

## CME-4311ND

### Digital broadband seismometer

**CME-4311ND** is a digital 3-component low-noise broadband seismometer. A bandwidth of up to 60 sec provides recording of the most remote teleseismic occasions.

At its reasonable price, the seismometer can be used for most applications as an optimal solution on the price/quality ratio.

CME-4311ND is excellent not only for permanent installations but also for field seismological surveys through the model's integrated digital recording system, compact size, light weight, rugged housing, easiness in operation and low power consumption.



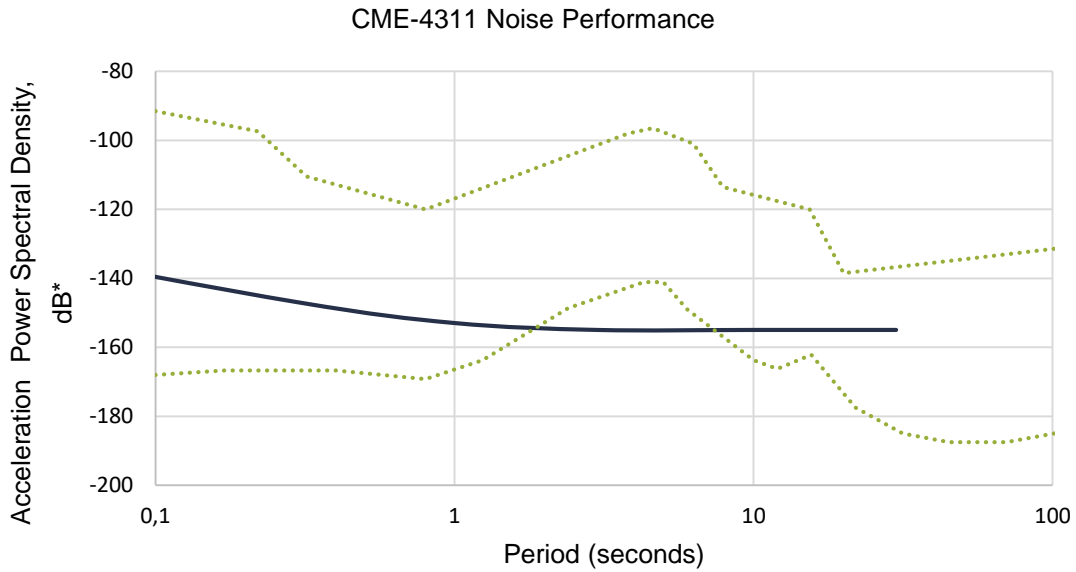
## Sensor specifications

Sensor type	Molecular-electronic seismic sensor
Axes	Up, North, East
Sensitivity	2000 $\frac{V}{m/sec}$ or by customer specification
Clip level	5 mm/sec
Bandwidth	0.016 (60 sec) – 50 Hz or customized down to 120 sec
Dynamic range at 1 Hz	124 dB
Cross-axis coupling	-60 dB
Nonlinearity at 1 Hz	0.5%
Temperature range	Standard -12°C - +55°C (10.4°F - 131°F) Low-temperature -40°C - +55°C (-40°F - 131°F)
Cold-start time	15 - 45 min
Maximum installation tilt	±15°
Leveling, mass locking	Not required
Intrinsic noise	35.6 nm/sec (71.2 μV) for 0.0167 – 50 Hz bandwidth <i>See Noise Performance figure below</i>

## Digitizer specifications

ADC type	Sigma-delta
Number of channels	3
ADC sampling rate	1, 10, 50, 100, 250, 500, 1000 Hz
ADC resolution	24 bit
ADC noise performance @ 100 sps	22 ENOB at gain = 1
GNSS receiver	GPS / GLONASS
GNSS timing accuracy	< 1μS
Data recording mode	Continuous Schedule
Data recording format	Internal binary, miniSeed, SEG converter
Data storage	32 Gb flash storage
Data transfer	High-speed USB 2.0 Wi-Fi IEEE 802.11b/g/n
Temperature range	-40 ... +85 °C
Inbuilt sensors for device health monitoring	Temperature sensor Voltage supply

Noise Performance



\*PSD is calculated in decibels with respect to  $1 \frac{m/sec^2}{\sqrt{Hz}}$ .

Electrical specifications

Standard supply voltage	12 V Nominal (9-36 V permissible) or 5 V from USB
Power consumption during stand-alone recording	< 1 W

Mechanical specifications

Connector type	10-pin PC-10 multipurpose connector SMA-A for active/passive GPS/GLONASS antenna SMA-A for Wi-Fi antenna Amphenol Straight Panel Mount USB-B
Delivery set	1.5 m USB A-B cable 3 m GPS antenna Wi-Fi antenna SMA A/B adapter 32 GB microSD card installed 0.6 m PC-10 USB cable 1.5 m Analogue cable
Dimensions	Diameter 180 mm Height without handle 160 mm Height with handle 195 mm
Weight	5.3 kg
Case	Aluminum
Case accessories	Bubble level, handle, 3 feet, 2 pointers