

CSNS-3000

Integrated Navigation System



Technical Specifications

SPECIFICATIONS	
Dimensions	Max. diameter: 193 mm, height: 277 mm
Weight in air	14.2 kg
Max. operating depth	3000 m
External sensor support	GPS (NMEA0183)/USBL position system
Depth sensor accuracy	0.0005% of full scale (1.5 cm at 3000 m)
Depth sensor resolution	Pitch/roll: 0.03° (RMSE)
Attitude accuracy	1mm/s
Heading accuracy (moored, no DVL/GPS)	0.25° (RMSE)
Heading accuracy (INS/DVL)	1 - 255
Travel distance error (Z-shaped survey)	≤0.1% of distance
Travel distance error (straight line)	≤0.5% of distance
Power supply	24 V ±1 V

Performance Parameters

Key Features:

- (1) Compact size, high accuracy, autonomous north-seeking, immune to magnetic interference.
- (2) Straight-line navigation accuracy: ≤0.5% of distance; Z-shaped survey pattern accuracy: ≤0.1%.
- (3) Integrated high-resolution pressure sensor, 3000 m depth-rated version with 1.5 cm resolution.
- (4) Phased array DVL, navigation accuracy unaffected by sound speed variations.
- (5) Automatically switches to water-track mode when bottom-track is lost in deep water.
- (6) Supports USBL position aiding with automatic outlier rejection.
- (7) Built-in Wi-Fi module for configuration and data access.

Dimensions&Connector

