Marine GPS

MX423... Type-Approved Universal AIS Transponder

The World's First Complete Solution To AIS

Introducing the **NEW** MK423 type-approved AIS Transponder. In one small black box you have the answer to all your AIS questions!

The most sophisticated and user-friendly total solution to the interpretation, control and display of all information about other vessels in your vicinity.

Smart Antenna

Smart Antenna

MX420

MX420

VHS Antenna

GPS Antenna

MX423 Transponder

- SatCom
- Gyro
- Pilot's PC
- Speed Log
- ARPA
- ECDIS/ GMDSS

MK423 AIS Transponder

Imagine the improvement in safety control and surveillance when you can automatically identify, process, and display all the relevant data from up to 20 ships within VHF range.

The MK423 Transponder does just that. It contains three (3) independent VHF receivers: two (2) use TDMA tuneable receivers, one DSC receiver and one (1) transmitter, which alternates its transmissions between the two operating TDMA channels. The transmitter can also be used to reply to a DSC interrogation (ITU-R M.825-3, Annex 1). The internal GPS receiver provides mainly accurate time synchronization. It can also be used as a back-up source of Ships Speed-Over-Ground (SOG), Course-Over-Ground (COG) and position information in the case of a failure of the main sensors.

The controller is a part of the Transponder that creates and schedules data packets for transmission based on **Dynamic, Static, and Voyage related** data. The messages sent out contain varied and detailed information, such as: the ships name, call sign, position, heading, COG, SOG, rate-of-turn, etc. It can also read and decode received data packets and then output them for presentation to the MX420, or an external system, such as an Electronic Chart System (ESC/ECDIS) or Automatic Radar Plotting Aids (ARPA) systems.

The MK420 system is the interface to other sensors such as: Gyro, GNSS, Logg, Long-Range (Sat Com) systems and external presentation systems. It also has a user-friendly interface for sending and receiving safety related messages, plotting of up to 20 other ships on a radar-like display, and displaying information about those other vessels, sector-wise in different bearings. All ships within VHF range, equipped with an AIS transponder, can receive transmitted messages from other ships and plot the position of the ships with their speed, name, call sign, heading, and course over ground etc. on the MX420 and /or external plotting aid.

This means that every ship within VHF radio coverage may be automatically plotted on the bridge. Differential corrections for enhanced GPS accuracy can be obtained from shore based stations, via the same AIS datalink, and from ship mounted receivers. It doesn't get easier than this.

Physical:

Size:	L x H x W. 8.25 inch (210mm) x 6 inch (152mm) x 3.5 inch (88mm)
Weight:	6 lbs (2.8 kg)

Power:

Input:	24V DC/ 1.0 Amp at 24V

GPS Receiver:

Receiver:	12 ch. Differential
Frequency:	L1, CA code (SP5)
Update Rate:	Once per second continuously.

Electrical Interfaces:

9 Data ports:	RS 422 (IEC 61162-1/2, NMEA-0183)
GPS antenna connector:	TNC female (50Ω)
VHF radio antenna connector:	BNC female (50Ω)

Power and Data interface to be connected on rail terminals.

VHF Transceiver:

Frequency:	136-174 MHz
Channel bandwidth:	25/12.5 kHz at 9600bps
Channel separation:	12.5 kHz
Output power:	2/12.5 W (±20%)
Bit rate:	9600 bps
Interval between position reports:	1 - 180 sec
Modulation:	GMSK/FM

One transmitter
Three receivers

Standards:

IMO Performance Standard for AIS (MSC.74(69) Annex 3).
ITU-R Recommendations for AIS (ITU-R M.1371-1).
IEC Standard for Class A Shipborne Mobile Equipment IEC 61993-2.
Draft IALA Recommendation on Technical Clarifications of Recommendation ITU-R M.1371-1 as applicable.
Draft IALA Guidelines on AIS as applicable
IEC 945
CE Approved
FCC Compliant
Wheelmark Approved

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