AIS 300

AUTOMATIC IDENTIFICATION SYSTEM
- CLASS A MOBILE STATION

0575

The AIS 300 is the 4th generation AIS class A mobile station from Kongsberg and is designed to be fully integrated in a ship's bridge environment. An improved receiver sensitivity of -115 dBm gives an increased range compared to AIS units with the standard sensitivity of -107 dBm. The AIS 300 is tested and approved in accordance with international regulations and have the Wheelmark certification. In addition the AIS 300 is tested and approved in accordance with the inland AIS regulations.

Integration

The AIS 300 is designed to be fully integrated with other navigation systems and can be delivered without an external display (MKD - Minimum Keyboard and Display), provided that the ECDIS is listed in MED-B for AIS-300. All operations and functionalities are handled from the ECDIS in an integrated bridge system. The AIS 300 is hence type approved with ECDIS from different manufacturers and brands, in order to avoid installing a redundant display/keyboard. One important principle of e-navigation is to reduce the number of displays on the bridge. The navigator needs to have important information easily available in order to reduce response time for decisions. Better integration will lead to a better bridge environment as well as a simpler installation. If the AIS Unit is not to be fully integrated, an external display is needed in order to operate the system.

ECDIS/ECS, radar and sensor interface

Interface to ECDIS/ECS and radar is provided via the Presentation Interface (PI) available on network or serial interface (RS-422). It is implicit that the system supports the AIS interface. When interfacing the AIS to radar and chart systems, AIS target information such as position, heading course and speed become easily available to the mariner.
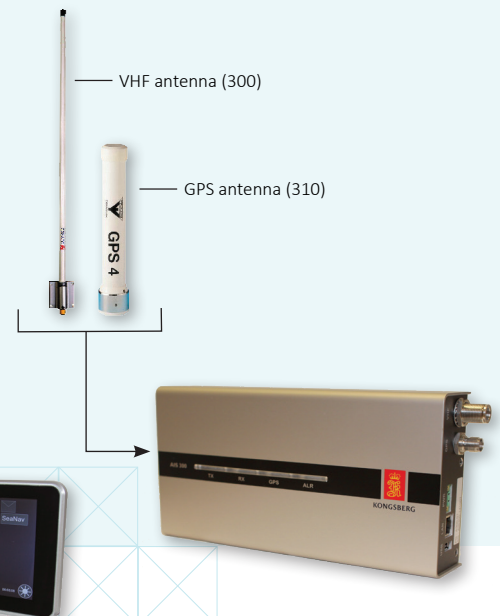
Easy to install and maintain

The AIS 300 is by default delivered with a bracket containing a solution for strain relief in both ends. The unit has a built-in WEB based user interface (UI) providing an interface for configuration and status monitoring. Software updates are supported via the WEB UI but also the USB interface will automatically detect new software when a USB stick is inserted. The update will be accomplished without interfering with the existing configuration. The latest software will continuously be available for download from an FTP server hosted by Kongsberg.

FEATURES

- Reception of all types of internationally approved AIS messages, including, but not restricted to, class A mobile, class B mobile, AtoN and AIS base station
- Three separate AIS channels
- Static data, dynamic data, voyage related data
- Safety related messaging
- Easy integration via network or serial interfaces
- Transmission of message 27 on SAT AIS frequencies
- Special tracking functionality and well valve status monitoring adapted to aquaculture live-fish carriers for documentation and reporting during transport operations in accordance with "Forskrift om transport av akvakulturdyr", §9a

VHF antenna (300)

GPS antenna (310)

TECHNICAL SPECIFICATIONS

AIS 300

PERFORMANCE
Position accuracy	5 m (DGPS optional) -95 % CEP
Velocity	0.05 m/s (DGPS optional) -95 %
Output rate	1 Hz

DATA INPUTS
Gyro compass	NMEA
GPS main source	NMEA
DGPS corrections	RTCM - SC104 v2.1
Blue sign switch	Closed/open

INTERFACES
Communication ports	7 x RS-422 (isolated) 2 x RS-232 (service, unisolated)
Baud rate	4800 to 115200 Baud
Message formats	NMEA
Message type	AIS message
LAN	Ethernet, 10/100 Mbit/s (autosense)
Alarm relay, blue sign switch	Open/closed

RADIO MODULE
VHF transmitter	12.5 W/1 W
Receiver sensitivity	Better than -107 dBm
Protocol	SOTDMA/DSC
Modulation	GMSK/FSK
Bandwith	25 kHz
Frequencies	156.025 to 162.025 MHz band Default CH87B (161.975 MHz) Default CH88B (162.025 MHz) CH70 (156.525 MHz) SAT 1 (156.775 MHz) SAT 2 (156.825 MHz)

WEIGHTS AND DIMENSIONS
AIS 300 Unit	1.3 kg, 260 x 133 x 54 mm
GPS antenna	0.15 kg, 230 mm x 33 mm
VHF antenna	1 kg, 1250 mm

POWER SPECIFICATIONS
AIS 300 Unit
Input voltage	+24 V DC (op. range 12 to 32 V DC)
Power consumption	9 W average, 39 W peak
GPS antenna	5 V CD from AIS Unit

ENVIRONMENTAL SPECIFICATIONS
Operating temperature range
AIS 300 Unit	-15 to +55 °C
GPS antenna	-50 to +70 °C
VHF antenna	-55 to +70 °C

Humidity
AIS 300 Unit	< 95 % relative, non-condensing
GPS antenna	100 %, hermetically sealed
VHF antenna	100 %, hermetically sealed

STANDARDS
Product safety low voltage	IEC 60945/EN 60945
Electromagnetic compatibility, immunity/ radiation	IEC 60945/EN 60945
Vibration	IEC 60945/EN 60945
AIS	IEC 61993-2, ed. 2/ITU-R M. 1371-5
IWW	Inland AIS test standard (CCNR), ed. 2.0 10/2012

OPTIONS INPUT/OUTPUT
- Rate of turn (Input)
- ECDIS/ECS
- Standard PI
- Radar
- Long range communication system
- Blue sign plate

MANDATORY INPUTS
GPS & heading data

Specifications subject to change without any further notice.

KONGSBERG