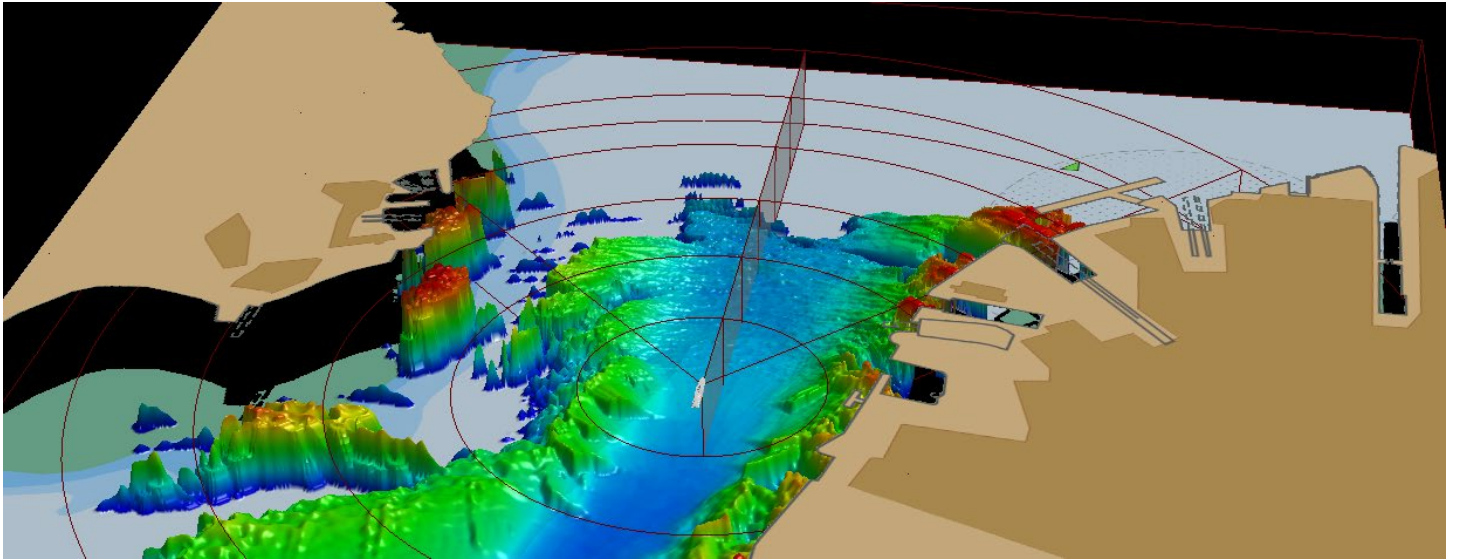


Datasheet

Vigilant Forward Look Sonar (Vigilant FLS)



Vigilant FLS is a low power, forward-looking sonar that can be operated as a standalone unit or be integrated into a vessel's navigation and integrated bridge systems. It has been tailored to provide high resolution imagery to help detect obstacles as far away as possible, to provide enough time for crews to manoeuvre safely. The detection range of 1,500 m and angular accuracy of 0.3° is unrivalled for this application.

The sonar scans the water column and builds a 3D model of the seabed and submerged objects ahead of the vessel. The intuitive display informs the crew of the seabed terrain and any potential underwater hazards to a range of up to 600 m over a 120° field of view in 2D and 3D depth modes and out to 1,500 m in sonar mode. Vigilant FLS also has an optional operating mode for underwater intruder detection and can be used with Sonardyne's leading diver detection sonar system, Sentinel.

Vigilant FLS can operate as an independent system or feed fully processed sonar images into, and be controlled by, the vessel's integrated navigation system. This allows the crew to customise the operator display to meet the specific needs of the vessel and its mode of operation.

When installed on autonomous vessels or unmanned surface vessels (USV), data on detected objects and potential collision hazards can be output to an auto-pilot or autonomous control system.

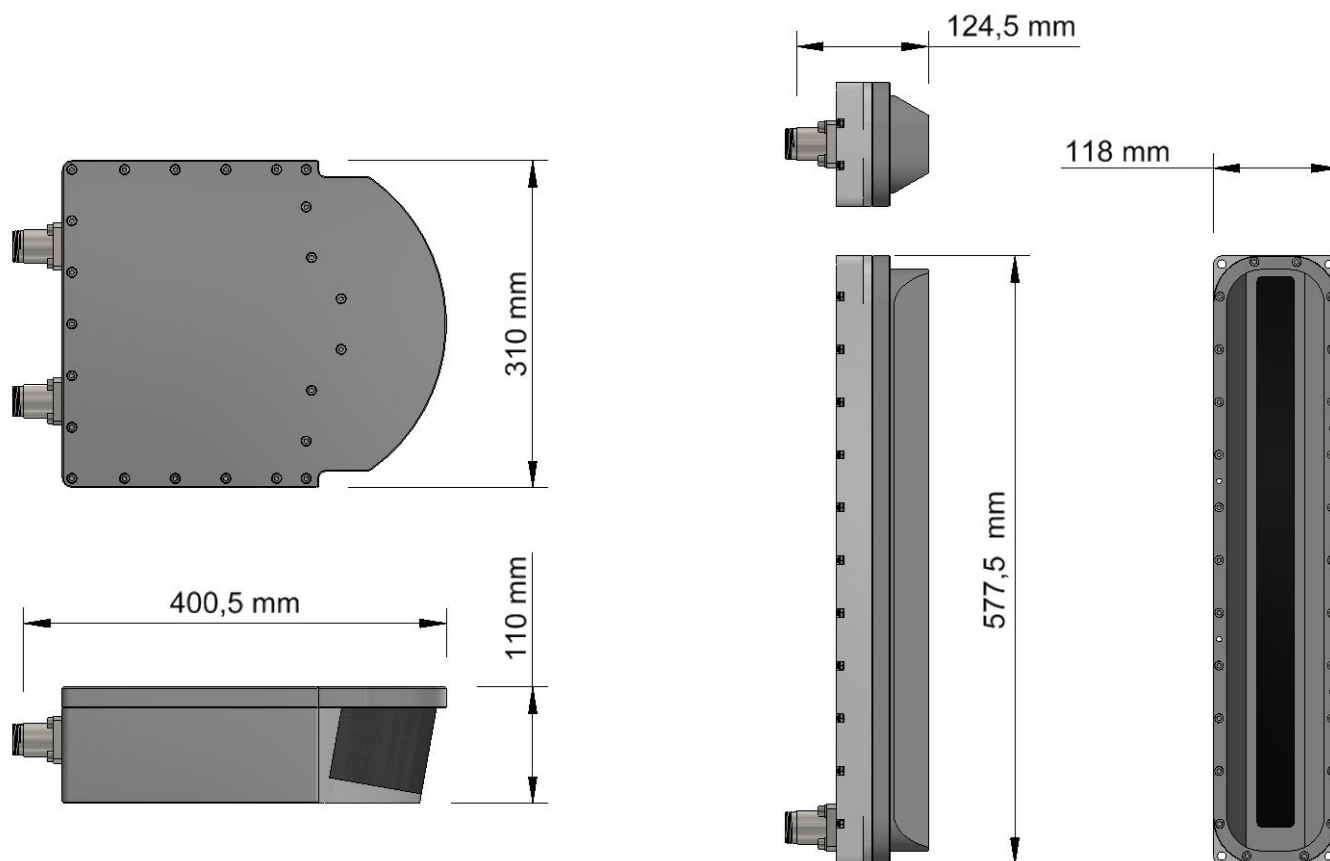
The Vigilant FLS hardware consists of Projector and Receiver arrays which can be mounted together or separately. Sonardyne's highly experienced engineering team can work with owners to design bespoke mounting arrangements. Consisting of two sonar arrays that are mounted in the bow of the vessel, Vigilant FLS is designed to be retrofitted to existing vessels as well as new builds. Comprehensive engineering support and advice is available from Sonardyne to support installation and commissioning.

Key Features

- 3D Depth Mode builds 3D model of the seabed around the vessel
- Sonar Mode detects obstacles up to 1500 m range
- 3D obstacle and ground avoidance in dynamically changing conditions
- Overlay charts to improve situational awareness
- Full bridge integration
- Includes interface to autonomous and smart ships
- User defined alarms conforms to your requirements
- Intruder detection mode optional

Specifications

Vigilant Forward Look Sonar (Vigilant FLS)



Feature	Vigilant FLS
Range/Field of View	75 m, 150 m, 300 m, 600 m x 120° 2D/3D Depth Mode 75 m, 150 m, 300 m, 600 m, 900 m, 1500 m x 120° Sonar Mode
Operational Speed	Up to 25 knots
Operating Frequency	70 kHz
Bottom Mapping Ratio	Up to 20 x water depth
Maximum Depth Detection	100 m
Roll/Pitch Stabilisation	+/- 20°
Angular Accuracy	~0.3°
Operating Power	<150 W
Operating Temperature	-2 to 40°C
Storage Temperature Range	-20 to 55°C
Receiver (Height x Width x Length)	110 x 310 x 400.5 mm
Receiver Weight in Air/Water	12.0/6.0 kg
Transmitter (Height x Width x Length)	577.5 x 118 x 124.5 mm
Transmitter Weight in Air/Water	11.5/6.0 kg