

# SeaBeacon® 2

System 6 Racon



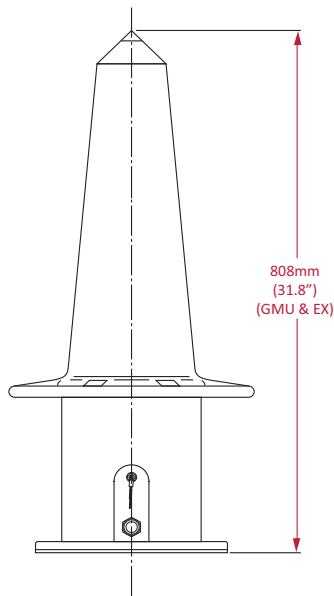
TIDELAND ENGINEERED

SeaBeacon® 2 System 6, a frequency agile radar beacon (racon), provides dependable service to all marine radars, including those with modern narrow band receivers. SeaBeacon® 2 System 6 is unequalled in frequency matching accuracy, consistent pulse-by-pulse response and advanced sidelobe suppression.

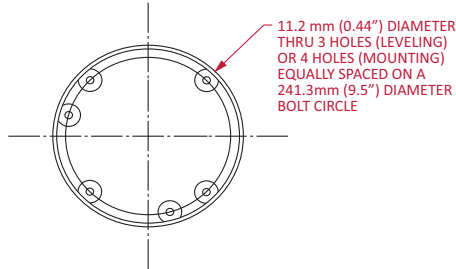
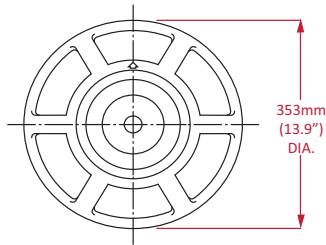
## FEATURES

- **Greater operational range** – SeaBeacon® 2 System 6 provides improvements in receiver dynamic range, receiver sensitivity, power consumption and transmitter power.
- **Positive pressurisation** - Tideland pressurises its racon with nitrogen to protect electronics against the corrosive environment, seasonal variations in ambient pressure fluctuations, condensation and accidental submergence.
- **Dual-token sidelobe suppression** – Radars are identified accurately by measuring frequency and pulsewidth. Amplitude values are used to block responses to sidelobes.
- **User selections** – Operating parameters such as quiescent periods, trace length, active period, extended quiescent and standard response code (per IALA recommendations) can be programmed in the field using an optional hand-held keypad or laptop.
- **Intelligent power management** – Users may program quiescent and active time intervals to match performance and power consumption requirements. To further reduce power consumption, if no local radar is detected the racon automatically returns to its quiescent state after a four second active period. Periodic quiescent periods allow the radar operator to view the radar screen ensuring that no targets have been obscured by a racon response.
- **Proportional scaling** - Ensures length of racon trace appearing on the radar screen is generally uniform on all range settings.
- **Monitoring** – SeaBeacon® 2 System 6 radcons can be linked, via Tideland's NavLink®, to a manned base station for remote monitor and control functions.
- **Hazardous use rating** – Available for General Marine Use (GMU), ATEX Category 2 or 3 for Hazardous Areas.





## DIMENSIONS AND MOUNTING DETAIL



## SPECIFICATIONS

Frequency of Operation	
X-Band	9.3 to 9.5 MHz
S-Band	2.9 to 3.1 MHz
Frequency Matching Accuracy	± 2 MHz
Output Power to Antenna	1.0 Watts (30 dBm)
Pulsewidth Response	
Minimum	50 nanoseconds
Maximum	2000 nanoseconds
Racon Response Display Scaling	
Pulsewidth (±50 ns typical)	Racon Response (±5 µsec typical)
800 nanoseconds to MAX nanoseconds	Selected value
450 nanoseconds to 800 nanoseconds	75% of selected value
215 nanoseconds to 450 nanoseconds	50% of selected value
50 nanoseconds to 215 nanoseconds	25% of selected value
System Sensitivity	
X-Band	-50 dBm
S-Band	-50 dBm
Response Rate - Maximum (either band)	10KHz
Response Delay - Maximum (100 metres)	667 nanoseconds
Radar Blanking	External blanking control ports available
System Test Monitor	
Built-in	Audible Beeper
External A	Transistor Switch for Go/No Go
External B	RS-232C Communications Port for monitor, control and field programming features
Power Supply Input Voltage	
GMU	9 - 36 nominal 12 VDC
Ex	18 - 32 nominal 24 VDC
Lighting Protection - Surge Protection	1 millisecond at 3000 volts
Quiescent Power Consumption	0.24 Watts
Nominal Power Consumption	
Light Traffic	0.75 Watts
Heavy Traffic	1.06 Watts
Quiescent Period	Programmable 0 to 60 seconds
Extended Quiescent	Programmable selectable
Active Period	Programmable 4 to 60 seconds
Antenna Specifications	
X-Band	
Gain	6 dBi
Polarisation	Horizontal
Vertical Divergence	22 degrees
Effective Radiated Power	4.0 Watts
S-Band	
Gain	6 dBi
Polarisation	Horizontal
Vertical Divergence	22 degrees
Effective Radiated Power	4.0 Watts
S-Band Dual Polarisation	
Gain	1 dBi (Horizontal); 0 dBi (Vertical)
Polarisation	Horizontal and Vertical
Vertical Divergence	22 degrees
Effective Radiated Power	1.0 to 1.3 Watts
Submersion Capability – Maximum Depth	10 metres (35 feet)
Dimensions	
Diameter (including lift ring)	353 mm (13.9 in)
Height	807 mm (31.8 in)
Weight (includes 4.5 metre external cable and all stainless steel mounting hardware) – GMU	13.6 kg (30 lbs)
Base Housing	Aluminium
Operating Temperature Range	
GMU and ATEX Category 3	-40°C to +70°C
ATEX Category 2	-20°C to +40°C

### TIDELAND SIGNAL CORPORATION CORPORATE HEADQUARTERS (Houston, TX)

TEL + 1 713-681-6101  
FAX + 1 713-681-6233  
EMAIL [hq@tidelandsignal.com](mailto:hq@tidelandsignal.com)

### TIDELAND SIGNAL CORPORATION (Lafayette, LA)

TEL + 1 337-269-9113  
FAX + 1 337-269-9052  
EMAIL [lafayettesales@tidelandsignal.com](mailto:lafayettesales@tidelandsignal.com)

### TIDELAND SIGNAL CANADA LTD

(Vancouver and Ottawa)

TEL + 1 604-247-0988  
FAX + 1 604-247-0987  
EMAIL [canada-sales@tidelandsignal.com](mailto:canada-sales@tidelandsignal.com)

### TIDELAND SIGNAL PTE LTD (Singapore)

TEL + 65 6333-0078  
FAX + 65 6333-0079  
EMAIL [sales@tidelandsignal.com.sg](mailto:sales@tidelandsignal.com.sg)

### TIDELAND SIGNAL LTD (Burgess Hill, UK)

TEL + 44 (0) 1444 872240  
FAX + 44 (0) 1444 872241  
EMAIL [sales@tidelandsignal.ltd.uk](mailto:sales@tidelandsignal.ltd.uk)

### TIDELAND SIGNAL LTD (Dubai, UAE)

TEL + 971 4-886-0180  
FAX + 971 4-886-0181  
EMAIL [sales@tidelandsignal.ltd.uk](mailto:sales@tidelandsignal.ltd.uk)

WEBSITE [www.tidelandsignal.com](http://www.tidelandsignal.com)



ISO 9001:2008  
Certificate  
Number: 30061

### ISO 9001:2008

Tideland Signal Corporation maintains ISO 9001:2008 accreditation. It is company policy to provide products and services that meet the highest standards of quality in the industry.

### Membership Organisations



NOTE: Specifications are subject to change.

ATEX Category 2 or 3



NavLink® and SeaBeacon® are registered trademarks of Tideland Signal Corporation.

© Tideland Signal Corporation 2009  
H4R13