



Seatex Seatrack 330

A New Extremely Robust GPS Transponder

The Seatrack 330 represents a new robust extension to the Seatrack product line. A built-in damping mechanism is developed to reduce shock exposure to the electronics including the GPS antenna. The design is verified by running a single unit through more than 1.000.000 extreme shock cycles without failure.



The environment on a seismic source is extremely challenging for all types of electronics. Firing the air guns may cause high-energy shocks of more than 50G with 10 ms duration. Repeated every few seconds, day and night, for periods of several months gives new meaning to the term shock exposure. Seatrack 330 is designed to withstand this harsh environment.

The electronics is fitted into a steel compartment, which is further protected by double polyethylene housing. This makes the Seatrack 330 resistant against all types of shocks and waterproof down to more than 50 meter.

Mechanical protection is not enough. Shocks of more than 20G will normally cause temporarily loss of lock of the GPS satellites. This ruins position accuracy especially when using carrier phase measurements or RTK.

A damping method reducing the high-energy shock exposure of the GPS antenna and receiver by more than factor of 2.5 has been developed. This enables the Seatrack 330 GPS receiver to continuously maintain track even during firing of the air guns. The robustness is verified by running unit through more than 1.000.000 repeated shocks. The test unit went through this exercise without one single failure.

Technical specifications

General

- Polyethylene cylinder
- 1Hz update rate

GPS

- 12 channel L1 C/A code and carrier phase
- Multipath mitigation
- High dynamic tracking feature

I/O

- RS232/RS485 (option)
- Remotely configurable
- Transmission of pseudorange and carrier phase data
- Transmission of position and status parameters
- Direct access to GPS receiver data
- Interface to handheld terminal for local status and control
- Different connector options available (contact Seatex for further information)

Physical characteristics

Weight	4 kg
Diameter	101 mm
Overall diameter	113 mm
Length	400 mm

Power

Input voltage	9-13 V DC
Power consumption	2.7 W

Environment

Operational temp.	0 °C -+70 °C
Storage temp.	-30 °-+70 °C
Humidity	100%, fully sealed
Water proof	IP68,50m

Shock

Tested for	50G/10ms 1.000.000 repetitions
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Ordering information

Seatrack 330	Pno:G720-04/G720-05/G720-06
Seadiff RNAV	Pno:G701-01

Specification subject to change without further notice

