IDC-AIS
Class A System

IDC-AIS Class A system provides SOLAS compliance and BSH-certification at very attractive prices.
The data link communication covering identity, position, destination and other required static, voyage-related and dynamic data gives all vessels in an area increased situational awareness and improves safety at sea for the individual ship. Positive identification and positioning of all ships in the vicinity reduce the unnecessary "ship on my port bow" calls. Less information overload greatly enhances safety at sea.

Features

The SOTDMA technology used in the AIS transponder transmits and receives information on all vessels within VHF coverage. This information includes position, identity, course over ground, heading, and rate of turn as well as navigational status and the destination of the ship. The information received from, and provided to, the ships is easily plotted on any ARPA radar or electronic chart system. This gives the Officer of the Watch a situational awareness that could never be achieved prior to AIS. Information on draught, type of cargo and destination could also be used to make decisions related to manoeuvring. The screen presentation of the call signs of other ships enables a ship to make direct contact with conflicting vessels by text messaging or voice communication. Maximum awareness is always accomplished.

Configuration and interfaces

IDC-AIS Class A system is easy to install onboard any ship by connecting it to a GPS and VHF antenna. The mandatory installation is complete after connecting it to the navigation GPS, gyro and installing the Pilot Plug interface. To maximise the benefit of the investment, IDC-AIS Class A is delivered with an interface to the chart system and/or ARPA radar. Moreover, the system is designed to support long-range reporting via satellite.

The shipborne Class A system consists of Transponder, Minimum Keyboard & Display (MKD), and Connection Unit.

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IDC AIS SYSTEMS
EXACT IDENTITY
EXACT POSITION
EXACT COURSE

IDC-AIS Class A System

Technical specifications

General

Power requirements	21.6-31.2 V DC

Transmitter

Number of transmitters	1
Tuning range	156.025 –162.025 MHz
Channel spacing	12.5 and 25 kHz
TX to Rx turnaround time	< 1 ms
Channel selection time	< 26 ms
Baud rate	9600 bps
Modulation scheme	25 kHz GMSK (AIS TDMA) / 12.5 kHz GFSK (AIS TDMA) / 25 kHz FSK (DSC)
Carrier power (adjustable)	33 and 41 dBm (2 and 12,5W) 50 Ohm load

Receiver

Number of receivers	3 (2 AIS TDMA, 1 DSC)
Tuning range	156.025 - 162.025 MHz
Channel spacing	12,5 and 25 kHz
Sensitivity, 20% MER	< -107 dBm AIS for 25 kHz, < -98 dBm AIS 12,5 kHz channel

GNSS Receiver

GNSS receiver	12 parallel channels
DGNSS support	Yes

Environmental

IEC 60945	Protected installation

Electrical Interfaces

Sensor Interfaces 1 to 3 (RS485)	IEC 61162-1 or -2
Pilot/Auxiliary (RS485)	IEC 61162-2
External Display (RS485)	IEC 61162-2
Long-range (RS485)	IEC 61162-2
DGNSS correction input (RS232)	RTCM-SC-104
Alarm relay	Normally closed

Transponder Interfaces

VHF Antenna	Type N, jack
GNSS Antenna	TNC, jack

Applicable Standards

ITU-R M.1371-3, IALA clarifications on ITU-R M.1371-3 Ed. 2.2, IEC 61993-2, IEC 60945, IEC 61162-1/2
RTCA/DO 178B (SW development)
IPC-A-610 (Manufacturing)

Physical characteristics transponder

Size (W x H x L)	175 x 81 x 276 mm
Weight	3.9 kg
Cooling	Not required

Minimum Keyboard and Display

Power requirements	24 V DC, from Connection Unit
Size (W x H x L)	120 x 180 x 45 mm
Weight	1.2 kg

Connection unit

Power requriements	24 V DC 3 A
Size (W x H x L)	175 x 345 x 75 mm
Weight	1.1 kg

Accessories included

Interface cables between transponder, MKD and connection unit

Certification

BSH

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