SAILOR

# SAILOR H3000M SSA Mini-C

Ship Security
Alert System


## Ship Security Alert System

With more than 50 years' experience in the maritime market, SAILOR is a leading developer and manufacturer of communications equipment for use in harsh conditions at sea. The SAILOR H3000M SSA Mini-C solution is based on the Inmarsat Satellite Network, which offers a wide range of modern communications services and has proven to be very reliable. This combination of well-known, reliable equipment from SAILOR and Inmarsat-C services provides a very strong Ship Security Alert Systems (SSAS) solution.

The SAILOR H3000M SSA Mini-C system is a dedicated SSAS solution, but it also provides traditional Inmarsat-C services, such as position reporting and polling.

The SAILOR Ship Security Alert System has been developed specifically to meet the requirements for Ship Security Alert Systems as specified in the amendments to SOLAS, chapter XI, Annex 6 (Dec. 2002). It also complies with Inmarsat's requirements for SSAS solutions. The details of these requirements are described in the International Ship and Port Facility Security Code (ISPS Code)*, which aims to establish an international framework to detect and assess security threats and take preventive measures against security incidents affecting ships or port facilities used in international trade.

### The following vessels are covered by the regulations and required to have an SSAS implementation:

| Type of vessel | Implementation deadlines * |
|---|---|
| Passenger ships, including high-speed passenger crafts | No later than the first survey on or after 1 July 2004 |
| Oil tankers, chemical tankers, gas carriers, bulk carriers and high-speed cargo vessels of 500 gross tonnage and upwards | No later than the first survey on or after 1 July 2004 |
| Other cargo vessels of 500 gross tonnage and upwards | No later than the first survey on or after 1 July 2006 |

* ISPS CODE, 2003 Edition, International Maritime Organization, ISBN 92-801-5149-5

## Approvals

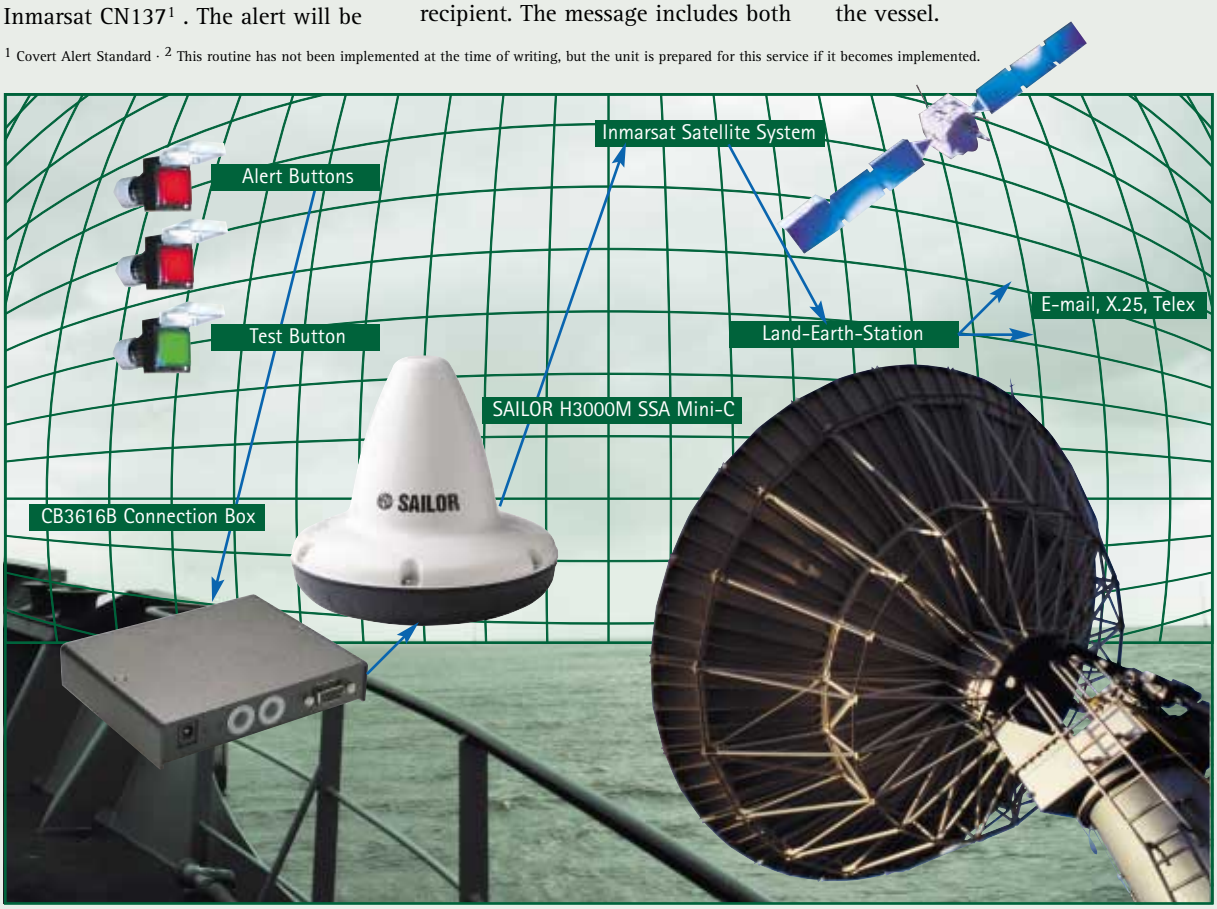
IMO and the International Committee have not specified the technical details for an SSAS system, but have laid out flexible guidelines for SSAS solutions. This provides manufacturers with an opportunity to develop systems that are not completely unified, thus making it more difficult for an aggressor on board a vessel to identify the equipment. National Authorities or the relevant Classification Society must approve a vessel's SSAS installation as part of the Ship Security Plan.

## The Alert System

The SAILOR H3000M SSA Mini-C can deliver an alert message in two ways. One is a Ship Security Alert Message system where the alert is sent to a predefined recipient. Up to three different recipients can receive the alert, e.g. the ship owner's office. This SSA Message is resent every 30 minutes until deactivated. The second alert possibility is the Inmarsat CN137[1] . The alert will be routed to the MRCC or National Security Organisation if the national authorities agree to implement this routing[2] procedure.

The SAILOR H3000M SSA Mini-C is activated by pressing one of the two alert buttons. The SSA Mini-C transmits an alert to an Inmarsat Land Earth Station (LES). The alert message is then forwarded to a predefined recipient. The message includes both ship identification and its position. The message can be forwarded from the LES by all means of communication available at the LES, e.g. as Fax, PSTN, Telex, X.25, Inmarsat-C, E-mail and Special Access Code, e.g. SMS. With the SSA Capsat Manager software installed on the recipient's PC, the alert can be displayed as a pop-up message. This software can also be used for polling/tracking of the vessel.

[1] Covert Alert Standard · [2] This routine has not been implemented at the time of writing, but the unit is prepared for this service if it becomes implemented.



# Configuration


Power Supply

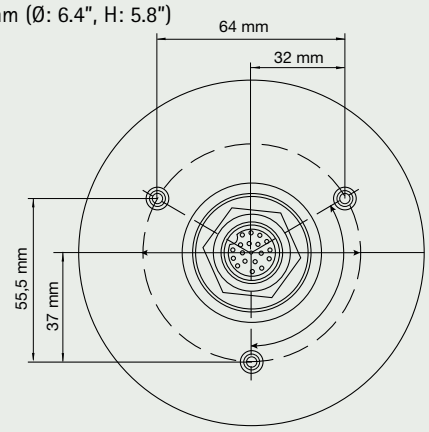
Cable length up to 20 m: 10.5 – 32V DC
Cable length up to 50 m: 16 – 32V DC

*Max 70 metres from Transceiver to Alert Buttons

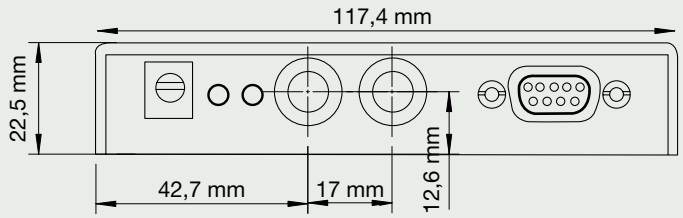
# Dimensions

SAILOR H3000M SSA Mini-C

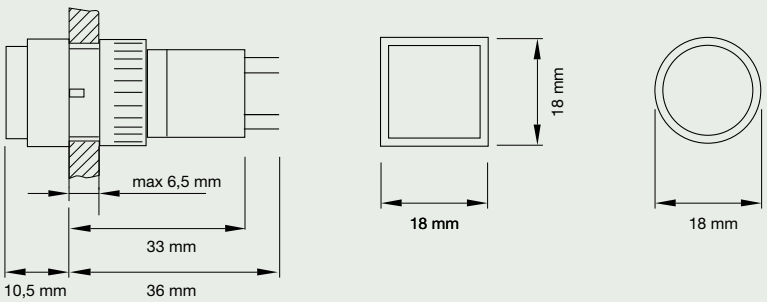
Dimensions: Ø: 163mm, H: 146.2 mm (Ø: 6.4", H: 5.8")
Weight: 1.1 kg (2.4 lbs.)




CB3616B Connection Box




Buttons




## Technical specifications

Meets or exceeds current and proposed Inmarsat specifications for Mini-C Land Mobile Earth Station and Mini-C Ship Earth Station.

**COMPLIANT WITH:**

FCC title 47, part 25, section 25.216
SOLAS Regulation XI-2/6
Inmarsat Covert Alert and CN137

**CERTIFIED BY:**

Relevant classification authorities

**INTERNAL ANTENNA:**

Inmarsat-C/GPS omni-directional antenna. RHC polarized.
G/T - 23.7 dB/K and EIRP 7 dBW at 5° elevation. Coverage +90° to -15°

**OPERATING FREQUENCIES:**

Receive 1525.0-1545.0 MHz
Transmit 1626.5-1646.5 MHz
GPS 1575.42 MHz

**CHANNEL SPACING:**

2.5/5 kHz

**MODULATION:**

600 and 1200 symbols/s. BPSK

**DATA RATE:**

Tx300 and 600bit/s, Rx 600bit/s

**TERMINAL INTERFACE:**

RS-232 w. hardware flow control. 4,800-115,000 Baud.
VT-100 mode

**I/O PORT:**

6 user-configurable 3.3 V I/Os
(5 V tolerant). Each open collector output sinks 25 mA

**MESSAGE STORAGE CAPACITY:**

175 kB SRAM

**INTERNAL GPS:**

12-Channels. 1 sec. update rate. 15m RMS accuracy

**POWER SUPPLY REQUIREMENTS:**

10.5-32V DC floating

**POWER OUTPUT:**

3.3V DC/100 mA, output for terminal equipment

**SLEEP MODE:**

Power supply 12V DC, timer and event programmable modes, reporting interval vs. typical total power consumption:
15 minutes/288 mW, 30 minutes/148 mW,
1 hour/78 mW, 2 hours/43 mW, 5 hours/25 mW,
10 hours/16 mW, 24 hours/11 mW

**AMBIENT TEMPERATURE:**

-35° C to 55° C operating -40° C to 80° C storage

**SOLAR RADIATION:**

Maximum flux density: 1200W/m2

**RAIN:**

100mm/hour, droplet size 0.5 to 4.5mm

**WIND:**

Relative wind up to 200km/hr (124 mph)

**VELOCITY:**

Max. velocity up to 140 km/hr (87 mpr.)

**VIBRATION OPERATIONAL:**

Vibration operational:
Random 5-20 Hz 0.005 g2/Hz, 20-150 Hz-3dB/oct. (0.5g rms)

**SHOCK:**

Survival half sine 20g/11ms

**MOUNTING OPTIONS:**

Standard 1" tube, or 3 bolts on flat surface with 30 mm (1/2") hole for cable.
Option railing/angular mount kit

## Features

- Meet the requirements for Ship Security Alert Systems under ISPS Codes
- No subscription fees
- Low airtime cost
- Polling and tracking of the vessel
- Up to three programmable recipients of alert message
- Prepared for Inmarsat CN137 Ship Security Alerts
- Inmarsat global coverage
- Easy installation
- Integrated antenna, transceiver and 12-channel GPS receiver
- Built-in advanced sleep mode functionality

## SAILOR H3000M SSA Mini-C

The SAILOR H3000M SSA Mini-C provides not only a dedicated SSAS solution, but can also be used for other Inmarsat-C services, such as position reporting and polling.

## The SAILOR H3000M SSA Mini-C system consists of:

- One integrated SAILOR H30000M SSA Mini-C Transceiver and Antenna
- One Mast Mounting Kit (1" Pole Mount Kit)
- One CB3616B Connection Box
- Two Alert Buttons with 50-metre cable each
- One Test Button
- 20-metre Antenna Cable
- Compliant with Inmarsat requirements for Covert/Security alert

## Optional

- SSA Capsat Manager for shore use
- SAILOR N163S Power Supply
- 50-metre Antenna Cable
- Railing/Angular Mount Kit

The extremely compact, rugged SAILOR H3000M SSA Mini-C is a unique Inmarsat Mini-C system, comprising a transceiver, antenna and 12-channel GPS receiver in a single unit - representing the perfect combination of cost-effectiveness and unsurpassed reliability. The system is easy to install, and there are no additional subscription fees for the SSAS.

The CB3616B Connection Box is easily installed anywhere below deck. The CB3616B Connection Box is equipped with I/O pin connectors for the two Alert Buttons, the Test Button and an RS-232 port for connecting Data Terminal Equipment.

A FRIEND IN NEED IS A FRIEND INDEED, the saying goes; and truly, SAILOR is committed to being there for you should a problem arise. What is more, we want to make sure that you are always on safe ground, even when you are on the open sea. That is why we operate under the maxim: "SAILOR – When safety counts".

With more than 50 years of experience in the market, SAILOR is a true professional. We know that we have to earn the loyalty of our customers. That is why nearly 15% of our annual turnover is reinvested in research and development and more than one employee in ten is engaged in finding solutions to the challenges of tomorrow.

Today, SAILOR provides a well-known range of communications products that includes everything from radios for the leisure market to equipment for fishing vessels and complete communications solutions for the deep sea sector. The SAILOR brand has become synonymous with reliable and technologically superior radio equipment – and covers everything from basic VHF units to state-of-the-art satellite systems, AIS (Automatic Identification System), SSAS (Ship Security Alert Systems) and complete compact GMDSS solutions.

SAILOR

When safety counts

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