SB-2200P SENTINEL® BUOY

TOPMARKS
Rotationally moulded polyethylene in shapes and colours recommended by IALA.

EXTENDED HEIGHT (not shown)
Pedestal for raising lantern focal plane.

LANTERN GUARD
Marine grade, hard-adonised aluminium. Extended focal plane version is available.

RECOMMENDED SIGNAL LANTERNS
Various self-contained and long range lanterns.

V-TRACK™ V-03 INFORMER™
Transmits real-time buoy, light and other navaid status information to AIS-equipped vessels. GPS (with built-in antenna) reads position and sends alert if buoy goes off station.

SEABEACON® 2 System 6 RACON (not shown)
A frequency agile radar beacon, providing dependable service to pulsed marine radars. SeaBeacon 2 is unequaled in power efficiency, frequency matching and constant pulse-by-pulse response.

PHOTOVOLTAIC SYSTEM (not shown)
Up to four (4) each 40-watt solar modules.

INTERNAL RADAR REFLECTOR
High gain (10m²) maintenance-free, passive radar reflector.

LIGHTNING PROTECTION MODULES
For robust lightning protection of the antenna.

NAVIAID SECTION
LADDER, MAN GUARD AND FOOT/HAND HOLDS
High gain (10m²) maintenance-free, passive radar reflector.

DAYMARKS (not shown)
In shapes and colours recommended by IALA.

BATTERY HATCH
Tamperproof.

SUPERSTRUCTURE SECTION

FLOAT SECTION

LIFTING EYES

TWO POSITION MOORING EYE
Suited to local conditions of depth and current.

Tideland Signal Corporation
(USA)
us-sales@tidelandsignal.com

Tideland Signal Ltd
(Burgess Hill, UK)
emea-sales@tidelandsignal.com

Tideland Signal Ltd
(The Netherlands)
emea-sales@tidelandsignal.com

Tideland Signal Pte Ltd
(Tianjin, China)
asia-sales@tidelandsignal.com

Tideland Signal Ltd
(Canada)
canada-sales@tidelandsignal.com

Tideland Signal Ltd
(Dubai, UAE)
emea-sales@tidelandsignal.com

Tideland Signal Pte Ltd
(Singapore)
asia-sales@tidelandsignal.com

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www.tidelandsignal.com
SB-2200P
SENTINAL® BUOY
SB-2200P Sentinel®, a larger patented version of the extremely successful SB-98P, is Tideland Signal’s newest generation of large sea buoys. This buoy’s patented hull, lifting and mooring eye system, and its twin-keel design, bring together two decades of experience in providing worldwide, on-station alternatives to steel and GRP buoys.

The SB-2200P modular design is ideal for use in open seas, exposed channels and harbours, and its twin keel provides superior performance in currents up to 6 knots. SB-2200P is a direct replacement for most steel ocean buoys.

FEATURES

• **UV-STABILISED POLYETHYLENE** – Rotationally moulded for a tough 12mm thick body with increased thickness for reinforcement at stress points. The polyethylene material is abrasion resistant, shock absorbing, impact resistant, and able to withstand collisions at sea. In addition, it repels marine growth. Colour pigment is impregnated throughout, eliminating the need for repeated, costly sandblasting and painting.

• **MODULAR CONSTRUCTION** – A float section, middle superstructure section and top navaid section form the SB-2200P buoy. In the event of damage, individual sections can be easily replaced on the deck of a buoy tender at sea.

• **MATCHING OR ALTERNATING COLOURS** – Bifurcation buoys easily can be made, either red or green as needed. Cardinal buoys can be assembled using the same method with yellow and black sections. Fairway or Safe Water buoys are produced using a process of colour graphics, resulting in red and white vertical striping. Wreck marker buoys use the same process, resulting in blue and yellow vertical striping.

• **FLOAT SECTION OF 2.2 METRES DIAMETER** – Utilises a patented high strength, internal structure, solidly linking a two-position mooring eye, two lifting eyes, deck and superstructure. The hull is filled with polystyrene beads, expanded and bonded through a steam process, filling voids and limiting water ingress in case of puncture. The one-piece polystyrene adds rigidity and support to the tough polyethylene outer hull. Twin keels provide stability in fast water and support the buoy standing erect on deck. The SB-2200P two-position mooring eye is provided for either fast or slow water conditions.

• **SUPERSTRUCTURE SECTION** – A maximum of four (4) 12-volt, 105 Ah lead-acid batteries can be located within this section above the waterline. This section includes a hinged, tamperproof, watertight service hatch.

• **NAVAID TOP SECTION** – This section supports up to four (4) optional 40-watt solar modules. Configurations can vary depending on electrical load and average solar insolation for the deployment site. An internal, high gain, passive radar reflector (10m2) can be included. All additional internal optional equipment is housed in this section.

• **CRATING/SHIPPING** – The design of the SB-2200P allows transport of four (4) buoys in a standard 40 foot container, minimising shipping costs.

• The standard SB-2200P is suitable for use with a self-contained lantern.

Optional Equipment Available

- Moorings
- Ladder
- Focal Height Extensions
- Solar Modules
- Racon
- Battery Hatch & Battery Fixture
- Daymarks and Topmarks
- Manguard
- Lantern Guards
- Lanterns
- Remote Monitoring
- AIS AtoN
**Technical Details**

**Construction**
- Rotationally moulded in low density UV-stabilised virgin polyethylene

**Foam Filling**
- 16kg/m³ expanded polystyrene foam

**Air Weight**
- 1750kg (3858lb)

**Diameter**
- 2200mm (7ft 2 in)

**Nominal Focal Plane Height**
- 3200mm (10ft 6 in)

**Optional Extended Focal Plane**
- 4000mm (13ft 1 in)

**Nominal Draft**
- 1288mm (4ft 2 in)

**Nominal Freeboard**
- 610mm (2ft)

**Submergence**
- 38kg/cm (215lb/in)

**Radar Reflector**
- 1m² (X-band)

**Radar Range, Nominal**
- 3 to 4NM

**Visual Area with daymark panels (can shape)**
- 3.7m² (40ft²)

**Visual Area with daymark panels (nun shape)**
- 3.3m² (36ft²)

**Colour**
- As specified

**Maximum Mooring Load**
- 1175kg (2590lb)

**Maximum Current**
- 6 knots

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**Recommend Moorings**

**Current Less than 2 Knots**

<table>
<thead>
<tr>
<th>Water Depth</th>
<th>Chain Length</th>
<th>Chain Size</th>
<th>Sinker Air Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;10m</td>
<td>21m</td>
<td>32mm</td>
<td>800kg*</td>
</tr>
<tr>
<td>10-15m</td>
<td>27m</td>
<td>32mm</td>
<td>800kg*</td>
</tr>
<tr>
<td>15-25m</td>
<td>41m</td>
<td>28mm</td>
<td>800kg*</td>
</tr>
<tr>
<td>25-35m</td>
<td>56m</td>
<td>25mm</td>
<td>900kg*</td>
</tr>
<tr>
<td>35-60m</td>
<td>90m</td>
<td>22mm</td>
<td>900kg*</td>
</tr>
</tbody>
</table>

* Recommendation is to use a 1000kg sinker for all above conditions.

**Current 2 – 4 Knots**

<table>
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<th>Water Depth</th>
<th>Chain Length</th>
<th>Chain Size</th>
<th>Sinker Air Weight</th>
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</thead>
<tbody>
<tr>
<td>&lt;10m</td>
<td>24m</td>
<td>38mm</td>
<td>1750kg</td>
</tr>
<tr>
<td>10-15m</td>
<td>30m</td>
<td>38mm</td>
<td>1750kg</td>
</tr>
<tr>
<td>15-25m</td>
<td>41m</td>
<td>28mm</td>
<td>2000kg</td>
</tr>
<tr>
<td>25-35m</td>
<td>72m</td>
<td>25mm</td>
<td>2000kg</td>
</tr>
<tr>
<td>35-60m</td>
<td>114m</td>
<td>22mm</td>
<td>2500kg</td>
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**Current 4 – 6 Knots**

<table>
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<th>Water Depth</th>
<th>Chain Length</th>
<th>Chain Size</th>
<th>Sinker Air Weight</th>
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</thead>
<tbody>
<tr>
<td>&lt;10m</td>
<td>31m</td>
<td>38mm</td>
<td>3000kg</td>
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<tr>
<td>10-15m</td>
<td>47m</td>
<td>32mm</td>
<td>3500kg</td>
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<tr>
<td>15-25m</td>
<td>63m</td>
<td>28mm</td>
<td>4000kg</td>
</tr>
<tr>
<td>25-35m</td>
<td>94m</td>
<td>25mm</td>
<td>4000kg</td>
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The patented SB-2200P Sentinel® buoy has a float section of 2.2 metres in diameter, a draft of 1.34 metres and a focal plane height of 3.2 metres or 4 metres if utilising optional focal plane extension.