GEO-S120
Seismic Sensor

EXACT GLOBAL TEKNOLOGI

Monitoring the earth

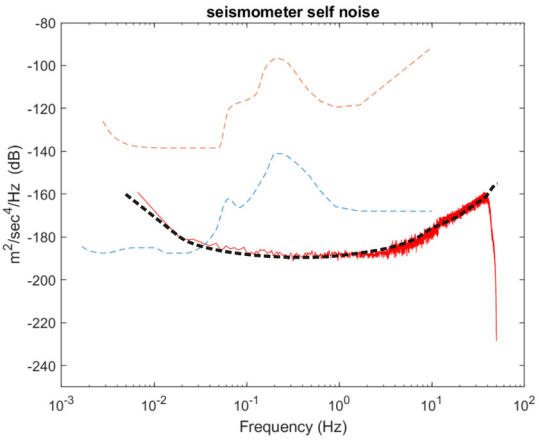
- 3 component broad-band seismometer
- Force Balance with capacitive transducer
- Surface or shallow burry installations
- 150mm diameter, 125mm height
- Aluminium or Stainless Steel casing
- Bandwidth 120sec - 80Hz or 60sec-105Hz
- Sensitivity 1200V/m/s, other options available (1500V/m/s, 2000V/m/s)
- Low power consumption < 1W
- Automatic mass centering
- Very Low Self Noise
- Dynamic range > 155dB @1Hz



FEATURES

Designed and made in Greece the GEO-S120 broad-band seismometer is a product based in years of experience of designing high precision, low noise, and reliable seismic equipment. It is based on a very sensitive capacitive transducer which monitors the position of the seismic mass and a feedback loop that generates signal output proportional to velocity with extended bandwidth 120sec to 80Hz. The instrument has low self-noise so it is ideal for local, regional and teleseismic earthquake recording. No mass lock is required and supports automatic mass centering. The sensor provides calibration input and communication via serial port. The GEO-S120 design is exceptionally versatile, ideal for both direct bury and vault use cases. The seismometer casing is made from hard anodized aluminum or stainless steel.

When combined with our GEOthree or GEOsix datalogger the GEO-S120 provides a true broadband station with low overall power consumption, providing an ideal solution for rapid response applications that require high resolution data. The GEO-S60 version of this seismometer has similar specifications but the output velocity response is flat between 60sec to 95Hz



- Broad-band networks
- Regional seismicity monitoring
- Seismic tomography acquisition
- Induced seismicity monitoring
- Volcano monitoring
- Permanent seismic networks
- Portable seismic networks
- Earthquake early warning systems

INSTRUMENT SPECIFICATIONS

GENERAL	S120: 120sec-160Hz	S60: 60sec-160Hz
Number of channels, orientation	3 channels, Vertical, North-South, East-West	3, Vertical, North-South, East-West
Bandwidth	120sec-80Hz	60sec-105Hz
Technology	Force-balance with capacitive transducer	Force-balance with capacitive transducer
Power	9-36Vdc isolated , typical < 1W	9-36Vdc isolated, typical < 1W
Mounting	Surface mount or shallow burry	Surface mount or shallow burry
OUTPUT		
Output Range	40Vpp	40Vpp
Sensitivity	1200 or 1500 or 2000 V/m/sec	1200 or 1500 or 2000 V/m/sec
Damping	0.7 critical	0.7 critical
Noise Level	Below NLNM 80sec - 16Hz	Below NLNM 80sec - 16Hz
Clip Level	16.6 mm/s	16.6 mm/s
Dynamic Range	>155dB	>155dB
CONTROL		
Calibration	Calibration Input	Calibration Input
Mass Centering	Automatic/mamual mass centering	Automatic/mamual mass centering
Communication	Serial port, RS232 level	Serial port, RS232 level
Mass Position	Three independent +/-10V outputs	Three independent +/-10V outputs
PHYSICAL		
Cable length	Standard 4m	Standard 4m
Size	124mm height, 149mm diameter	124mm height, 149mm diameter
Weight	2.9Kg	2.9Kg
Casing	Aluminum or stainless steel	Aluminum or Stainless Steel
EVIRONMENTAL		
Temperature range	-40 to +60°C	-20 to +60°C
Humidity	100%, IP68 enclosure	100%, IP68 enclosure.
Submersible	0.5m	0.5m
Protection	Reverse and over voltage protected. Signal lines are protected	Reverse and over voltage protected. Signal lines are protected

GEObit
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