

OCEANTOOLS

Innovative Products & Solutions for use in some of the world's harshest environments

OceanTools PoleStar

Compact north seeking gyrocompass with integral motion sensor.



The OceanTools PoleStar is an Inertial Reference System (IRS) based on latest-generation fibre optic gyrocompasses (FOGs) and micro-mechanical (MEMS) accelerometers in a single, compact, 3000m standard depth rated package. The PoleStar provides highly accurate Heading, Pitch, Roll, Heave, Rate, Acceleration and Geographical Position.

PoleStar may be used in a wide variety of subsea and surface applications including Survey, ROV navigation, AUV navigation and for Metrology applications. For metrology applications, external augmentation such as a DVL and Digiquartz inputs may be introduced to enhance the high accuracy latitude, longitude and delta-height outputs.

When Used in semi-static survey operations PoleStar does not require any external latitude inputs. If used on a moving vessel then a GPS derived external latitude will be required.

PoleStar features a rapid realignment mode. If the unit has not been moved significantly from it's last location then re-alignment will be completed within 90seconds.

PoleStar has two output datastreams: one is a relatively slow "legacy" output that maintains full systems compatibility with OceanTools MiniFOG gyrocompasses. There is also a new high-speed output that contains 50Hz updates of all important parameters.

KEY FEATURES

Outputs heading, pitch, roll, heave, latitude, longitude, rates & accelerations

Rapid run-up times

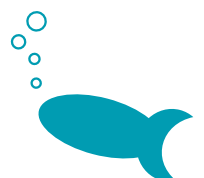
Simultaneous RS232 and RS485 outputs

High accuracy metrology mode

3000m standard depth rating



REGISTRATION NUMBER 183376

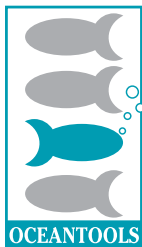


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SPECIFICATIONS

Heading accuracy	0.4° x secant latitude
Pitch & Roll accuracy	0.1°
Pitch & Roll measurement range	±45°
Heave accuracy	0.1m
Acceleration accuracies	0.2mS ²
Static alignment time, latitude <45°	<3min
Static alignment time, latitude >45°<78°	<10min
Dynamic alignment time	<30min
Operating voltage range	18-36VDC
Power consumption	<30Watt
Interfaces	RS232, RS485
Interface protocol	OceanTools MiniFOG, various others
Update rates	Up to 50Hz
Operating temperature range	-15°C to 55°C
Maximum operational shock	6g for 11mSec in 3 axes
MTBF	>20000hours
Maximum latitude	78°N/S
Length	390mm
Diameter	205mm
Weight in air	19kg
Weight in water	7kg
Depth ratings	3000m standard
Depth options	500m - 6000m
Data transmission	RS232, RS485



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