

## EC TYPE EXAMINATION CERTIFICATE

MED-B-20021

In compliance with Module B of Council Directive 2014/90/EU of the European Parliament and included the Implementing Regulation (EU) 2019/1397 of 6 August 2019, this certificate is issued to the manufacturer:

**Thrane & Thrane A/S trading as Cobham SATCOM**  
**Lundtoftegaardsvej 93 D**  
**DK-2800 Kgs. Lyngby, Denmark**

And applies to the product

**Fire-fighter's two-way radiotelephone apparatus**  
**SAILOR 3965 UHF Fire Fighter Radio**  
**OEM variant: McMurdo R8F Fire Fighter Radio**

This certificate attest that provisions according to type examination requirements given in

SOLAS 74/2014 Reg. II-2/10.10.4  
IMO Res.A.694(17)  
ITU-R M.1174-3 (03/15)

IEC 60945 (2002) incl. IEC 60945 Corr. 1 (2008)  
ETSI EN 301 843-1 V2.2.1 (2017-11)  
ETSI EN 301 843-2 V2.2.1 (2017-11)  
ETSI EN 300 720 V2.1.1 (2017-01)  
ATEX Directive 2014/34/EU

This certificate loses its validity if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to and agreed upon with Nemko. Software changes and updates: - See Product description in the Annex. Should the specified regulations or standards be amended during the validity of this certificate, the products are to be re-approved prior to them being placed on board vessels to which the amended regulations or standards apply.

The attached Schedule of Approval forms part of this certificate. The certificate remains valid unless cancelled or revoked, provided the conditions in the attached schedule are complied with and the equipment remains satisfactory in service.

Oslo, 2020-01-20

Date of expiry: 2025-01-19

Notified Body Id. no. 0470  
Nemko AS  
Philip Pedersens vei 11,  
1366 Lysaker, Norway



---

Roy Uggerud  
Nemko AS

## Annex I to EC Type-Examination Certificate, No. MED-B-20021

### SCHEDULE OF APPROVAL

#### Product description

Portable two-way radiotelephone for Fire-fighter

The products covered by this certificate are marketed under the brand SAILOR and Mc. Murdo.

Operating frequencies:

Rx frequency band: 457.525 – 457.575 MHz  
467.525 – 467.575 MHz

Tx frequency band: 457.525 – 457.575 MHz  
467.525 – 467.575 MHz

Modulation: 16K0G3E

RF output power, maritime: 2 W radiated / 0.4 W radiated

SAILOR 3965 software version: 3.00.xx

McMurdo R8F software version: xxx3.00.xx

Minor software changes, represented by increasing the last 2 digits of the core revision number, are given with a notification to Nemko.

Major software changes, represented by increasing the first digit of the core revision number, must be recorded and documentation must be provided to Nemko for review and acceptance before implementation.

#### The EC Type-Examination Certificate covers the products listed below

Item no.	Type	Designation	Manufacturer	Option
1	403965A-00500	SAILOR 3965 UHF ATEX Portable Marine Radio	Thrane & Thrane A/S	
2	403965A-26000	McMurdo R8F Fire Fighter Radio	Thrane & Thrane A/S	
3	403503A	SAILOR B3503 Primary Battery.	Thrane & Thrane A/S	
4	403906A	SAILOR B3906 ATEX 1.800 mAh rechargeable Li-Ion Battery	Thrane & Thrane A/S	option
5	403504A	SAILOR B3504 ATEX 1.800 mAh rechargeable Li-Ion Battery	Thrane & Thrane A/S	option
6	403505b	SAILOR CH3505 Compact Charger ATEX	Thrane & Thrane A/S	option
7	403507B	SAILOR CH3507 Single Position Charger ATEX	Thrane & Thrane A/S	option
8	403508B	SAILOR CH3508 Dual Position Charger ATEX	Thrane & Thrane A/S	option
9	88-125538	SAILOR AC/DC Converter incl. cable (not ATAX)	Thrane & Thrane A/S	option

#### Trademarks

Products covered by this certificate are Thrane & Thrane and OEM variants. Thrane & Thrane variants are identified by the designation of SAILOR or THRANE followed by 4 digits and a description.

Thrane & Thrane variant: 403965A-00500 SAILOR 3965 UHF fire fighter Radio, ATEX

OEM variant: 403965A-26000 McMurdo R8F Fire Fighter Radio

## Type approval documentation

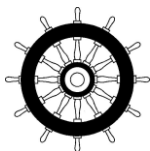
Document	Document no.	Rev.	doc
Manual, Cobham: SAILOR 3965 UHF Fire Fighter user manual	98-150078-F	F	001
Document, Cobham: SAILOR 3965 UHF Fire Fighter Product Sheet	71-151986	A00 05.16 MBU	002
Statement, Cobham SATCOM: Statement on similarities between 3965 R8F and SP3560	99-159557-A	2017-07-03	003
Report, Cobham SATCOM: IEC 62133 Over-charging of battery	91-152536-C	C	004
Report, Cobham SATCOM: IEC 62133 External short circuit	91-152565-B	B	005
Report, Cobham SATCOM: IEC 62133 Moulded case stress B3906	92-132539-A	A	006
Report, Cobham SATCOM: IEC 62133 Free fall B3906	91-152581-A	A	007
Certificate, TÜV: TT-3965A UHF Fire ATEX - EC Type Examination Certificate	99-150096-B	01	008
Report, UL: Test Report UL Demko HH Batteries Yellow Red Blue Orange	99-150941-B	B	009
Document, Cobham SATCOM: Evaluation of Measuring Accuracy_CYCOLOY Resin C1200HF_IEC 60093	99-150942-B	B	010
Report , TÜV Nord: Test report TUV NORD - SAILOR 3965	99-151192-B	B	011
Report , DELTA: Assessment Report Safety DELTA OH-1048A AC-DC Converter	99-152355-B	B	012
Report , DELTA: Assessment Report_Safety_DELTA_SAILOR B3906	99-152355-B	B	013
Report, Nemko: TRF MAR 342319	99-170910-A	A	014
Report, Nemko: Nemko TRF ETSI EN 300 720, 342319-01	99-170909-A	A	015
Report, IMST: ISED RSS-102 Issue5 Annex A-B 6180631 Sailor3965A, 6200B-3965	99-170906-A	A	016
Report, IMST: SAR Report FCC ISED 6180631 Sailor3965A	99-170907-A	A	017
Report, IMST: SAR Report FCC ISED 6180631 Sailor3965A Appendix, 6200B-3965	99-170908-A	A	018
Report, Nemko: Performance test SAILOR 3965 UHF Fire Fighter radio, 389894	99-170911-A	A	019

## Limitations/restrictions

Charging the Secondary Battery SAILOR B3506 with the associated non-ATEX chargers is only permitted outside the hazardous area.

Using the SAILOR AC/DC Converter incl. cable is only permitted outside the hazardous area.

Both the primary battery B3505 and the secondary battery B3504 may be changed in the hazardous area.



"The Mark of Conformity" (i.e. the Wheel mark) may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity issued when the production control phase module D (Production Quality Assurance), E (Product Quality Assurance), or F (Product Verification), of Annex B of the Directive (MED) is fully complied with and controlled by a written inspection agreement with a notified body."

----- End of certificate -----