

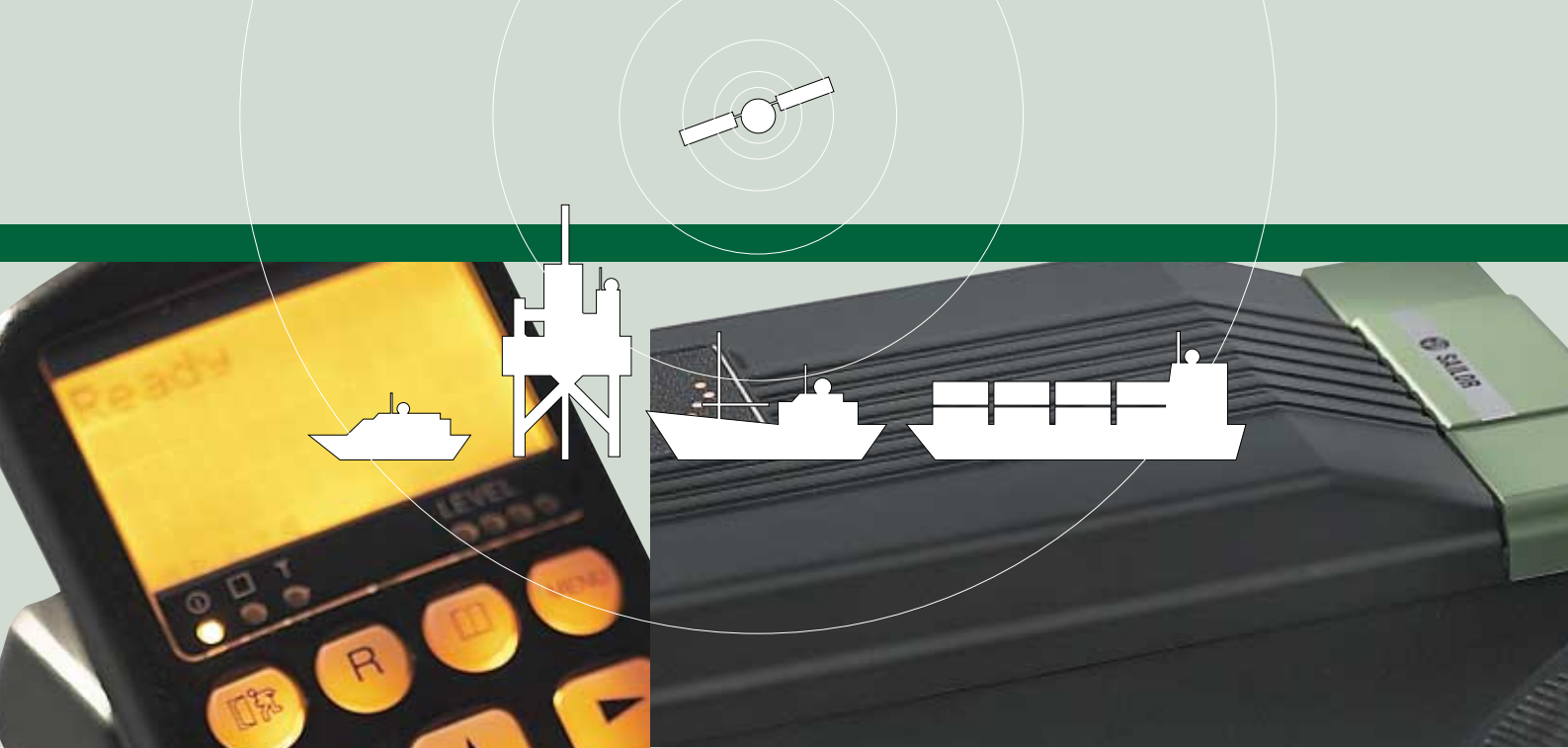
SAILOR SC4000 IRIDIUM



A wide horizon
is a privilege,
not a right



IRIDIUM



IRIDIUM

Iridium is the first truly global satellite network for telecommunications.

Its 66 cross-linked Low Earth Orbit satellites form a worldwide grid only 780 km (485 miles) above Earth. The Iridium telephone system provides truly global spot beam coverage for satellite telephones, and it also offers unique cross-protocol roaming facilities for all existing telephone systems.

SC4000 IRIDIUM, TRUE GLOBAL COVERAGE

SAILOR communications systems are well-known for their quality, reliability and continuous innovation; and the innovative SC4000 Iridium is no exception. The Iridium system, on which the SC4000 operates, is the first truly global communications system, which means that no matter where you are and who you want to call, you always have 66 Low Earth Orbit satellites at your disposal. This is not only convenient, but, more important, a crucial safety factor. The SC4000 is well-suited for all types of vessels – from fishing boats and cargo ships to powerboats, yachts and cruise liners – even in remote areas, both on land and at

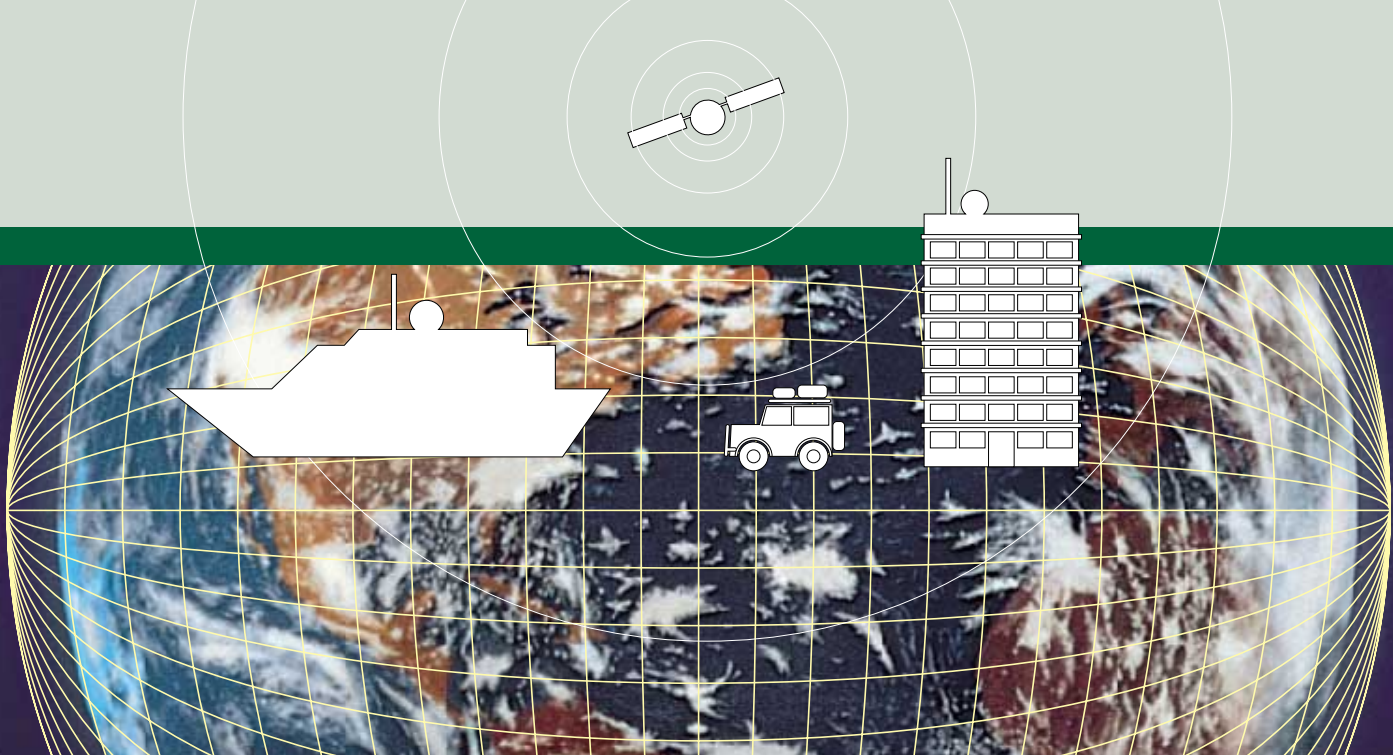
sea. The SC4000 puts you in closer contact with the world.

The compact SC4000 consists of only three units: the antenna SA4110, the transceiver ST4120 and the intelligent handset SC4150 – intelligent, because it is a combined handset and control unit. It can operate with as many as four handsets, making it possible to use the system anywhere on board.

The fact that the antenna can always "see" three satellites ensures good contact at all times and guarantees a clear signal irrespective of the distance between the communicating parties.

The SC4000 has other additional advantages to offer as well: – a surprisingly extensive data capability, for example.





THE INTELLIGENT HANDSET

The SAILOR SC4150 is a handset and control unit in one. The unique control unit requires very little space. It features a logic menu-structure and is easy to use as it is operated in exactly the same way as a conventional mobile phone. The large 4-line/12-character LCD-display shows all the major functions and includes system surveillance and all the usual mobile phone functions. As it is equipped with a small but efficient loud-speaker, incoming calls are easy to hear – even in wheelhouses and other noisy environments.

The intelligent Man Machine Interface (MMI) controls the actual

execution of commands entered by means of the keypad. The LCD display is used for both incoming calls and confirmation of the user's actions.

Up to four individual handsets/control units can be connected to the system, providing maximum flexibility as regards both users and locations.

THE TRANSCEIVER

The smart, ruggedized transceiver contains an L-band transceiver (LBT) and a built-in SIM card reader unit designed for the small SIM cards used in most types of mobile phones. It also contains the system control PCB with the memory and interfaces necessary: RJ-11 PSTN/

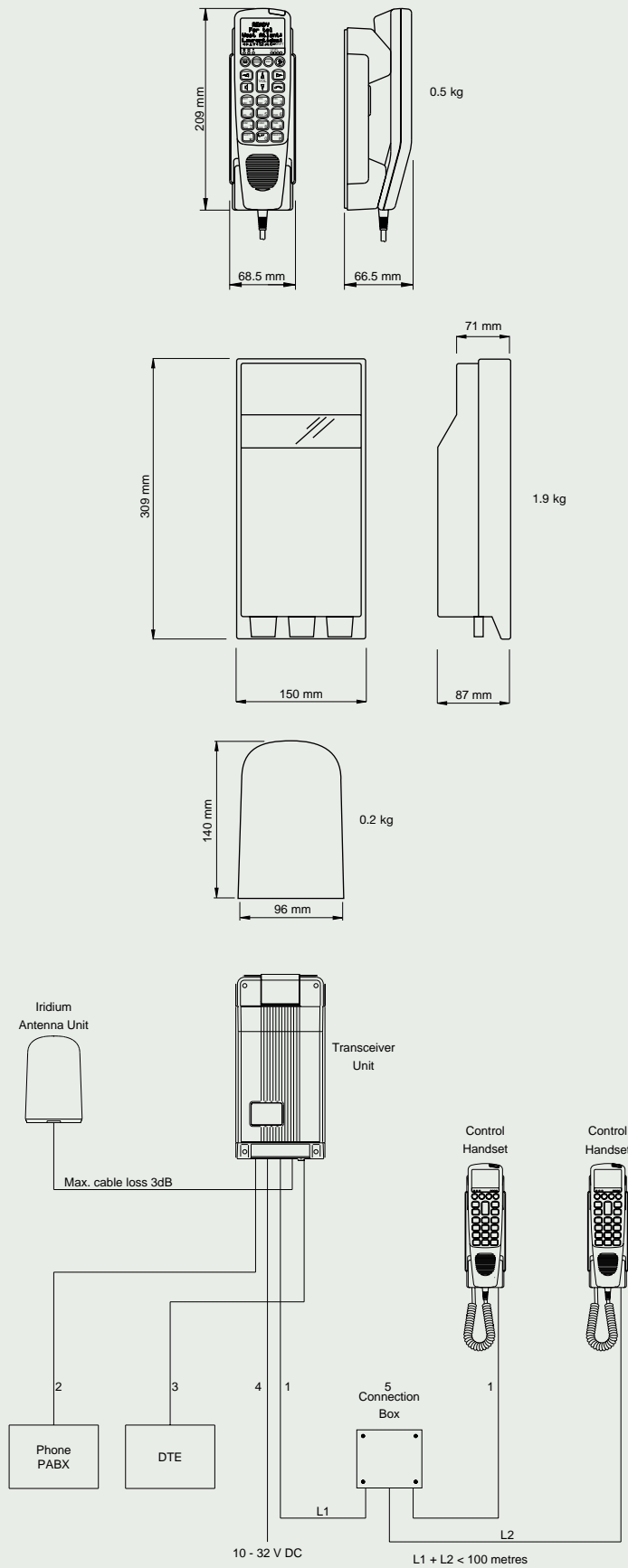
PABX, NMEA 0183, RS-232 serial and RS-485 SCANBUS.

THE ANTENNA

In spite of its very slim and delicate design, the SC4000 antenna is very sturdy. It has no moving parts, and the helix construction is coated with glass-enforced epoxy, which is highly weather-resistant and able to withstand the extreme conditions at sea.



Dimensions and mass:



Technical Specifications

FREQUENCY RANGE SC4000

Terminal - Satellite	1616 - 1626.5 MHz (L-Band)
Intersatellite	23.18 - 23.38 GHz (Ka-Band)

MODULATION (INFORMATION RATE)

Voice/data	2.4 kbit/s O-QPSK
Compressed data	10 kbit/s O-QPSK

ABOVE DECK EQUIPMENT

Antenna	Helical, omnidirectional 210° (3 dB bandwidth) Fiberglass ϕ 100 mm
Link margin	16 dB

INTERFACE

Handset	RS-485, 8-wire, 600 Ω
Telephone/PABX	RJ-11, 2-wire, 600 Ω
Data	RS232, standard serial
Position information	NMEA 0183

POWER SUPPLY

DC	10-32 V DC
AC - optional (ext. power supply)	100-230 V

POWER CONSUMPTION

Transmission	25 Watt
Stand-by	8 Watt

ENVIRONMENTAL CONDITIONS

Temperature	ADE -35°C to +55°C
Relative humidity	Up to 95% at 40°C
Icing (survival only)	Up to 25 mm of ice
Precipitation	Up to 100 mm/hour
Wind (velocity)	Up to 100 knots
Vibration	IME: 2 - 50 Hz +/- 1 g EME: 4 - 33 Hz +/- 1 g

ANTENNA TRACKING CAPABILITY

Turn	Omnidirectional antenna
Roll/Pitch	Tilt to any direction upto 20° from horizontal.
Yaw	Satellite elevation > 8°



Features

Call Facilities

- Crew calling
- PC based SMS
- Conference calls
- Easy to use; works like a mobile phone
- Repeat call function
- Memory for up to 100 telephone numbers
- Call log
- 2.4 kbps data transmission and Iridium's 10 kbps compressed data service
- SSAS compatible

Installation

- Up to four Intelligent Handsets in any one system
- Direct connection for PABX or standard telephones
- Easily accessed SIM-card reader
- Easy to install and requires a minimum of space

Design

- Built-in loudspeaker
- Intelligent Man Machine Interface (MMI)
- Low power consumption
- Small, light-weight antenna with no moving parts
- Specially designed and developed for the demanding environment at sea

Crew Calling

With one single SIM Card and a SAILOR SC4000 System, vessels can have both a traditional subscription service and a prepaid service on Iridium. The traditional subscription can be used for business matters while the crew can benefit from the prepaid service with no administration cost for personal calls.

PABX/PSTN interface

The SC4000 has a built-in RJ-11 port as interface for a PABX or a standard analogue phone (according to IEC 300 001). When connected to a PABX set-up, all the phones of the network will be able to use the Iridium system to make and receive calls.

Data capability

In addition to the data capability of 2.4 kbps, the SAILOR Iridium terminal gives access to Iridium's 10 kbps compressed data service, which allows the user to operate faster on the Internet. In fact, the SC4000 provides the fastest global satellite-based service for equipment of this size. It allows the user to connect to the Internet and with the new Iridium SMS-service you can receive text messages from all over the world.

Compact robust design

The SC4000 is specially designed for the harsh maritime environment and is able to withstand even the toughest conditions at sea. It is made for this life and is naturally approved according to international maritime standards.

SSAS

With the dedicated SAILOR Iridium SSAS Box and alert buttons connected to the SAILOR SC4000 Iridium System the IMO requirements for an SSAS system (Ship Security Alert System) can be fulfilled. The SSAS functionality does not require extra subscription or signing fees apart from the standard Iridium subscription.



PIRATES BEWARE



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

SAILOR® · Porsvej 2 · PO Box 7071 · 9200 Aalborg SV · Denmark
Tel: +45 9634 6100 · Fax: +45 9634 6101 · sailor@sailor.dk · www.sailor.dk