SeaBeacon® 2
SYSTEM 6 RACON

Industry Leader for Realibility, Accuracy and Low Power

SeaBeacon® 2 System 6 is unequaled in frequency matching accuracy, consistency pulse-by-pulse response and advanced sidelobe suppression. Receiver sensitivity and higher gain antennas give the SeaBeacon® superior range performance with solid-state radars.

Benefits of the SeaBeacon® 2 include:

- **User Selectable Operating** - Parameters can be programmed in the field using an optional hand-held keypad or laptop.
- **Intelligent Power Management** - Program quiescent and active time intervals to match performance and power consumption requirements.
- **Smart Monitoring** - Link via Tideland’s NavLink® to a manned base station for remote monitor and control functions.
- **Proportional Scaling** - Ensures length of racon trace appearing on the radar screen is generally uniform on all range settings.
## Technical Details

### Frequency of Operation

<table>
<thead>
<tr>
<th>Band</th>
<th>Frequency</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Band</td>
<td>9.3GHz to 9.5GHz</td>
</tr>
<tr>
<td>S-Band</td>
<td>2.9GHz to 3.1GHz</td>
</tr>
</tbody>
</table>

### Frequency Matching Accuracy - Long/Short Radar Pulses

± 1MHz

### Output Power to Antenna

1.0W (30dBm)

### Pulswidth Response

<table>
<thead>
<tr>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>50 nanoseconds</td>
<td>2000 nanoseconds</td>
</tr>
</tbody>
</table>

### RACON Response Length

4 - 80 microseconds

### RACON Response Display Scaling

- 800 nanoseconds to 2000 nanoseconds
- 450 nanoseconds to 800 nanoseconds
- 215 nanoseconds to 450 nanoseconds
- 50 nanoseconds to 215 nanoseconds

### RACON Response (±5 μsec typical)

- Selected value
- 75% of selected value
- 50% of selected value
- 25% of selected value

### System Sensitivity

<table>
<thead>
<tr>
<th>Band</th>
<th>Sensitivity</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Band</td>
<td>-50dBm</td>
</tr>
<tr>
<td>S-Band</td>
<td>-50dBm</td>
</tr>
</tbody>
</table>

### Response Rate - Maximum (either band)

10KHz

### Response Delay - Maximum (100 metres)

667 nanoseconds

### Response Recovery Time - Maximum

20 microseconds

### Response Code

AZ, 0-9, NW, NE, SW, SE

### Radar Blanking

External blanking control ports available

### Built-in System Test Monitor

- Audible Beeper
- Isolated Transistor Switch for Go/No Go
- RS-232C Communications Port for monitor, control and field programming features

### Power Supply Input Voltage

- GMU: 9 - 36 nominal 12VDC
- Ex: 18 - 32 nominal 24VDC

### Lighting Protection - Surge Protection

1 millisecond at 3000 volts

### Quiescent Power Consumption

0.24W

### Nominal Power Consumption

- Light Traffic: 0.75W
- Heavy Traffic: 1.0W

### Quiescent Period

Programmable 0 to 60 seconds

### Extended Quiescent

Programmable/Selectable

### Active Period

Programmable 4 to 60 seconds

### Seasonal Inhibit

Programmable/Selectable

### Antenna Specifications

<table>
<thead>
<tr>
<th>Band</th>
<th>Gain Polarisation</th>
<th>Vertical Divergence</th>
<th>Effective Radiated Power</th>
</tr>
</thead>
<tbody>
<tr>
<td>X-Band</td>
<td>6dBi</td>
<td>Horizontal</td>
<td>4.0W</td>
</tr>
</tbody>
</table>

[tidelandsignal.com/SeaBeacon](tidelandsignal.com/SeaBeacon)
## Technical Details (Continued)

### Antenna Specifications (continued)

<table>
<thead>
<tr>
<th>Type</th>
<th>Band</th>
<th>Gain Polarisation</th>
<th>Vertical Divergence</th>
<th>Effective Radiated Power</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>S-Band</strong></td>
<td>S-Band</td>
<td>6dBi</td>
<td>22 degrees</td>
<td>4.0W</td>
</tr>
<tr>
<td><strong>S-Band Dual Polarisation</strong></td>
<td>S-Band Dual Polarisation</td>
<td>1dBi (Horizontal); 0dBi (Vertical)</td>
<td>22 degrees E</td>
<td>1.0 to 1.3W</td>
</tr>
</tbody>
</table>

### Submersion Capability -

- **Maximum Depth**: 10 metres (35ft)
- **Positive pressurisation**: GMU version available with or without (NCE/CSA Class 1, Division 2 only available without positive pressurization).

### Dimensions

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diameter (including lift ring)</td>
<td>353mm (13.9in)</td>
</tr>
<tr>
<td>Height</td>
<td>807mm (31.8in)*</td>
</tr>
<tr>
<td>Weight (includes 4.5 metre external cable and all stainless steel mounting hardware) - GMU</td>
<td>13.6kg (30lbs)*</td>
</tr>
</tbody>
</table>

### Base Housing

- **Material**: Aluminium

### Operating Temperature

- **GMU**: -40°C to +70°C
- **IECEx/ATEX Zone 1/Cat 2**: -40°C to +48°C
- **NEC/CSA Class 1, Division 2**: -40°C to +70°C

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* Dimensions vary with options. Specifications are subject to change.