EXACT GLOBAL TEKNOLOGI

C100

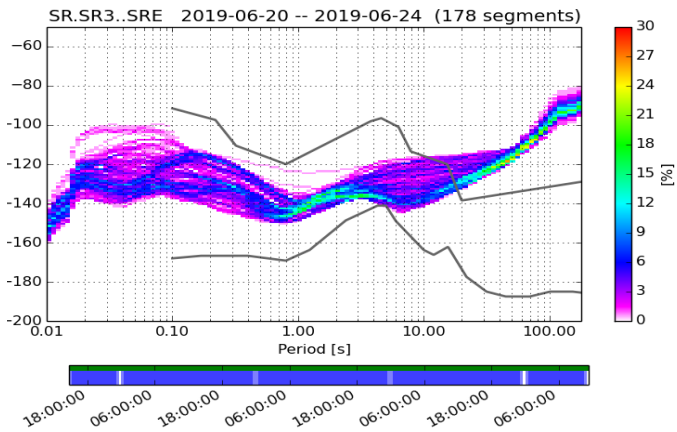
Wide Band Seismometer 10sec - 98Hz

Monitoring the earth

- 3 axis velocity sensor
- Low power consumption
- Borehole/surface type
- Only 50mm diameter
- Up to 150m depth
- Smart elastic clamping
- Guiding wheels driver
- Wide input voltage range
- Build-in test line
- Wide response 10sec - 98Hz
- High sensitivity 1500V/m/s
- Velocity feedback design
- Operation Range: -20 +70°C
- Local & regional seismicity monitoring

FEATURES

The C-100 is a three-component velocity equivalent output seismic sensor. The unit is recommended for local and regional seismicity and microseismicity monitoring. **The sensor electronics are integrated into the GEOthree/sixL digitizer. This makes the difference with the S-100 unit.** The design is based on the force-balance principle. Using three geophone elements, the bandwidth is extended to lower frequency than the original geophone natural frequency. Three generations of the C-100 sensor have been manufactured so several low and upper corner frequencies are provided through different sensor configuration. 10s, 5s, 2s and 1s low cut corner frequency is available as well as 50, 80 and 98 Hz high corner frequency. The sensitivity is 1000V/m/sec for the Mk1 version while it has been increased to 1500V/m/sec for the Mk2 and Mk3 versions. The default cable length of the sensor is approximately 20 meters but it can be extended up to 150 meters. The sensor electronics are housed outside the sensor casing in a separate box (S100 model) or a datalogger (C100/GEOthree/six) thus the damage risk is dramatically minimized. Two sensor types are provided, one borehole type and one surface type. Both have similar characteristics. The borehole type is



housed into an 50mm diameter casing while the surface type unit's dimensions are only 115x90x55mm. No mass-lock or centering is required that makes an easy connection with the digitizer. The settling time of the unit is very short, only thirty seconds. Sensitivity is 1500V/m/sec (differentially) thus providing a very sensitive seismic sensor. A test line is also provided for calibration and testing. The sensor is ideal for local and regional earthquake seismology as well as human or induced microseismicity monitoring.

INSTRUMENT SPECIFICATIONS

GENERAL

Number of channels	3
Orientation	Vertical, North-South, East-West
Geophone resistance	375 OHms
Mounting	Borehole type

PHYSICAL

Cable length	Standard 20m, up to 150m
Size (geophone enclosure)	180mm length, 50mm diameter
Weight (geophone enclosure)	600g

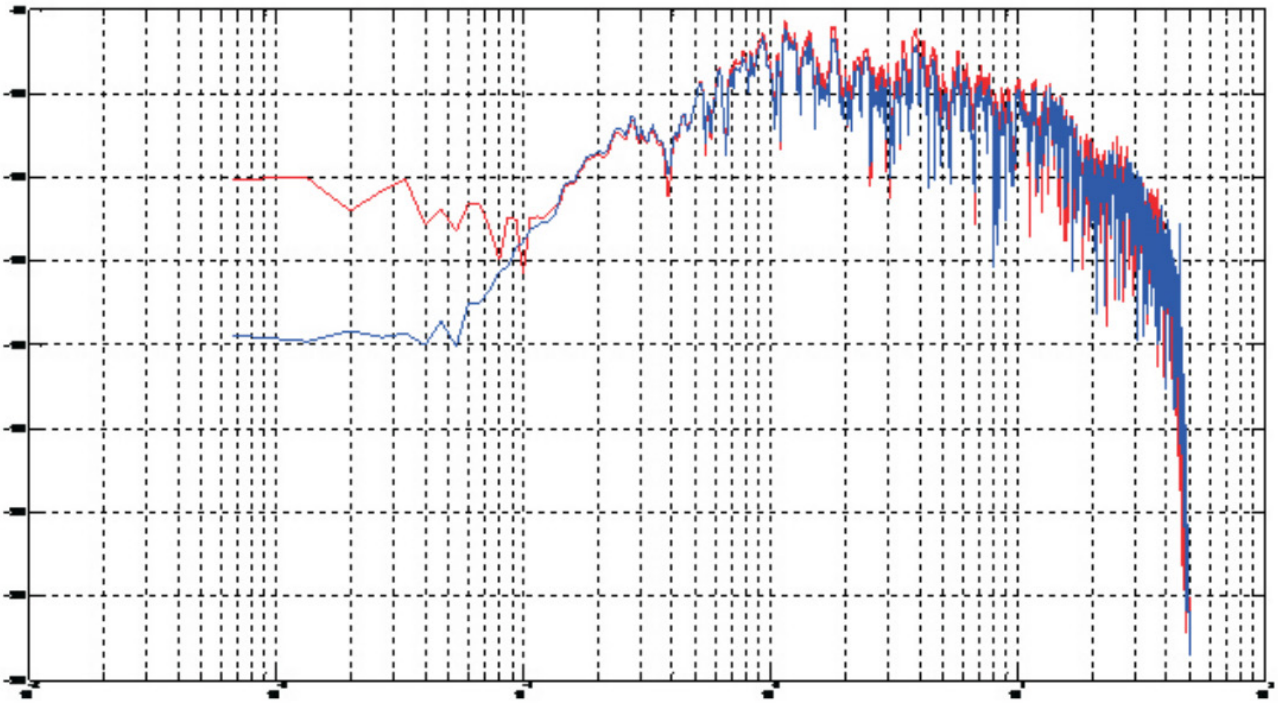
FORCE BALANCE ELECTRONICS

Sensitivity	1500 V/m/sec
Noise Level	Below NLNM into recording band
Bandwidth	4.5Hz , 10sec to 98Hz if connected to GEObit electronics

ENVIRONMENT

Temperature Range	-20 to +70°C
Humidity	100%, IP67 enclosure
Submersible	1000 meters

Optional versions with corner frequency 1sec, 2sec and 5sec are available



C100 (red) vs Guralp3T (blue) PSD plot

GEObit
Monitoring the earth

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