P C100

Wide Band Seismometer 10sec - 98Hz

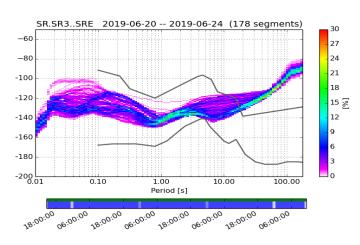


- 3 axis velocity sensor
- Low power consumption
- Borehole/surface type
- Only 50mm diameter
- Up to 150m depth
- Smart elastic clamping
- Guiding wheels driver
- Wide input voltage range
- Build-in test line
- Wide response 10sec 98Hz
- High sensitivity 1500V/m/s
- Velocity feedback design
- Operation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



FFATURES

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.



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

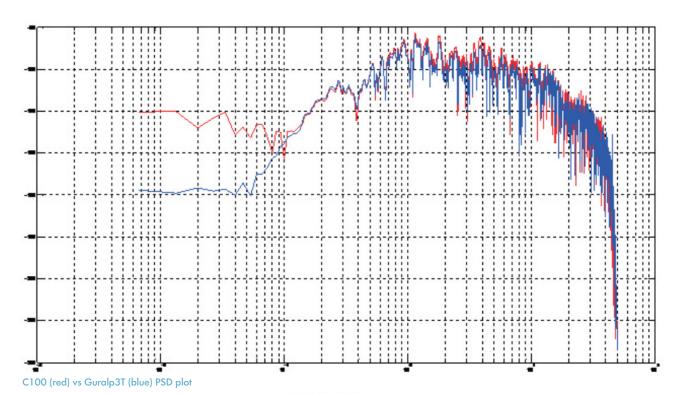
ENVIRONMENT

Temperature Range $-20 \text{ to } +70\,^{\circ}\text{C}$

Humidity 100%, IP67 enclosure

Submersible 1000 meters

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







13 Ag. Saranta str. Patra 26222 Greece Tel: +30 261 087 6876 | Fax: +30 261 087 6877 info@geobit-imstruments.com



