

data buoy platforms



moorings



navigation buoys



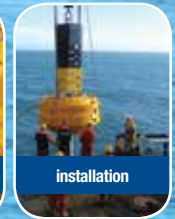
hydrosphere



navigation lights



mooring buoys



installation

the UK's leading supplier of aids to navigation

HEKLEO - SX

frequency agile Racon



The HEKLEO-SX frequency agile Racon is designed to measure the frequency of every incoming radar pulse and transmit a Morse code response back to the radar on that frequency.

Operating on both the S and X bands. The HEKLEO-SX Racon provides an invaluable aid in all weather conditions. It is compliant with IMO regulations and IALA Recommendation R-101.

The Racon answers all active radars in the vicinity employing a Side Lobe Suppression system to better discriminate which pulses to respond to. The length of the Morse code response matches the display range setting by programming the duration of the response according to the incoming pulse length.

The HEKLEO-SX has a low power consumption whilst active as well as during its user programmable idle time. This saves energy and gives time for the navigator to check for the presence of echoes unintentionally hidden by the Racon response. Additionally, if no radar is detected in the vicinity, the Racon enters into a quiescent period where only the monitoring circuits are active.

The unit is easy to install and program. No special tools or training is required and a standard laptop can be connected to the user port to check and program the Racon.

features:

- Low power consumption
- IMO and IALA compliant
- Easy to install and to program
- Virtually maintenance free
- S and X band operation
- Built-in system test with automatic calibration
- Easy to deploy
- Highly suitable for seasonal or short-term use



AIS & monitoring

HEKLEO - SX frequency agile Racon

specifications

physical

Diameter mm	280
Height mm	735
Weight Kg	9
Case sealing	IP67

operation

Frequency MHz	X band (9300-9500) S band (2900-3100)
Reception	S and X bands
Detected pulse widths ns	50 to 2000
Receiver sensitivity	- 50 dBm, X band (adjustable) - 50 dBm, S band (adjustable)
Response delay ns	670 and < 700 typical S and X bands
Emission	S and X bands
Emitted power	X Band 1 W typical S Band 1 W typical
Response duration	Selected by user according to interrogation pulse width (6 to 60 μ sec)
Temperature ° C	-20 to 60
Protection against reversal of polarity	Yes

power

Voltage	10 to 32
Current	Quiescent : <25 mA (for 12V) Idle : <100 mA (for 12V) Active: Max 1300mA (depending on the number of radars in the vicinity)

functionality

Programming of active and idle periods. Cycle time programmable: active from 0 to 60 seconds and idle from 0 to 60 seconds. Quiescent cycle when no interrogation.

communications

User Port	RS 232 serial link for programming and testing
Logical outputs	3 dry contacts: X band default, S band default, power supply default
Logical input	Inhibition for local radars

antennas

Polarisation	Horizontal and vertical in S band / Vertical in X band
Horizontal diagram (pan)	± 2 dB in X+S bands over 360° ± 3 dB in X+S bands over $\pm 15^\circ$

accessories

Programming cable
Power supply cable



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about Hydrosphere

Hydrosphere is the UK's leading supplier of aids to navigation and has been providing cost-effective solutions to the marine industry for more than 20 years. We offer a wide range of navigation and mooring buoys, LED navigation lights, sector lights, rotating beacons, leading lights, jetty masts, beach and zone marking products and associated moorings. Rental, installation and maintenance services are also available for all our products and systems.

For more information please contact us.

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Compliant with all IALA recommendations.

