



AIS TRANSPONDER UNIT

MTA



The MTA unit is an AIS AtoN transponder device housed in a IP 67 watertight box, providing automatic information on the GPS position of the marine aid to navigation (AtoN); thus making easy the location and identification of buoys, beacons and lighthouses on a vessel or an AIS Base Station chart.

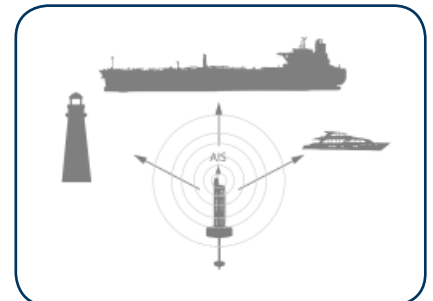
This unit is designed to be connected to any beacon of the market with a serial port and NMEA 0183 protocol, thus transmitting operating status data.

Thanks to its minimum energy consumption, those devices can be integrated in buoys and on-shore lanterns.

The MTA unit complies with IMO, IEC, ITU and IALA Standards.

FEATURES

- ✓ Broadcasting of aids-to-navigation (AtoN) identification data on Message 21, as well as basic data and operating status.
- ✓ Ideal for remote monitoring and control unit to NMEA 0183 protocol lanterns, providing alarms and status on Message 6.
- ✓ Manufactured according to IEC AIS Aids to Navigation, IEC 62320-2, IEC 60945, IEC 61108-1, IEC 61162-1/2, ITU-R M.1371-4, IALA A-126 Standards.
- ✓ Minimum energy consumption (<0.06 Ah/day, Type 1).
- ✓ Two versions are available:
MTA-1: Type 1, transmitter only.
MTA-3: Type 3, transmitter-receiver.
- ✓ Capability of generating virtual and synthetic nav aids (AtoN), and also repeater function.
- ✓ Configuration via software under Windows environment and commands via VDL radio.
- ✓ Position alarm generator by chain breaking (only buoys).
- ✓ Remote Monitoring Centre Software via AIS available.



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Specifications subject to change without previous notice.

Message 21 content	
MMSI number / Name of AtoN.	
WGS84 position.	
GPS time and date.	
Type of AtoN.	
AtoN indicator: Real, Synthetic, Virtual.	
Out of position alarm.	
Racon failure alarm.	
Lantern failure alarm.	
Day-Night mode lantern status.	

Power supply	
Power input:	10 to 36V d.c.
Typical consumption (*):	Type 1: 0.06 Ah/day.
	Type 3: 0.5 Ah/day.

(*Emission every 3 min, at 12.5W.

MTA RF module	
Frequency range:	156.025 to 162.025 MHz.
Transmission power:	1, 2, 5, 12.5W (adjustable).
Number of receivers:	2.
Receiver sensitivity:	< -110 dBm (Type 3).
AIS 1 frequency:	161.975 MHz 25 Khz.
AIS 2 frequency:	162.025 MHz 25 Khz.
Auto-diagnosis:	Emission power test and SWR measurement.

Transmission	
Possible messages:	21, 6, 12, 14, 25, 26.
Standard transmission:	Every 3 min, adjustable.
Control:	Type 1: FATDMA. Type 3: FATDMA, RATDMA.

GPS	
Integrated receptor:	50 channels. IEC 61108-1.
Antenna:	Active 35 dB, external, marine type.
Optional	Glonass.

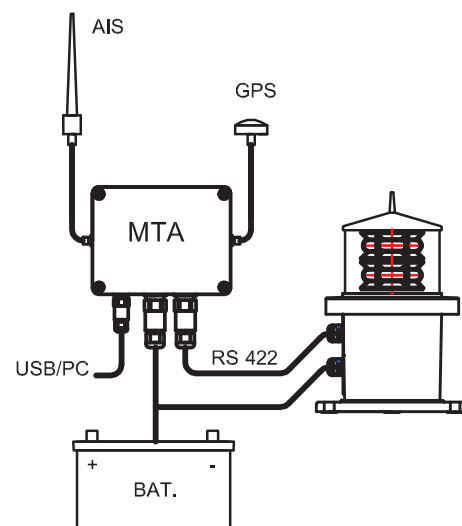
Versions	
MTA Type 1:	Transmitter only.
MTA Type 3:	Transmitter and receiver.

Mechanics and environmental	
Dimensions:	160 x 130 x 70 mm.
Weight:	1.2 kg.
Temperature range:	-25° to 55°C.
Watertightness:	IP 67.

Message 6 content (NMEA 0183 interface)	
MMSI number / Name of AtoN.	
Battery voltage (V).	
Lantern current (A).	
Solar current (A).	
Day-Night mode lantern status.	
Lantern failure.	
Racon failure.	
Out of position.	
Low battery voltage.	
Flasher failure.	
LED diodes failure.	
Wrong flashing rhythm.	
Excess consumption of the lantern.	

MTA interfaces	
Digital I/O:	5 nos. opto-coupled inputs. 2 nos. additional relay outputs.
Ports:	Bidirectional port 38.400 baud. NMEA 0183. Input port 38.400 baud. NMEA 0183. Configuration USB port.

Standards	
IEC AIS Aids to Navigation.	IALA A-126. Edition 1.4.
IEC 62320-2. Edition 1.	IEC 61162-1/2. Edition 2.0.
IEC 60945. Edition 4.	ITU-R M.1371-4.
IEC 61108-1.	



Beacon to AIS MTA connexion.



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