

Aids to Navigations system

AIS-BEACON • AUTOMATIC IDENTIFICATION SYSTEM



The AIS-BEACON is a broadcast AIS transponder operating in the VHF maritime mobile band. It has been developed to enhance the safety of vessels at sea and has some specific messages that enhance the Aids to Navigation environment.

It is capable of sending Aids to navigation information to ships such as AtoN identification, GPS position, beacon status, etc.

Message 21 is defined for this purpose and is primarily concerned with the identification of the Aids to Navigation.

Features

- Operating Frequencies on AIS1, AIS2.
- Messages 21, 8 and 6 in the VDL services in accordance with ITU.R M.1371-1
- Designed for low power solar systems installations.
- Microprocessor controller with integrated DSP functions.
- FATDMA Operation.
- Integrated with LMV beacons signals using Serial Port RS232.
- 4 Integrated analogue inputs for telemetry channels.
- 2 W RF Transmitter power selectable.
- 12 channels GPS receiver.
- Power control for GPS receiver and antenna.
- Optional DGNSS receiver.
- Robust enclosure IP-66.
- Configuration software for PC.
- Optional meteorological sensors.

Technical specifications

LMV AIS-BEACON is designed and manufactured at a reduced cost of current AIS hardware prices, as a simplex transmit only device.

The controller does not require any RAM or peripheral chip addition as no VDL profile data tables, VDM conversions etc are required therefore the complexity of the controller is minimized.

OUTPUT POWER	2 W Nominal selectable
RF Frequency Accuracy	3.5 ppm
Frequency AIS 1	161.975 MHz
Frequency AIS 2	162.025 MHz
AIS Modulation	GMSK BT 0.4

DESIGNATION	AIS Derivative equipment for the Universal Automatic Identification System (AIS)	
	Designed according to ITU.R M.1371-1 IEC61993-2	
Services VDL messages in accordance with ITU.R M.1371-1	Message 21	Aids To Navigation (def.)
	Message 6	ABM
	Message 8	BBM
Default Packet	Message 21 with telemetry encoded regional 8 bits	
VDL Modes	FATDMA and FASMTV	
Analogue interface	4 analogue inputs (0-5 V)	
Status interface	4 digital inputs (Max 16 V)	
Power supply	12 Vdc Nominal	
Power consumption	0.73 W nominal, transmission scheduled every 3 min.	
EMC	IEC 60945 –Radiated interference	
	IEC 61000-4-2 Electrostatic discharge	
	IEC 61000-4-3 Radiated frequency	
Temperature Range	-10 to +55°C	
Watertightness degree	IP-66	
Weight	450 gr	
Dimensions	186 x 116 x 34	