LightGuard AIS for AtoN

The LightGuard AIS (LGA) unit is a fully compliant AIS transponder suitable for all aids to navigation installations. Housed in a rugged triple protected housing suitable for the harsh marine environment, it can be deployed on exposed location on buoys and fixed structures. The unit comes with GPS antenna integrated in the housing but an external GPS antenna can be connected if required.

The unit is supplied with a standard stainless steel mounting bracket making the installation to a buoy or a beacon structure easy.

- **Rugged enclosure with IPx6 and IPx7 degree of protection**

- **Integrated GPS antenna in enclosure**

- **Lowest power consumption on the market in both Type 1 and Type 3 configuration**

- **Integrated interface to lantern (health and ON/OFF) and racon (health)**

- **Optional sensor board for met/hyd sensors**

- **Support messages #6, #7, #8, #12, #13, #14, #20, #21, #25**

- **Support up to 10 messages**

- **Wide voltage range from 10 to 32 VDC**

- **Approved by the Federal Maritime and Hydrographic Agency (BSH)**

The military spec connectors are all located in a protected area under the unit and can be wired through a tube for field protection.
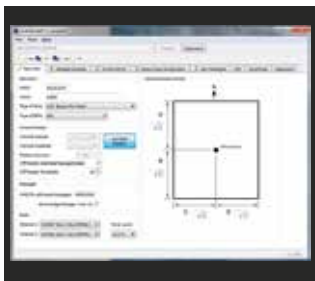

The housing is equipped with a pressure release valve to prevent humidity build-up inside unit.

The unit can also be installed flush on a surface using bolts through the flange.

The stainless steel mounting flange supplied with the unit enables easy mounting on poles and handle bars.

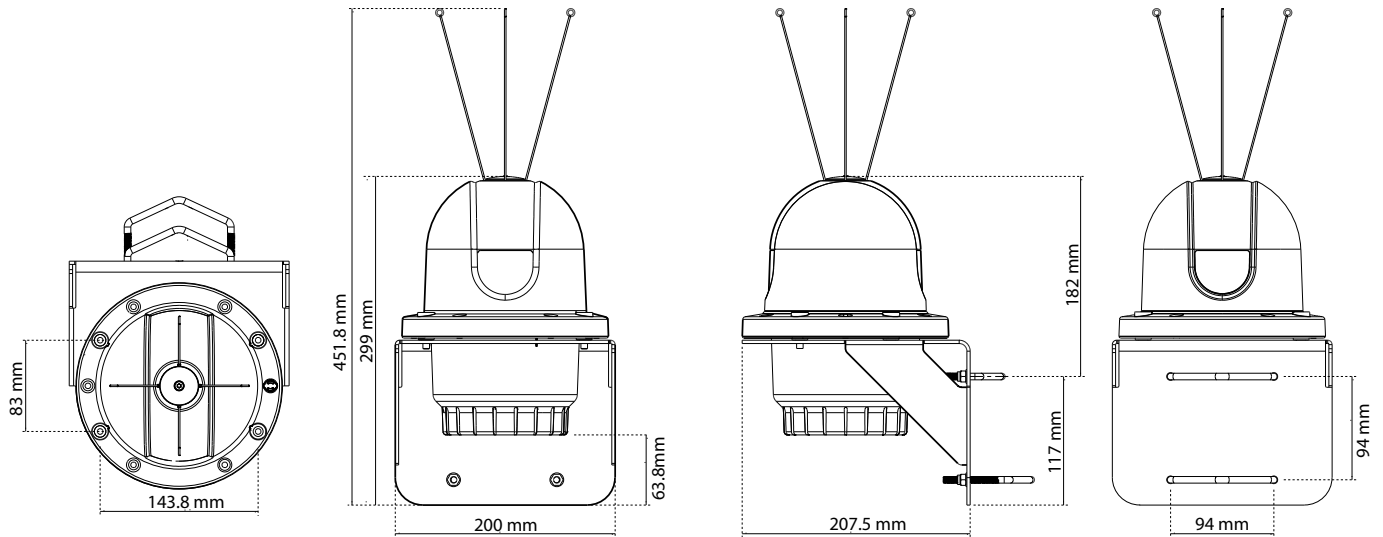Easy-to-use Windows programming interface for setting up unit.

State of the art electronics enables lowest power consumption on market.

Functionality

The unit is available in both Type 1 (transmit only via FATDMA channel access) and Type 3 (transmit and receive using RATDMA channel access) configuration. The LGA unit supports all the standard AIS message types. Advanced functions such as chaining and VDL configuration are also supported.

In standard configuration it can be directly interfaced to a Sabik lantern for updating the lantern health and ON/OFF status in the message 21.

Technical Specification LightGuard AIS for AtoN

Main Technical Specification

PHYSICAL		
Height	284 mm	
Diameter	180 mm	
Weight	1.3 kg without cables and mounting bracket	
ELECTRICAL		
Supply voltage	10 to 32 VDC (absolute min and max)	
Average Power consumption @ 12 VD	**Type 1 (FATDMA channel access)**	< 45 mW (0,09 Ah/day) with 1 msg/3 minutes
	Type 3 (RATDMA channel access)	< 400 mW (0,8 Ah/day) with 1 msg/3 minutes
	typical added consumption for optional sensor board	+ 50 mW (0,1 Ah/day) with one input active (consumption varies with I/O's and functionality)
Transmission power output levels	1 W, 2 W, 5 W and 12.5 W	
Configuration interface	USB	
Interfaces to external equipment (standard)	Integrated I/O interface (max 3.3 V) for • Light ON/OFF status • Light health status • Racon health status	
Interfaces to external equipment (with sensor board)	10 user configurable input/output signals 2 isolated analogue inputs 2 non-isolated analogue inputs 1 current sense loop (lamp current) 2 relay driver outputs A bi-directional NMEA0183 serial port An input only NMEA0183 serial port	

ENVIRONMENTAL	
Degree of protection	IPx6 and Ipx7 for water ingress
Operating temperature	-25°C to +55°C

STANDARDS	
Applicable equipment standards	IEC62320-2 ITU-R M.1371-4 IEC61162-1 IEC61162-2 IEC61108-1 IEC60945
Supported messages	#6 – Binary addressed message #7 – Binary acknowledge message #8 – Binary broadcast message #12 – Addressed safety related message #13 – Acknowledgement of received addressed safety related message #14 – Safety related broadcast message #20 – Data link management message #21 – Aids to Navigation report #25 – Single slot binary message
Approvals	BSH approved
INCLUDED IN PACKAGE	AtoN transceiver Stainless steel mounting bracket and fixing Bird deterrent components Power and data cable 2 meters Sensor interface cables included for AIS unit with sensor board Product manual and CD with programming software

Order Overview LightGuard AIS for AtoN

Product code	Description
LGA T1	LightGuard AIS transponder Type 1 (Transmit only)
LGA T1S	LightGuard AIS transponder Type 1 (Transmit only) with sensor board
LGA T3	LightGuard AIS transponder Type 3 (Transmit and receive)
LGA T3S	LightGuard AIS transponder Type 3 (Transmit and receive) with sensor board

Option code	Description
970211	USB AIS ATON Configuration cable
-	Sensor cable