

Sea Mate Class "B" Transponder

Xanatos Marine Ltd.

Sea Mate© Class B Automatic Identification System (AIS)

The Sea Mate© AIS Class B receiver and transmitter unit is the result of exacting adherence of rigid Class "B" AIS specifications, and applying the most advanced wireless digital development skills and techniques available. The result is a small, low cost, reliable robust and high performance product suitable for a variety of applications within the AIS environment.

Features

Simple Design concept

Xanatos's Sea Mate© AIS Class B is an elegant single PCB solution optimizing the combined application of hardware and software.

Standard NMEA interface

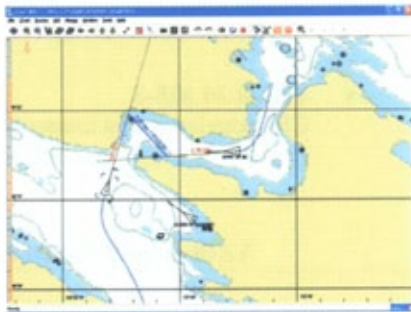
As standard the Sea Mate© Class B can be connected to any NMEA compatible GPS plotter or suitably configured PC.

Transmit your position

Fitting an AIS class B device ensures you are seen by other AIS fitted vessels.

Distress alert Transmit

Distress alert button enables the user to transmit a distress alert with the GPA position of the Vessel (Configurable option additional to the Class B specification).



Anti-Tamper

Xanatos's Class B is enabled to alert users and / or authorities if the unit has been either removed or tampered with once installed (configurable option additional to the Class B specification).

Water resistance

Robust, coated aluminum case, to ensure the unit is able to operate in the harshest of environments. IEC60945 – Cat C.



Internal GPS Module

Xanatos's Sea Mate© Class B includes an integral GPS module to facilitate ease of installation and use.

Benefits of AIS

Transmit your position

Fitting an AIS class B device ensures you are seen by other AIS fitted vessels.

Vessel Protection

As part of a suitably configured network, enables owners to be alerted to unauthorized vessel movements.

Coastal Surveillance

AIS and radar can be fused to create effective and efficient coastal tracking, surveillance and safety systems.

Port management

AIS can be used a highly effective port management tool – easy identification, control and direction of vessels.



Networkable

Sea Mate can be used as a standalone unit or in a network environment where multiple receive stations are necessary to cover a larger area such as a coast line.



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Product features

Physical

- Dimensions: 190 × 135 × 83 mm (L × W × H)
- Weight: 1450g

Power

- 12V DC (9.6- 15.6V)
- Average power consumption 6W
- Power Consumption 0.5A Continuous

GPS Receiver (AIS Internal)

- IEC 61108-1 compliant
- RTCM corrections

Electrical Interfaces

- RS232 38.4kbaud bi-directional
- RS422 NMEA 38.4kbaud bi-directional

Connectors

- VHF Antenna connector
- GPS Antenna connector
- RS232/RS422/Power

VHF Transceiver

- Transmitter × 1
- Receiver × 2 (one time shared between AIS /DSC)
- Frequency : 156.025 to 162.025 MHz in 25KHz steps
- Out put power:
 - . 33dBm ± 1. 5 dB
- Channel Bandwidth : 25KHz
- Channel Step : 25KHz
- Modulation modes
 - . 25KHz GMSK (AIS, TX and RX)
 - . 25KHz AFSK (DSC, RX only)
- Bit rate
 - . 9600 b/s ± 50 ppm (GMSK)
 - . 1200 b/s ± 30 ppm (FSK)
- RX Sensitivity
 - . Sensitivity – 107 dBm 25 KHz
 - . Message Error Rate 20%
 - . Co-Channel 10dB
 - . Adjacent Channel 70dB
 - . IMD 65dB
 - . Blocking 84dB

Environment

- IEC 60945
- Operating Temperature: - 25 °C to + 55 °C

Designed to be compliant with the following standards:

- IEC62287 FDIS
Draft IEC standard, Class B AIS
- IEC60945 Edn 4.0
IEC standard, environmental requirements
- ITU- RM. 1371-1
Universal AIS technical Characteristics
- IEC61162-1 Edn. 2. 0
IEC standard, digital interfaces part 1
- IEC61108-1
IEC standard, GPS receiver equipment
- ITU RR AP18eWRC2000
Radio Regs. , Appendix 18, Table of frequencies in the VHF maritime mobile band
- ITU R M. 493-9
Digital Selective Calling system for use in the maritime mobile service
- ITU-R.M 825-3
Characteristics of a transponder system using DSC
For use with VTS and ship- to- ship identification



Certificate No. 160263
BS EN ISO 9001 : 2000
ISO 9001 : 2000
SS ISO 9001 : 2000

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