

# DPS 112



KONGSBERG



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## MARITIME DGNSS SENSOR FOR WORLDWIDE OPERATIONS

DPS 112 is a robust and reliable DGNSS (DGPS/DGLONASS) sensor suitable for a wide range of marine applications. It utilises the new Seastar SGG service capable of world wide sub-metre accuracy. Performance is independent of distance from reference stations.

### Seastar SGG service

DPS 112 has been developed to utilise the new Global Satellite Based Augmentation System (Global SBAS) introduced by Fugro Satellite Positioning, the Seastar SGG service. Unlike regional SBAS services such as WAAS, EGNOS, GAGAN and MSAS, and local DGPS services such as IALA DGPS, Seastar SGG utilises Fugro's own network of dual system reference stations to calculate 'orbit and clock' corrections. The service provides consistent sub-metre level accuracy positioning with global validity.

DPS 112 is even capable of supplementing Seastar SGG corrections with regional SBAS and local IALA DGPS corrections.

### GPS and GLONASS

One of the primary advantages of a combined GPS/GLONASS system is the increased satellite coverage. The addition of GLONASS increases system availability and the performance of DPS 112 is greatly enhanced compared to traditional DGPS systems when operating in highly obstructed environments and under challenging signal tracking conditions.

### A member of the DPS Family

The Kongsberg Seatex DPS product line is well-proven and in use by professional marine and offshore users worldwide. By complementing the DPS product line and introducing the Seastar SGG service, Kongsberg Seatex and Fugro Satellite Positioning extend the user segment to new and less complex vessel categories.

The DPS product series is developed and suitable for all applications in need for a confident position solution when operating in safety-critical environments.

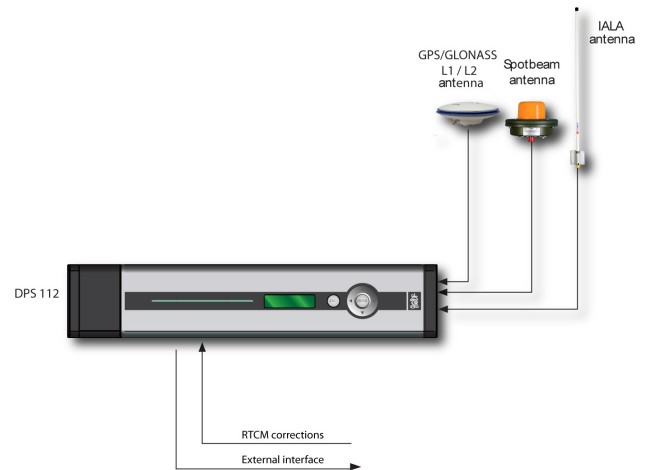
The DPS 112 is an addition to the existing well proven DPS range comprising DPS 132/232/4D/5D. The high end solutions offer decimetre level position accuracy, IMU integration (DPS 4D/5D), application tailored HMI, extended DP operation functionality and extended interfacing capabilities.

### Applications

DPS 112 is a cost efficient DGNSS solution designed for users where availability and reliability are paramount, with a meter-level position accuracy. DPS 112 has a built-in display for easy system configuration and status monitoring and is an ideal solution for workboats and platform support vessels.

# FEATURES DPS 112

- Combined GPS L1/L2, GLONASS L1/L2 and SBAS receiver
- IALA beacon capability
- Built-in L-band receiver with Fugro Seastar SGG capability
- Optional standard RTCM correction input
- Easy software updates via USB
- Ethernet interface
- Embedded keypad and display
- Configurable output for external interfaces



## TECHNICAL SPECIFICATIONS

### PERFORMANCE

Global DGNSS position accuracy with: (\*)  
Seastar SGG service < 1 m

Regional DGPS position accuracy with: (\*\*)

SBAS 1 - 2 m  
IALA 1 - 3 m

Output rate 1 Hz

(\*) Accuracy specifications (CEP 95 %) are based on real-life tests conducted under low multipath conditions and an open view to the sky. Tests at different locations under different conditions may produce different results.

(\*\*) Accuracy specifications (CEP 95 %) for SBAS (WAAS, EGNOS, MSAS, GAGAN) are based on real-life tests conducted under low multipath conditions and an open view to the sky within the respective SBAS service coverage areas.

### INTERFACES

Serial ports 3 serial ports (2 for NMEA output, 1 for RTCM input), RS-232 or RS-422 (galvanically isolated)

Ethernet/LAN 1  
USB 3

### DATA INPUTS

Data inputs RTCM-SC104 ver. 2.2 and 2.3

### DATA OUTPUTS

Message formats NMEA 0183 v. 3.0  
Message types GGA, GLL, GSA, GST, GSV, VTG, ZDA

Specifications subject to change without any further notice.

### WEIGHT AND DIMENSIONS

DPS 112 unit	5.8 kg, 89 mm x 444 mm x 357 mm
GNSS antenna	0.5 kg, 69 mm x 185 mm
IALA antenna	0.75 kg, 850 mm
Spotbeam antenna	1.4 kg, 96 mm x 150 mm

### ENVIRONMENTAL SPECIFICATIONS

Operating temperature range  
DPS 112 unit -15 to +55 °C\*)  
GNSS antenna -40 to +85 °C  
IALA antenna -55 to +55 °C  
Spotbeam antenna -30 to +70 °C

\*) Recommended +5 to +40 °C

### Humidity

DPS 112 unit	Max. 95 % non-condensing
GNSS antenna	Hermetically sealed
IALA antenna	Hermetically sealed
Spotbeam antenna	Hermetically sealed

### Mechanical

Vibration IEC 60945/EN 60945

### Electromagnetic compatibility

Compliance to EMCD, immunity/emission IEC 60945/EN 60945

### Power

DPS 112 unit	100 - 240 V AC 50/60 Hz, max 60 W
GNSS antenna	5 V DC from processing unit
IALA antenna	10.2 V DC from processing unit
Spotbeam antenna	12 V DC from processing unit

### Product safety

Compliance to LVD, standard used IEC 60950-1/EN 60950-1