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** - 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
- **X-Band**: 9.3 to 9.5 GHz
- **S-Band**: 2.9 to 3.1 GHz

### Frequency Matching Accuracy
Long/Short Radar Pulses: ± 1 MHz

### Output Power to Antenna
1.0W (30dBm)

### Pulsewidth Response
- **Minimum**: 50 nanoseconds
- **Maximum**: 2000 nanoseconds

### RACON Response Length
- **Minimum**: 4 - 80 microseconds
- **Maximum**: 800 nanoseconds to 2000 nanoseconds

#### 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
- **X-Band**: -50dBm
- **S-Band**: -50dBm

### Response Rate - Maximum (either band)
10KHz

### Response Delay - Maximum (100 metres)
667 nanoseconds

### Response Recovery Time - Maximum
- **Light Traffic**: 20 microseconds
- **Heavy Traffic**: Programmable 4 to 60 seconds

### Radar Blanking
External blanking control ports available

### Built-in System Test Monitor
- **Built-in**: Audible Beeper
- **External A**: Isolated Transistor Switch for Go/No Go
- **External B**: RS-232C Communications Port for monitor, control and field programming features

### Power Supply Input Voltage
- **GMU**
  - Ex: 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
- **X-Band**: 6dBi
- **Gain Polarisation**: Horizontal
- **Vertical Divergence**: 22 degrees
- **Effective Radiated Power**: 4.0W
## Technical Details (Continued)

### Antenna Specifications (continued)

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

### IP Rating

IP68 (IECEx/ATEX and NEC/CSA versions are IP66)

### 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

- **Diameter (including lift ring):** 353mm (13.9in)
- **Height:** 807mm (31.8in)*

### Weight

- GMU: 13.6kg (30lbs)*

### Base Housing

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

*Dimensions vary with options. Specifications are subject to change.*
Xylem |'zɪləm|

1) The tissue in plants that brings water upward from the roots;
2) a leading global water technology company.

We’re a global team unified in a common purpose: creating advanced technology solutions to the world’s water challenges. Developing new technologies that will improve the way water is used, conserved, and re-used in the future is central to our work. Our products and services move, treat, analyze, monitor and return water to the environment, in public utility, industrial, residential and commercial building services settings. Xylem also provides a leading portfolio of smart metering, network technologies and advanced analytics solutions for water, electric and gas utilities. In more than 150 countries, we have strong, long-standing relationships with customers who know us for our powerful combination of leading product brands and applications expertise with a strong focus on developing comprehensive, sustainable solutions.

For more information on how Xylem can help you, go to www.xylem.com