APPLIED ACOUSTICS
Underwater Technology

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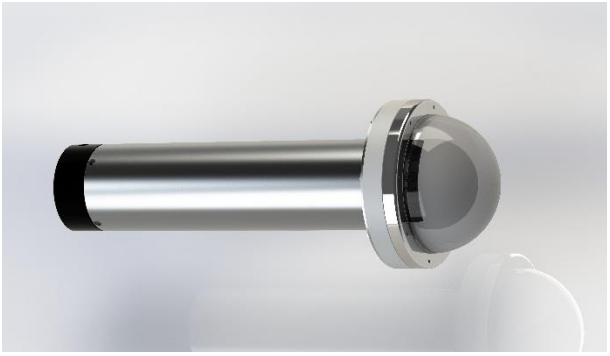
106G Series Submersible GPS



The 106G is an additional GPS receiver designed to survive immersion that complements the operation of a nearby standard subsea positioning beacon.

This arrangement is suited to coastal construction tasks where submersible vehicles may periodically break the surface.

Whilst submerged, positioning data is provided by a standard positioning beacon but once the vehicle breaks the surface the 106G takes over to provide the information required, typically cabled to the vessel based positioning system via the vehicle umbilical system.

Key Features

- L1 + L2 band antenna
- Submersible GPS receiver with integrated antenna
- 500m rated.
- Begins positioning <30s after surfacing.
- Easytrak Nexus compatibile
- Receives wide area corrections or accepts external corrections
- Internal batteries assist in the case of temporary power failure.

Applications

- Transition zone operations, trenching and construction. Sandbank UXO crawlers
- Surface positioning for vehicle recovery operations

Technical Specification

MODEL TYPES – PHYSICAL SPECIFICATION

Housing material: Hard anodised aluminium, with durable clear protection sleeve and glass hemisphere.

	Survival Depth	Diameter	Length	Weight air/water
106G	500m	125mm/200mm	640mm	9.7kg/3.75kg

106G Series Technical specification continued…

ELECTRICAL SPECIFICATION

Battery

Battery type	Rechargeable. NiMH.
Battery life	40 minutes

Configuration

Receiver type	GNSS L1 & L2, RTK with carrier phase.
GNSS compatibility	GPS, GLONASS & GALILEO.
Channels	270
SBAS tracking	3 channel parallel tracking.
Output rate:	1Hz

Horizontal Accuracy (2drms – 95%)

Dependent on corrections:

RTK	10mm + 2ppm
WAAS	0.6m
Unaided	2.5m

Accuracies dependent on multi-path environment, number of satellites in view, geometry and ionospheric conditions

Warm up time (typical):

From cold	<60s	(No almanac or real time clock).
Warm start	<30s	(Almanac & RTC, no position.)
Hot start	<10s	

Connectivity

Connector	8 pin MCBH connector (male)
Power	18-32v 300mA nominal.
Main output	RS232 or RS422 output
Input	Differential only port
Protocol	NMEA 0183 protocols supported.
Diagnostics	Status LED's; power, lock & differential lock.

Safety and management:

- Spring return PRV valve.
- External on/off switch.
- Housing sleeve provides isolation to limit corrosion.

Options:

- Extended depth rating
- Remote antenna
- RF Modem

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