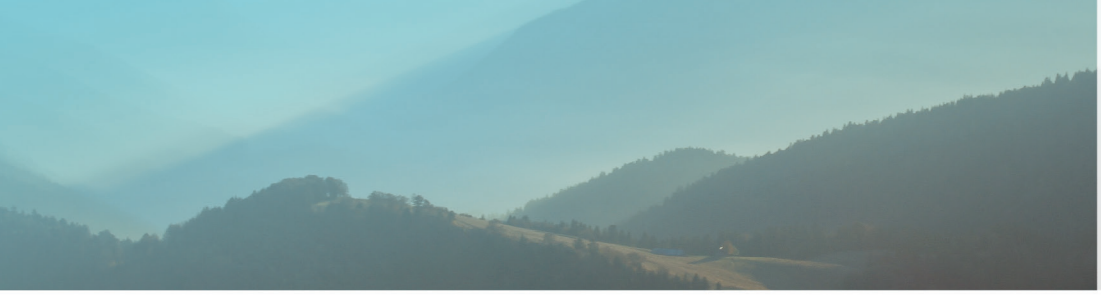

MERIDIAN COMPACT
ALL-IN-ONE DIGITAL POSTHOLE SEISMOGRAPH

Introduced in 2009, the Trillium Compact's small size and portability revolutionized broadband fieldwork. The Meridian Compact PH takes broadband to an entirely new level, by marrying the sensor to the digitizer and recorder.

As shallow as possible, as deep as necessary

Direct bury installation consistently demonstrates performance gains. And combining technologies in a single unit keeps things simple: the Meridian Compact PH seismograph is extremely easy to deploy, with no-mass lock or mass centering required. Its exceptionally small size and generous operational tilt range significantly reduces the time and effort required for site preparation and installation.

Metadata you can trust

Instrumentation configuration is made easy with an intuitive user interface. Once configured, the Meridian Compact PH builds its own metadata. With the digitizer and sensor housed in a single unit, Dataless SEED or RESP response files are internally built and guaranteed to be correct every time.

This next-generation seismograph is a marvel of miniaturization, with no compromise in performance

- Accurate
- Deployable
- Portable
- Serviceable

Meridian CompactPH

The combination of two proven technologies in a single instrument maintains a small station footprint.

Ask us about our ultra-low temperature options

nanometrics

nanometrics.ca

TECHNICAL SPECIFICATIONS MERIDIAN COMPACT PH

Specifications subject to change without notice

SENSOR: Trillium Compact Seismometer

See the Trillium Compact Seismometer specifications for more details.

TECHNOLOGY

Topology: Symmetric triaxial
Mass centering: None required
Operational tilt range: 120s model: ±2.5°
20s model: ±10°

PERFORMANCE

Bandwidth/120s: -3 dB corners at 120 s and 108 Hz
Bandwidth/20s: -3 dB corners at 20 s and 108 Hz
Clip Level: >26 mm/s up to 10 Hz and 0.17 *g* above 10 Hz

DIGITAL RECORDER

DIGITIZER PERFORMANCE & CAPABILITIES

Type: 24-bit ADC per channel, simultaneous sampling
Dynamic range: 142 dB @ 100 sps (full-scale peak to RMS shorted-input noise)
Selectable Gain: 1, 2, 4, 10
Sensitivity: 300, 600, 1200, 3000 counts/(µm/s), 1% accuracy
Sample rates: 1, 2, 5, 10, 20, 40, 50, 80, 100, 125, 200, 250, 500, 1000, 2000, 5000 sps
Dual Sample Rates: A second sample rate can be selected from the sample rates above
Decimation Filter: Selectable linear phase (non-causal) or minimum phase (causal)
Anti-alias Filters: -140 dB (linear phase) or -120 dB (minimum phase) at Nyquist frequency, 0 dB at 80% Nyquist
Digital Filters:

- User-configurable low-pass and high-pass
- 1st to 5th order, 0.1mHz to Nyquist
- Different filters may be configured for primary and secondary sample rates

Orientation Correction: User configurable onboard 3-D data rotation for correcting azimuth and tilt

CALIBRATION

Signal Source: 16-bit DAC with 30 ksps output
Attenuator: Selectable 1, 10, 100 attenuation
Waveforms: Synthesized sine, PRB signals
Playback user defined calibration files

RECORDING (CONTINUOUS)

Formats: MiniSEED
Internal Media: 8 GB flash memory
(32 or 64 GB options available)
Removable Media: SD Card up to 64 GB

RECORDING (EVENTS)

Triggers: Bandpassed STA/LTA, Threshold
Captured Data: MiniSEED, ASCII

DATA RETRIEVAL

File Transfer: Via Ethernet, Ethernet-connected DSL, VSAT, cellular, radio
Media Exchange: Weather-sealed data cartridge that is field-swappable during continuous recording with no loss of data
Response Metadata: Generate and download full digitizer/sensor response files in RESP or Dataless SEED format

DATA STREAMING

Continuous: Seismic data and State-of-Health data
Formats: SeedLink, Nanometrics NP
Events: Triggered event data: email, secure file transfer, other options available

TIMING - GNSS & PRECISION NETWORK TIMING

Timing System: Internal DCXO clock disciplined to selectable timing source
Timing Source: Select from GNSS, PTP (Precision Timing Protocol), NTP or free-running
Timing Server: Serve PTP or NTP time to other Meridian, Titan SMA/EA or Centaur
Timing Accuracy:

- <5 µsec (GNSS Always On)
- <100 µsec (GNSS duty cycled, PTP or local NTP)

GNSS Support: Internal 32-channel GNSS receiver
GNSS Power: Selectable: Always on, duty cycled, or off

COMMUNICATIONS

Web-based UI: Supports standard PC, tablet and mobile devices
Network interface: 10/100 Base-T Ethernet
IP Addressing: Static, dynamic (DHCP) or link-local IP address
Protocols: UDP/IP unicast/multicast, HTTP data streaming

SEISMOGRAPH SPECIFICATIONS

POWER

Power Input: 9-36 VDC isolated input
Consumption: 1.0 W (1.3 W with Ethernet) typical
Protection:

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

Battery Manager: User configurable low voltage shutdown and restart thresholds

ENVIRONMENTAL

Operating temperature: -20°C to +60°C (Ultra-low temperature option available, including the SIU. Please contact Nanometrics.)
Storage temperature: -40°C to +70°C
Shock: 100 *g* half sine, 5 ms without damage, 6 axes
Pressure: Insensitive to pressure
Weather/water resistance: Rated to IP68 continuous immersion up to 40 m
Humidity: 0 to 100%

PHYSICAL

Max. cable length: 40 m
Housing: Stainless steel
Weight: 3.3 kg
Height: 238 mm, including connector
Diameter: 97 mm
Removable digitizer: Digital recorder can be removed for servicing
Connector: 16-pin, Subconn Micro series, top mounted

SURFACE INTERFACE UNIT (SIU)

FEATURES

Status LEDs: Removable media, Archive, Time, Link, Sensor, System
Connectors:

- Power: 3-pin MIL-Circular
- Ethernet: 4-pin MIL-Circular
- Data cartridge: 8-pin MIL-Circular
- GPS antenna: TNC connector with 3.3 V supply for active antenna
- Meridian: 14-pin MIL-Circular

Data cartridge: Field-swappable, weather-sealed data cartridge that holds replaceable SD card (41 mm dia. x 67 mm)
Buttons: Media Eject, Shutdown

PHYSICAL/ENVIRONMENTAL

Housing: Powder coat aluminum with nickel-plated steel base
Weather/water resistance: Rated to IP67
Dimensions:

- Length: 180 mm
- Width: 83 mm
- Height: 43 mm including connectors

Specifications for Meridian Compact PH 120s and Meridian Compact PH 20s

Specifications are the same for both products unless otherwise stated. For more detailed specifications, please go to ***www.nanometrics.ca****.*

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

nanometrics
Strategic intelligence fueled by science

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