



TELLUS BH-FB 160

BOREHOLE TRUE MECHANICAL
FORCE BALANCE ACCELEROMETER

KEY FEATURES

HIGH DYNAMIC RANGE UP TO 160dB

FREQUENCY RANGE DC ÷ 80Hz (200HZ OPT)

FULL SCALE RANGES AVAILABLE $\pm 0.5G$, $\pm 1G$, $\pm 2G$, $\pm 4G$

HIGH ACCURACY

LOW SELF-NOISE

GOOD THERMAL STABILITY

POWER SUPPLY FROM 5V UP TO 40V

Specifically designed
for borehole installation
down to 300m.

TELLUS BH-FB 160 is a high performance true mechanical force balance accelerometer which was conceived specifically for borehole installation. Thanks to the high dynamic range the TELLUS BH-FB 160 provides excellent data both where the seismic noise is extremely low (as in environmental noise) and in the presence of strong motion events. Our standard true force balance accelerometer comes with a frequency range from 0 to 80Hz, this range is tuned expressly for structural and seismic analysis where the higher frequencies are of no practical interest. Lunitek provides custom bandwidth extension up to 200Hz for scientists and engineers who are interested in evaluating motions at higher frequency. TELLUS BH-FB 160 is available in four ranges: $\pm 0.5g$, $\pm 1g$, $\pm 2g$, $\pm 4g$.

Seismic Monitoring
 Structural Monitoring
 Oil and gas exploration
 Ambient seismic noise monitoring

APPLICATIONS

TPOLOGY Triaxial
FEEDBACK Force balance
FULL-SCALE RANGE $\pm 4g, \pm 2g, \pm 1g, \pm 0.5g$,
BANDWIDTH DC to 80 Hz -3 dB point (200Hz extension available)
DYNAMIC RANGE (Integrated RMS)
 160 dB @ 1 Hz over 1 Hz bandwidth
 150 dB, 3 to 30 Hz
OFFSET < 1mg
NON-LINEARITY < $\pm 0.1\%$ FS
SCALE FACTOR TEMPERATURE COEFFICIENT 0.01% / deg C Max
HYSTERESIS < 0.1%
CROSS-AXIS SENSITIVITY < 1%

PERFORMANCE

CONNECTOR Teledyne AG, 10 pin
ACCELERATION OUTPUT 40 Vpp differential
OUTPUT IMPEDANCE $2 \times 50 \Omega$

INTERFACE

EMI/ESD GDT and TVS
POWER SUPPLY 5 to 40 V DC isolated input
POWER CONSUMPTION 1.5 W typical quiescent
PROTECTION Reverse-voltage, overvoltage and surge protected
ISOLATION Supply power is isolated from signal ground
GROUNDING Predrilled hole for M4 x 5 grounding lug screw

POWER SUPPLY

STORAGE TEMPERATURE RANGE $-20 \div +80 \text{ }^\circ\text{C}$
HUMIDITY 0 to 100%
OPERATING TEMPERATURE RANGE $-40 \div +80 \text{ }^\circ\text{C}$
WEATHER RESISTANCE Rated to IP68, immersible 300m max

OP. CONDITIONS

HOUSING Stainless steel
OD 70mm
HEIGHT 510mm
WEIGHT 8000 g (Al)

PHYSICAL

Self-Noise: 2019 353 0:0:0 3600.0 seconds

