

PRELIMINARY



DATA-SHEET TELLUS BB



# TELLUS-BB

## BROAD BAND SEISMOMETER

### KEY FEATURES

DYNAMIC RANGE > 150dB

FREQUENCY RANGE 200s-20s ÷ 100 Hz

TRANSDUCTION FACTOR 1500V/m/s (S)

HIGH ACCURACY

LOW SELF-NOISE

GOOD THERMAL STABILITY

LOW POWER

ROBUST

PRECISION FACTORY CALIBRATION

## High Performance triaxial broad-band seismometer.

Tellus-BB is a high quality broad-band triaxial seismometer designed for easy deployment and safe transport.

Tellus-BB is based on Galperin configuration which allows to more easily distinguish external noise sources from internal ones and achieve higher performance.

Tellus-BB can be ordered with a flat band-pass between 200s-20s and 100Hz. The lower frequency corner can be customized at the order. The transduction factor is 1500V/m/s, the output differential 40Vpp.

Tellus-BB is manufactured in aluminum (surface treatment) housing offering a high level of protection IP68K making it ideal for harsh environment and for field use.

Tellus-BB is robust magnetic shielded and exhibits a low temperature sensitivity.

National Seismic Networks / Site Response  
 Regional and Tele-seismic Events / Magnitude Estimation  
 Restitution of ground displacement / Event Detection and Location  
 Volcano eruption / Early Warning

APPLICATIONS

**TIPOLOGY** Galperin arrangement, Force feedback capacitive transducer  
**VELOCITY OUTPUT XYZ** XYZ (H and V motion) or UVW (masses motion)  
**BANDWIDTH** 200-20s to 100 Hz (customizable)  
**DYNAMIC RANGE** > 150dB between 0.1 Hz and 10 Hz  
**TRANSDUCTION FACTOR** 1500V/m/s (customizable)  
**SELF NOISE** < USGS NLNM between 0.02 to 25Hz  
**OUTPUT** Velocity differential 40Vpp XYZ Mass position Single 10Vpp  
**CLIP LEVEL** 13mm/s  
**TILT TOLERANCE** +/- 3°  
**OUTPUT IMPEDANCE** 2x100 Ohm  
**CALIBRATION** Via dedicated calibration coils (analog test signals)  
**MASS LOCKING AND CENTERING** Auto, via Control Lines or RS232

PERFORMANCE

**CONNECTORS** MIL-STD 26 pin male  
**DIGITAL INTERFACE** RS232 commands and diagnosis  
**CONTROL LINES** GPIOs and Analog Outputs

INTERFACE

**SUPPLY VOLTAGE** 9 to 40 V DC isolated input  
**POWER CONSUMPTION** 50mA@12V  
**PROTECTION** Reverse-voltage, overvoltage and surge-protected Isolation  
**GROUNDING** Predrilled hole  
**REGULATION** CE compliance

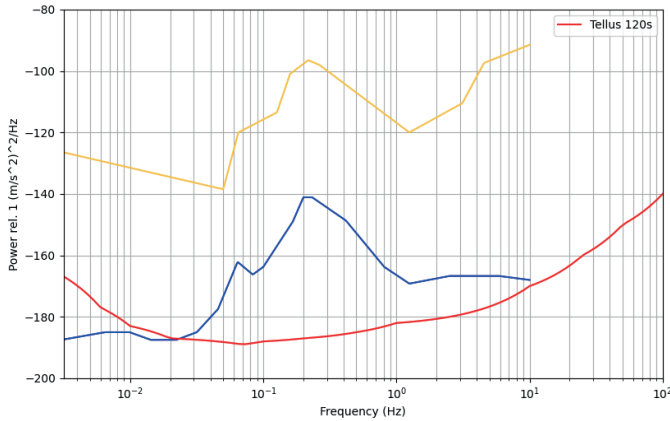
POWER SUPPLY

**OPERATING TEMPERATURE** -20°C to +70°C (+/-25°C without recentering)  
**STORAGE TEMPERATURE** -40°C to +80°C  
**HUMIDITY** 0 to 100%  
**WEATHER RESISTANCE** IP68K

OP. CONDITIONS

**HOUSING** aluminum surface treatment  
**LEVELING** Integrated leveling bubble and adjustable locking leveling screws for spikes  
**OD** 230 mm  
**HEIGHT** 254 mm  
**WEIGHT** 16 Kg  
**CABLE** 3m or custom  
 Shock MIL STD 810G

PHYSICAL



Version with top connectors