AIS, RACON & REMOTE MONITORING

MTU AIS-C

UNIVERSAL COMPACT AIS TRANSPONDER

MTU AIS-C

Automatic information on the GPS position

The MTU AIS-C transponder is a compact AIS AtoN device, 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.

GPS antenna inside

A triple environmental protection housing compactly holds this device and the GPS antenna inside. The transponder is able to send status signals and alarms signals coming from any kind of beacon, either rotating or flashing one, without need to install any additional sensors.

Minimum energy consumption

Additionally, the MTU AIS-C can transmit meteorological and oceanographic data, such as current, wave height, tides, and wind direction and intensity; all this with a minimum energy consumption.

The MTU AIS-C 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.*
- *Able to transmit meteorological and oceanographic data on Message 8.*
- *Ideal for remote monitoring and control of beacons, 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.*
- *Certifications approved by BSH, R&TTE, BSH, FCC (USA) and IC (Canada).*
- *Two versions are available:*
  - *MTU AIS-C1: Type 1, transmitter only.*
  - *MTU AIS-C3: Type 3, transmitter-receiver.*
- *Capability of generating virtual and synthetic navaids (AtoN), and also repeater function.*
- *Configuration via software under Windows environment and commands via VDL radio.*
- *Remote Monitoring Centre Software via AIS available.*

MTU AIS-C

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:	From 10 to 32V c.c.
Typical consumption (*):	Type 1: 0.06 Ah/day.
	Type 3: 0.5 Ah/day.

(*) Emission every 3 min, at 12.5W.

MTU AIS-C RF MODULE

Frequency range:	156,025 to 162,025 MHz.
Transmission power:	1, 2, 5, 12.5W (adjustable).
Number of receivers:	2.
Receiver sensitivity:	< -107 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, 8, 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 20 dB, internal.

VERSIONS

MTU AIS-C Type 1:	Transmitter only.
MTU AIS-C Type 3:	Transmitter and receiver.

MECHANICS AND ENVIRONMENTAL

Dimensions:	Ø188 x 235 mm.
Weight:	1.3 kg. Unsupported.
Temperature range:	-25º to 55ºC.
Watertightness:	IP 67.
Bird spikes:	4 Uds. Detachable.

MESSAGE 6 CONTENT

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.

MESSAGE 8 CONTENT

MMSI number.

GPS time and date.

Air temperature/wind: direction and speed, average and peak. Atmospheric pressure: average and trend.

Marine current and Tide level.

Water temperature.

MTU AIS-C INTERFACES

Digital I/O:	5 nos. opto-coupled inputs. 2 nos. relay outputs. 4 nos. non-isolated adjustable inputs/outputs.
Analogical Inputs:	2 nos. isolated inputs 0-36V. 3 nos. non-isolated inputs 0-32V. 1 no. current sensor 0.1-5A.
Ports:	RS-422 bidirectional port 38,400 baud. NMEA 0183. RS-422 input port 38,400 baud. NMEA 0183. 2 nos. adjustable RS-232 ports. RS232 38400 NMEA0183 Configuration USB port. SDI12 Bus.

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.	

OPTIONS

Weather station.
Tide sensor (on-shore).
Glonass.
Other parameters and sensors available.

Specifications subject to change without previous notice.

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