

VDL 6000

AIS Class A / Inland Transponder



- Increased situational awareness for inland navigation, the system communicates the blue sign for inland waters.

- The AIS transponder can be configured to operate either as AIS Inland or AIS Class A transponder. It can also be factory configured to function in Receive-only and GPS/GLONASS mode.

- The system communicates required static, voyage-related and dynamic data.

The VDL 6000 AIS Class A/Inland Transponder provides SOLAS compliance and BSH-certification at very attractive prices.

The VDL 6000 AIS Inland transponder is based on our well proven AIS Class A transponder and developed in accordance with the latest AIS Inland standard requirements. The AIS Inland transponder is type approved by Fachstelle der WSV für Verkehrstechniken FVT.

The data link communication covers standard AIS messages and the required static, voyage-related and dynamic data as well as blue sign messages for inland navigation for increased situational awareness and improved safety for the individual ship.

Features

The SOTDMA technology is used and 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 AIS Inland transponder broadcasts Inland blue sign status messages for upstream or downstream navigation; ships passing on starboard side, hazardous cargo carriage (Blue Cones), and estimated time of arrival at locks, bridges and terminals. Lock management, information on draught, type of cargo and destination is vital for decision making and safe maneuvering along the inland waterways.

The information received from, and provided to, the ships is easily plotted on any ARPA radar or electronic chart system. Maximum situational awareness is accomplished.

Configuration and Interfaces

The AIS Class A/Inland transponder is easy to install onboard any ship by connecting it to a GPS and VHF antenna, and is complete after connecting it to the onboard sensors. To maximize the benefit of the investment, the AIS Inland transponder is delivered with an interface to the Inland ECDIS and/or ARPA radar.

The AIS Class A/Inland transponder consists of an integrated Minimum Keyboard and Display (MKD).



CNS Systems™

AIS Class A / Inland Transponder

Technical Specifications

Power

| | |
|---------------|---------------|
| Input voltage | 12 or 24 V DC |
|---------------|---------------|

Radio

| | |
|---------------------------------------|--|
| Transmitter output power (adjustable) | 1 and 12.5 W, 50 Ohm load |
| Bandwidth | 25 kHz |
| Protocol | TDMA (AIS) |
| Baud rate | 9600 bps (AIS) / 1200 bps (DSC) |
| Modulation | GMSK (AIS) / FSK (DSC) |
| Frequencies | 156.025 MHz - 162.025 MHz |
| Default channels | 87B (161.975 MHz), 88B (162.025 MHz), 70 (156.525 MHz) |
| Number of receivers | 3 (2 AIS TDMA, 1 DSC) |
| Receiver sensitivity, 20% MER | < -107 dBm |

GNSS Receiver

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|---------------|------------------------------|
| GNSS receiver | GPS L1, 50 parallel channels |
| DGNSS support | Yes |

Environmental

| | |
|-----------|------------------------|
| IEC 60945 | Protected installation |
|-----------|------------------------|

Interfaces

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|----------------------------------|--------------------------------|
| VHF antenna | N female, 50 Ohm |
| GPS antenna | TNC female, 50 Ohm |
| Power | 3-way pluggable screw terminal |
| Sensor Interfaces 1 to 3 (RS422) | IEC 61162-1 or -2 |
| Pilot/Auxiliary (RS422) | IEC 61162-2 |
| External Display (RS422) | IEC 61162-2 |
| Long-Range (RS422) | IEC 61162-2 |
| Blue sign interface | Discrete Input 24 V DC / Open |
| DGNSS correction input (RS232) | RTCM/SC-104 |
| Alarm relay | Normally closed |

Standards

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| ITU-R M.1371-4 |
| IEC 61993-2 |
| IEC 61162-1, 2 |
| IMO Resolution A.694 (17) |
| IMO Resolution MSC.74 (69) Annex 3 |
| ITU-R-M.825-3 |
| ITU-R M.1084-5 |
| IEC 61108-1 |
| IEC 62288 |
| IPC-A-610 (manufacturing) |
| RTCA/DO-178B (SW development) |
| CCNR Vessel Tracking and Tracing Standard for Inland Navigation version 1.01 |

Physical characteristics

| | |
|---------------------|---|
| Size (W x H x L mm) | 164 x 103.5 x 233 (132 x 100.5 x 233, without brackets) |
| Weight | 2.3 kg |
| Cooling | Not required |

Integrated MKD on the front panel

Accessories included

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|---|
| Pluggable screw terminals for cable connections |
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Compliance

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|-----------------------------|
| BSH Statement of Conformity |
| FVT type approved |



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