

Translation



(1) **EC-Type Examination Certificate**

(2) Equipment and protective systems intended for use in potentially explosive atmospheres, **Directive 94/9/EC**

(3) **Certificate Number** **TÜV 08 ATEX 353822 X**

(4) for the equipment: Radio Transceivers
Type: SAILOR SP3540 VHF GMDSS

(5) of the manufacturer: **Thrane & Thrane A/S**

(6) Address: Porsvej 2
DK-9200 Aalborg SV, Denmark

Order number: 8000353822

Date of issue: 2008-12-29

(7) This equipment or protective system and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.

(8) The TÜV NORD CERT GmbH, notified body No. 0044 in accordance with Article 9 of the Council Directive of the EC of March 23, 1994 (94/9/EC), certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems intended for use in potentially explosive atmospheres given in Annex II to the Directive. The examination and test results are recorded in the confidential report No. 08 203 353822.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:


EN 60079-0:2006

EN 60 079-11:2007

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-type examination certificate relates only to the design, examination and tests of the specified equipment in accordance to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment or protective system must include the following:

 **II 2G Ex ib IIC T4**

TÜV NORD CERT GmbH, Langemarckstraße 20, 45141 Essen, accredited by the central office of the countries for safety engineering (ZLS), Ident. Nr. 0044, legal successor of the TÜV NORD CERT GmbH & Co. KG Ident. Nr. 0032

The head of the certification body

A handwritten signature in blue ink, appearing to read 'Schwedt', is written over the text 'The head of the certification body'.

Schwedt

Hannover office: Am TÜV 1, 30519 Hannover, phone +49 (0)511 986 1455, Fax +49 (0)511 986 1590

(13) **SCHEDULE**

(14) **EC-Type Examination Certificate No. TÜV 08 ATEX 353822 X**

(15) Description of equipment

The ATEX VHF radio transceiver type SP3540 VHF GMDSS are designed as intrinsically safe for use onboard ships and on land in classified areas Zone 1 and Zone 2.

The SP3540 is a special GMDSS approved radio for use in emergency situations onboard ships. SP3540 are orange and are supplied either from the ATEX Primary battery type B3503 or alternatively the Secondary battery type B3504. The ATEX Primary battery B3503 is orange and can not be charged. The ATEX Secondary battery B3504 is blue and is rechargeable. Charging takes place in the belonging non ATEX charger. Charging takes place outside protected ATEX area. Both the primary and the secondary batteries are constructed with intrinsically safe connection facilities and they can be changed inside the hazardous area and fulfils Ex ib IIC T4 specifications. The cabinet of the radio is designed to fulfil antistatic ATEX requirements even without the accessory leather case.

Technical data

The accessory interface connector on top of radio is intrinsically safe with the following entity parameters:

Uo: 8.4 V
Io: 0.45 A
Lo: 10 µH
Co: 150 nF

Only ATEX certified accessories matching the above mentioned entity parameters must be connected.

Approved accessories:

Charger CH3505	403505A
Charger CH3507	403507B
Charger CH3508	403508B
VHF Antenna	88-124370-A
VHF Antenna	62-124370
Lanyard	41-124375-A
Belt clips	62-124320
Leather case	403500-207
Service cable	403500-958

Ingress protection: IP 67

Permitted range of the ambient temperature - 20 °C to +55 °C

(16) Test documents are listed in the test report No. 08 203 353822.

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(17) Special conditions for safe use the following 2 conditions should be added:

- Do not change the battery in wet or humid environments.
- Always keep battery connectors dry and clean.
- Use only with Sailor ATEX approved accessories.
Alternatively ATEX approved accessories in compliance with the accessory connector ATEX specification may be used.
- Do not change accessories in wet or humid environments.
- Do not charge the battery in hazardous area.
- For charge of battery use
Part no: 403505A - ATEX CH3505 Compact Charger,
Part no: 403507B - ATEX CH3507 Single Position Charger or
Part no: 403508B - ATEX CH3508 Dual Position Charger
- Use only battery type Sailor B3503 or B3504.
- Do not use a mechanically damaged radio.
- Unpacking of the radio and accessories and the removal of the protective film in front of the display window must not take place in the ATEX protected area.

(18) Essential Health and Safety Requirements

no additional ones