

Coming soon!



CODEVINTEC

Tecnologie per le Scienze della Terra

Meridian PH Compact All-in-one Digital Seismometer

Meridian Compact PH ships with a Surface Interface Unit which provides intuitive diagnostic LEDs enabling installations without the need for a smart device



Its small size and portability has changed the way we do broadband fieldwork and now the Meridian Compact Posthole takes broadband to an entirely new level.

Features

- > The Trillium Compact speaks for itself
Marrying the sensor to the digitizer, this second generation seismograph is the latest development in downhole installations. The Meridian Compact PH is a marvel of miniaturization with no compromise on performance.
- > As shallow as possible, as deep as necessary
It is extremely simple to deploy with no mass lock and no mass centering required. The exceptionally small size and self-correcting leveling system reduces time and effort for installation.
- > Meta data you can trust
Instrumentation configuration is made easy with the intuitive user interface. Once configured, the Meridian Compact PH builds its own meta data.
- > Less to forget, less to integrate
Combining proven technologies into a single package keeps it simple.

**Technical specifications**

Specifications are applicable to both Meridian Compact PH 120s and Meridian Compact PH 20s unless otherwise stated.

SURFACE INTERFACE UNIT (SIU)**External features**

LEDs	Status, Link, Time, Media, Sensor
Connectors	Power: 3-pin MIL-Circular Ethernet: Watertight RJ-45 connector GPS antenna: TNC connector with 3.3 V supply for active antenna receiver Sensor cable connector: 14-socket MIL-C-26482 Series I

Internal features

LED	Media eject
Media slot	Fits standard SD card
Buttons	Media eject, Power On/Off

Data recording and retrieval features

Recording	Removable SD card
Retrieval	Direct download or continuous streaming via Ethernet Media exchange: SD card field-swappable with no loss of data

Physical/environmental

Housing	Hard anodized aluminum
Weather/water resistance	Rated to IP-67
Dimensions	Length: 187mm (7.36 in.), end of sensor connector gland to end of housing at opposite end Width: 70mm (2.76 in.) Height: 49mm (1.93 in.), maximum height, top of GPS antenna connector to bottom of housing

SYSTEM PERFORMANCE**Sensor inputs**

Clip level	26, 13, 6.5, 2.6
System sensitivity	0.3016e9, 0.6032e9, 1.2064e9, 3.016e9 counts/(m/s)

SENSOR**Technology**

Topology	Symmetric triaxial
Mass centering	None required
Operational tilt range	Self-leveling (120 s): $\pm 2.5^\circ$ Self-leveling (20 s): $\pm 10^\circ$

Performance

Bandwidth	120 s: -3 dB corners at 120 s and 100Hz 20 s: -3 dB corners at 20 s and 100Hz
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DIGITIZER**Performance**

Type	24-bit ADC per channel
Dynamic range	>140 dB @ 100 sps, measuring full-scale sine wave amplitude to RMS shorted-input noise
Sample rates	1, 2, 5, 10, 20, 40, 50, 80, 100, 200, 250, 500, 1000, 2000, 5000 sps, plus dual sample rates
Calibration	16-bit DAC with 30 ksps output Various output attenuation: 1, 10, 100, 1000 Playback standard .wav files (step and sine wave provided) Custom waveforms may be used

Recording

Formats	MiniSEED, SEGY, Nanometrics NP, ASCII
Internal media	8GB flash memory (other capacities available upon request)
Removable media	Standard SD card slot in Surface Interface Unit (SIU)

Data retrieval

Modes of access at SIU	File transfer or continuous streaming via Ethernet Media exchange: SD card field-swappable with no loss of data
Data products	Peak ground motion (i.e., PGA, PGD, PGV) statistics available on instrument

Real-time communications

Real-time data products	Time series data (continuous or triggered) State-of-Health information Ground motion data products
Data formats	Nanometrics NP or SEEDLink

Timing

Timing System	Internal DCX0 clock disciplined to GPS
Accuracy	<100 μ s
GPS receiver	Internal 12 channel receiver
Duty cycle selectable	Always on – OR – Automatic (power saving option): GPS only turned on when necessary, will maintain timing accuracy to within 100 μ s
GPS (standard)	Internal GPS receiver via external antenna
PTP (optional)	High precision network timing via PTP Master on same LAN (available option)

Communications

Web-based UI	Supports standard PC, tablet and mobile platforms
Interface	10/100 Base-T Ethernet

Events

Triggers	Bandpassed STA/LTA, Threshold
Captured Data	MiniSEED, SEGY, ASCII
Data Products	Peak ground motion (i.e. PGA, PGV, PGD) statistics calculated on the instrument

POWER, ENVIRONMENTAL, PHYSICAL**Power**

Supply voltage	9-36 V DC isolated inputs
Consumption	(Ethernet inactive/active) Meridian PH: 1.6W/2.0W Meridian Compact PH: 1.1W/1.5W
Protection	Lightning surge protected Reverse-voltage and over-voltage protected Self-resetting over-current protection

Environmental

Operating temperature	-40 to + 65°C
Storage temperature	-65 to +75°C
Shock	100 g half sine, 5ms without damage, 6 axes
Pressure	Insensitive to pressure
Weather/water resistance	Rated to IP-68 continuous immersion up to 40m
Humidity	0 to 100%

Physical

Max. cable length	40m
Housing	Stainless steel
Weight	3 kg (6.6 lb.)
Height	210mm (8.27 in.), including eyebolts, body, feet
Diameter	97mm (3.82 in.)
Connector	14-pin, shell size 12, MIL-C-26482 Series I, top mounted inside IP-68 rated waterproof shroud
Removable digitizer	Digitizer can be removed for self-servicing