

Seistans

Export-free fiber-optic gyrocompass for seismometer true North alignment



Seistans is a fully strapdown gyrocompass providing very accurate heading, attitude, roll and pitch for seismic sensors alignment. Based on the Fiber-Optic Gyroscope (FOG) technology and already field-proven, it perfectly meets the need of sensor orientation accuracy for modern seismic analysis even in GNSS denied environments.

Features

- Compact and plug & play system
- All-in-one optical gyrocompass
- Highly accurate heading, attitude and roll & pitch
- Embedded Man Machine Interface (no proprietary CDU)
- Full option suite to transfer the North line

Benefits

- Free of export
- Accurate and reliable even in GNSS denied environments
- Fast settling time
- Maintenance and calibration free
- 5-years warranty

Options

Rugged tablet

- Water and shock proof
- Configuration of Seistans
- Repeater of Seistans orientation
- GNSS receiver to feed the Seistans
- Embedded camera
- Battery powered



How to transfer the North line of Seistans to your instruments

Precision pins under the Seistans are the only accurate mechanical reference

- **Reference plate:** To install permanently your instrument into grooves aligned with precision pins to dock the Seistans
- **Contact plate:** To get the orientation of your instrument through the mechanical contact with the contact plate aligned precisely to precision pins of the Seistans
- **Laser line:** To draw a red line on the floor, factory aligned to the Seistans heading

Without precision pins		Precision pins			
Raw' contact with		+nothing	+grooves	+contact	+laserline
Baseplate $\pm 0.12^\circ$	Housing $\pm 0.30^\circ$	Onto blueSeis-3A $\pm 0.03^\circ$	Reference plate $\pm 0.04^\circ$	Contact plate $\pm 0.08^\circ$	LaserLine $\pm 0.25^\circ$



TECHNICAL SPECIFICATIONS

Dynamic & static performances

Heading accuracy ^{(1) (2)}	0.23 deg RMS secant latitude ↔ 0.7 deg Maximum secant latitude
Roll/pitch accuracy ⁽²⁾	0.5 deg RMS
Settling time	< 30 mn (all conditions), 0.7 deg in 15 mn

Operating range/environment

Heading/roll/pitch	0 to +360 deg / ±180 deg / ±90 deg
Latitude	+/- 85 deg
Dynamic range	250 deg/s
Operating/storage temperature	-20 °C to 55 °C / -40 °C to 80 °C
Ingress protection	IP66

Physical characteristics

Weight	2.8 kg
Dimensions (LxWxH)	160 x 160 x 113 mm
Connections	Fischer connectors

Interfaces

Inputs ⁽³⁾	2 inputs serial or Ethernet
Outputs ⁽³⁾	2 outputs serial and/or Ethernet
Pulse port	4 inputs and 2 outputs, 5V (TTL Level)
Input/output formats	Industry standards: NMEA 0183, ASCII, BINARY
Data output rate	0,1 Hz to 200 Hz
Power supply	12 VDC (11 to 30 VDC)
Power consumption	10 W

Support

MTBF	150.000 hours
Warranty	5 years
Calibration interval	Not required
Export status	Free of export

(1) x 1 / cosinus (latitude). (2) Maximum error = 3xRMS errors. (3) All input/output serial ports are available and can be duplicated on Ethernet ports.