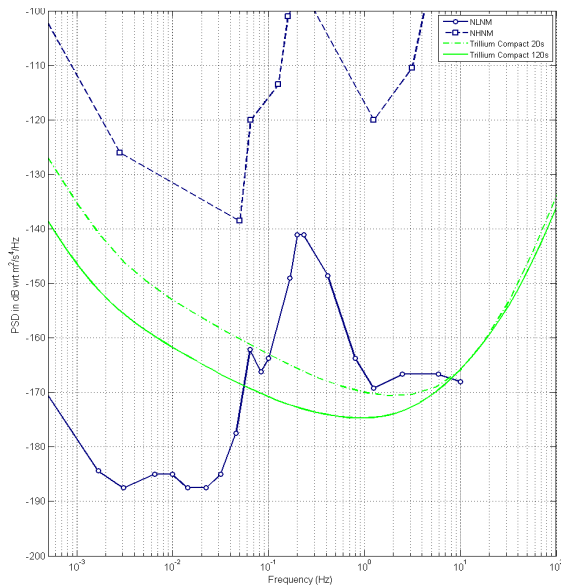
## SEISMOMETER MODULE PERFORMANCE

**Self-noise:** See self-noise graph  
**Nominal Sensitivity:** 750 V-s/m (reference User Guide for precise value)  
**Precision:**  $\pm 0.5\%$  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  
**Clip level:** 26 mm/s up to 10 Hz and 0.17 g above 10 Hz  
**Oper. Tilt Range/120s:**  $\pm 2.5^\circ$   
**Oper. Tilt Range/20s:**  $\pm 10^\circ$   
**Parasitic Resonances:** None below 200 Hz  
**Dynamic Range/120s:** 159 dB @ 1 Hz  
**Dynamic Range/20s:** 156 dB @ 1 Hz

## LEVELING AND ALIGNMENT

**Digital bubble level:** Graphical bullseye level is available via Centaur digital recorder GUI  
**Physical Bubble level:** Optional accessory  
**Alignment:** Vertical scribe marks for (N and S); precision guide in cover for straight-edge, line, or laser level

## SELF-NOISE PERFORMANCE PLOT



## INTERFACE

**Connector:** 16-pin, marine SubConn, top-mounted (for models TC120-PH2-XH, TC20-PH2-XH) SubConn MCBH16MNM (for all other models) SubConn MCBH16MSS  
**Velocity Output:** 40 V peak-to-peak differential  

- Selectable XYZ or UVW mode

**Mass Position Output:** Single  $\pm 4$  V output representing maximum mass position  

- 3-channel mass positions available through serial port

**Calibration Input:** Single voltage input and one active high control signal to enable all 3 channels  

- Remote calibration in XYZ or UVW mode
- Independent channel selection by serial port

**Control Lines:** Cal. Enable or Long/Short Period mode, 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

## AVAILABLE MODELS

**TC120-PH2:** 120 second Standard Model  
**TC120-PH2-XC:** 120 second Polar Certified Model  
**TC120-PH2-XH:** 120 second Plastic Connector  
**TC20-PH2:** 20 second Standard Model  
**TC20-PH2-XC:** 20 second Polar Certified Model  
**TC20-PH2-XH:** 20 second Plastic Connector

## POWER

**Supply Voltage:** 9 to 36 VDC isolated input  
**Power Consumption:**  

- 180 mW typical (model TC120-PH2)
- 195 mW typical (model TC20-PH2)

**Protection:** Reverse-voltage and over-voltage protected  

- Self-resetting over-current protection

## PHYSICAL

**Diameter:** 97 mm  
**Height:**  

- Body & connector: 160 mm
- On fixed studs: 167 mm

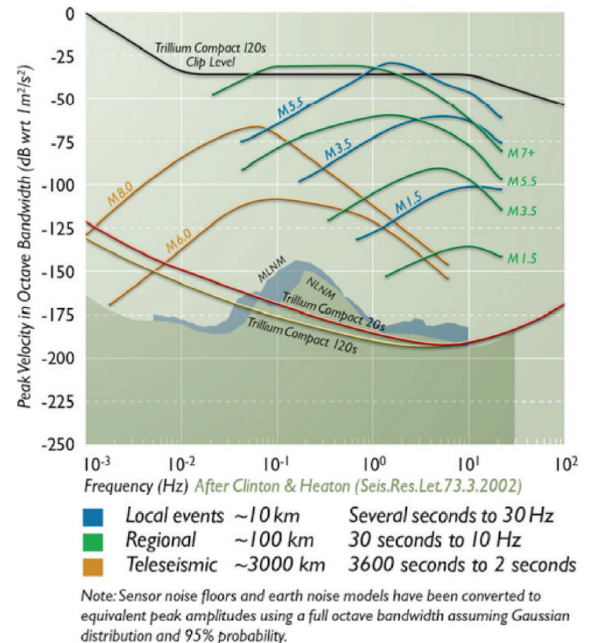
**Weight/120s:** 3.2 kg  
**Weight/20s:** 3.2 kg  
**Housing:** Stainless steel, resistant to corrosion, scratches & chips

## ENVIRONMENT

**Operating temperature:**  
 -20°C to 60°C (Standard Model)  
 -50°C to 60°C (Polar Certified Model)  
**Storage temperature:**  
 -40°C to +70°C (Standard Model)  
 -60°C to +70°C (Polar Certified Model)  
**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  
**Ingress Protection:** Rated to IP68 to 300 m for prolonged immersion  
**Humidity:** 0% to 100% (submersible)



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



Listening to the Earth

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