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106G MiniPod, GNSS Submersible

Key features

- L1 + L2 band antenna
- Submersible GNSS receiver with integrated antenna
- 6000m rated
- Multi GNSS constellation compatibility
- Begins positioning <30s after surfacing
- Receives wide area corrections or accepts external corrections
- Internal batteries assist in the case of temporary power failure

Applications

- Deep water to transition zone operations, trenching and construction
- Sandbank UXO crawlers
- Surface positioning for vehicle recovery operations

106G MiniPod Overview

The 106G MiniPod is a ruggedised GNSS receiver designed to survive 6000m immersion that complements the operation of a nearby standard subsea positioning beacon.

This arrangement is suited to coastal construction tasks where deep rated 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 MiniPod takes over to provide the information required, typically cabled to the vessel based positioning system via the vehicle umbilical system.

Technical Specification

MODEL TYPES – PHYSICAL SPECIFICATION

Housing material: Titanium body with glass hemisphere.

Model Part Number	Survival Depth	Diameter	Length	Weight air/water
BCN- 106G	6000m	119mm	289mm	7kg / 4kg

ELECTRICAL SPECIFICATION

Battery type	Rechargeable. NiMH
Battery life	4 hours

ACCURACY (DEPENDENT ON CORRECTIONS)

RMS 67%	Horizontal	Vertical
RTK	8mm + 1 ppm	15mm + 2ppm
SBAS (WAAS)	0.3m	0.6m
Unaided	1.2m	2.4m
Atlas H10	0.04m	
Atlas H30	0.15m	
Atlas H100	0.50m	

Accuracies dependent on multipath 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

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CONNECTIVITY

Connector	8 pin MCBH connector (male)
Power	18-36VDC 24v 160mA nominal
Communication	RS232 (2 bi-directional ports) RS485 (2 wire bi-directional)
Position protocol	NMEA 0183 protocols supported
Refresh rate	1Hz standard, 10Hz, 20Hz optional
Correction I/O protocol	Hemisphere GNSS proprietary, ROX Format, RTCM v2.3, RTCM v3.2, CMR, CMR+
1pps	3.3V, 1ms pulse width, 20mA optional

SAFETY AND MANAGEMENT

- Automatic Pressure Relief Valve (PRV)
- External on/off switch

OPTIONS

- RTK Base and Rover activation for GNSS receiver. Allows full RTK fixed position quality. RTK float can be achieved as standard without additional option

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