Simrad MX521B

D/GNSS (GPS+GLONASS) SMART ANTENNA

- IMO Compliant GPS/DGPS sensor with GLONASS*
- Enhanced position performance with GLONASS
- Flexibility for easy integration into NMEA 0183 interface
- RAIM (Receiver Autonomous Integrity Monitoring) enabled
- Meets Smart Beacon specifications for DGPS Smart Antenna
- Connects directly to Simrad Control and Display Unit
- Better than 1 meter DGPS Position accuracy
- Better than 3 meter GPS position accuracy
- Built-in DGPS source include SBAS (WAAS, EGNOS, MTSAT)
- D/GPS mode compatibility with MX420/MX510 and MX512 CDU

* SIMRAD CDU is required to comply as an IMO approved system

MX521B
Smart Antenna

MX610/MX612 CDU

DGPS SMART ANTENNA

The MX521B delivers position accuracy better than 1 meter in DGPS/DGNSS mode when using RTCM corrections.

BEACON

Navigation authorities around the world have installed DGPS readiobeacon networks that broadcast RTCM corrections. With the use of its built-in beacon demodulator, the MX521B uses these real-time corrections to deliver accurate, reliable positioning when antenna is within range of Beacon station.

RAIM

Receiver Autonomous Integrity Monitoring (RAIM) is a safety feature in the MX521B which continuously verifies the integrity of the GPS system to ascertain its' accuracy and reliability.

When satellite range error exceeds a pre-set limit, the CDU alerts the operator to take precautionary measures.

INTERFACE

The MX521B features two independent NMEA compliant serial ports which are identical to MX421B-10 and MX521A DGPS smart antenna

Technical specifications overleaf.

Wheelmark Approved

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Technical Specifications

GNSS SENSOR SPECIFICATIONS	
Receiver Type:	GNSS L1 Receiver
Signals Received:	GPS, GLONASS
Channels:	270
GPS Sensitivity:	-142 dBm
SBAS Tracking:	2-channel, parallel tracking
Update Rate:	10 Hz standard
POSITIONING ACCURACY	
RMS:	Horizontal
Single Point: [1]	3 m
SBAS (WAAS): [2]	1 m
Code Differential DGPS: [2]	1 m
COMPASS SAFE	
Distance:	75 cm (with enclosure) [3]
Cold Start:	60 s (no almanac or RTC)
Warm Start:	20 s typical (almanac and RTC)
Hot Start:	1 s typical (almanac, RTC and position)
Heading Fix:	10 s typical (valid position)
Maximum Speed:	1,850 mph (999 kts)
Maximum Altitude:	18,288 m (60,000 ft)
BEACON SENSOR SPECIFICATIONS	
Channels:	2-channel, parallel tracking
Frequency Range:	283.5 to 325 kHz
Operating Modes:	Manual, automatic and database
Compliance:	IEC 61108-4 beacon standard
COMMUNICATIONS	
Baud Rates:	4800 – 38400
Correction I/O Protocol:	RTCM v2.3 (DGPS)
Data I/O Protocol:	NMEA 0183
POWER	
Input Voltage:	10.5 to 32 VDC
Power Consumption:	4.3 W nominal (GPS L1 + GLONASS L1) 4.6 W nominal (GPS L1 + GLONASS L1 + Beacon)
Current Consumption:	0.36 A nominal (GPS L1 + GLONASS L1) 0.38 A nominal (GPS L1 + GLONASS L1 + Beacon)
Power Isolation:	Isolated to enclosure
Reverse Polarity Protection:	Yes

ENVIRONMENTAL	
Operating Temperature:	-30°C to + 70°C (-22°F to + 158°F)
Storage Temperature:	-40°C to + 85°C (-40°F to + 185°F)
Humidity:	95% non-condensing
Shock and Vibration:	Mechanical Shock: EP455 Section 5.14.1 Vibration: EP455 Section 5.15.1 Random
EMC:	CE (IEC 60945 Emissions and Immunity) FCC Part 15, Subpart B CISPR22
IMO Wheelmark Certification:	Yes [6]
MECHANICAL	
Power/Data Connector:	10-pin, environmentally sealed

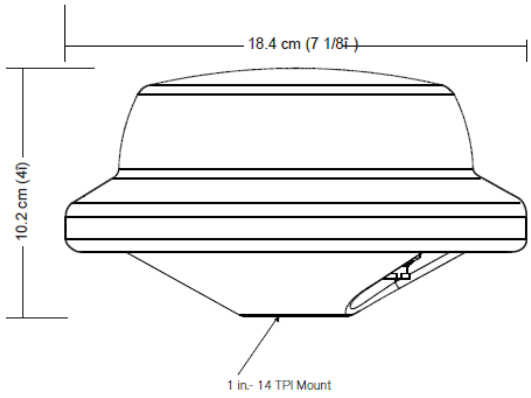
SPECIFIED STANDARD(S)	
IMO Resolution MSC.112(73)	IEC 61108-1 Ed.2.0, 2003
IMO Resolution MSC.113(73)	IEC 61108-2 Ed.1.0, 1998
IMO Resolution MSC.114(73)	IEC 61108-4 Ed.1.0, 2004
IMO Resolution MSC.115(73)	IEC 60945 Ed.4.0, 2002 incl. Corr. 1, 2008
IMO Resolution A.694(17)	IEC 61162-1 Ed.4.0, 2010
IMO Resolution MSC.191(79)	IEC 62288 Ed.1.0, 2008
	IEC 61162-3 Ed. 1.1 2010 (NMEA 2000)

[1] Depends on multipath environment, number of satellites in view, satellite geometry, no SA, and ionospheric activity

[2] Depends on multipath environment, number of satellites in view, WAAS coverage and satellite geometry

[3] This is the minimum safe distance measured when the product is placed in the vicinity of the steering magnetic compass. The ISO 694 defines "vicinity" relative to the compass as within 5m (16.4 ft) separation

[4] NMEA 0183 only



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