

AIS AtoN TRANSPONDER Type 1



Advantages

Low consumption < 0.2 AH/day

- Small watertight case
- Easy installation
- Burnt-in oversized power amp
- Input protected against overvoltage
- VDL message: 6, 8 and 21
- Easily configured from a PC on a series or USB port
- Compliant with standards: IEC 62320-2, EN 60945, ITU-R M1371, IALA A-126

Selected by the French Lighthouses Authority (Cetmef) to equip French buoys

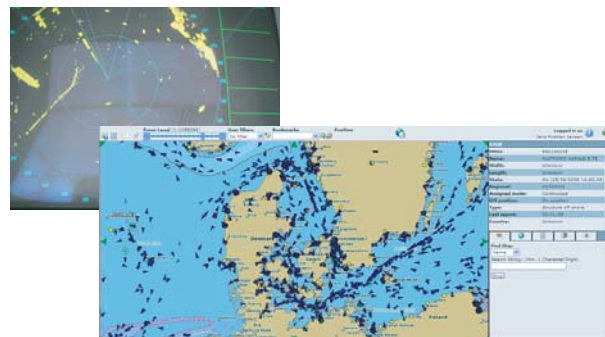


Description

The **Kanaton¹** AIS AtoN Transponder transponder is a type 1 automatic identification system (AIS) for aid to navigation.

This high-performance tool allows seamen and maritime authorities to obtain accurate information about an AtoN (buoy, lighthouse) on marine monitoring systems (shore stations) or on board ships. Data such as: name, type, size, identification (MMSI), true position, status of the buoy if it has been displaced: navigators and management departments are warned in real time.

The **Kanaton¹** AIS AtoN Transponder transponder can also be used to transmit meteorological and hydrological data, and the technical status of the AtoN and its environment.



Message

The AIS **Kanaton** transponder, installed on an AtoN (Aid to Navigation: buoy, lighthouse) transmits accurate data from this AtoN via a HF transmitter in the 160MHz waveband in accordance with the AIS FATDMA protocol (Fixed Allocation Time Division Multiple Access).

Kanaton can be used to broadcast 3 types of message:

■ Message 21: Identification of the Aid to Navigation

MMSI identification
 Type
 Name
 Position
 Longitude, latitude
 Dimension
 Out of position indicator (displaced buoy)
 Status, etc.

Signalling light on off indicators

■ Message 8: Meteorological and hydrological messages

Kanaton can be used to transmit meteorological and hydrological messages, which can be configured according to the user's requirements. These messages are received via the RS422 link according to a standard NMEA protocol

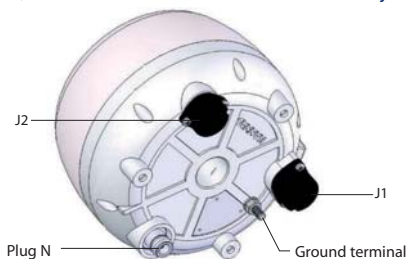
■ Message 6: Remote AtoN monitoring

The message can be used to send binary technical data from the AtoN according to programming adapted to the user's needs.

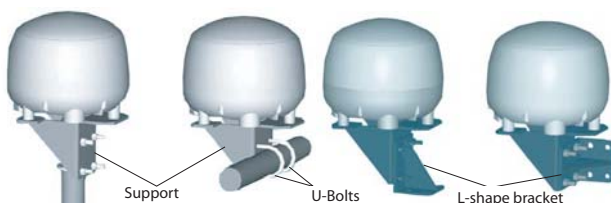
Possibility of programming up to 4 virtual or synthetic AtoNs.

Kanaton transponder includes the VHF and GPS antennas, the different connection cables and their connectors, together with the hardware and software tools required for their configuration, tests and maintenance

All the components are integrated in a watertight case (except for the VHF antenna), which can be mounted directly on the exterior.



Assembly



TECHNICAL SPECIFICATIONS

Operating temperature: -20 to -60° C
 Protection against reversal of polarity: yes
 Operating voltage: 10 to 16 V
 Operating current: <1 mA sleep mode <50 mA in operation <2.5 A in transmission

Consumption (message 21 every 3 min): <0.20AH / day

GPS receiver: GPS L1 C/A-code, SPS 12 channels

Acquisition time:
 - Cold start: 36 s
 - Hot start: 4 s
 Sensitivity:
 - Acquisition (cold): -141 dBm
 - Acquisition (hot, warm):-149 dBm
 -Tracking: -156 dBm
 Supports WAAS / EGNOS

VHF collector antenna: N female
 Power supply /input output connector: Amphenol C16-1
 AIS frequency: AIS1 161.975 MHz
 AIS2 162.025 MHz
 Power: 2W or 12,5 W

Transmission mode: FATDMA (AMRTAF)

Inputs/outputs:
 4 inputs insulated by optocouplers (to read light fault, lights on, Racon fault data)

Characteristics:
 - Insulation voltage 5300Vrms
 - Protection voltage 16V 600W for 1 ms
 - Operating voltage: 16 to 3.3 V

1 output per static relay (for remote contro of a Racon)
 Characteristics:
 - Insulation voltage 5300Vrms
 - Max current 200mA at max 16V
 - Ron resistance < 150 Ohms

Communication ports:
 - TX and RX in RS232 for configuration and reception of technical data
 - RX in RS422 for reception of meteorological data

Operating indicator:
 - Three-colour LED (green/yellow/red)

Dimensions: diameter 165 mm – height 135 mm
 Weight: 1.1 kg
 Case material: ASA plastic
 Case colour: white
 Sealing: IP67

Accessories:
 - 1 VHF antenna
 - 2 x 7 strand shielded cables fitted with an Amphenol C16-1 connector, length 5 m
 - 1 RG213 coaxial cable fitted with an N male connector, length 5 m