



DET NORSKE VERITAS TYPE APPROVAL CERTIFICATE

CERTIFICATE NO. A-11036

This Certificate consists of 4 pages

This is to certify that the

Ship Security Alert System (SSAS)

849.01

with type designation(s)

Furuno SSAS

Manufactured by

Furuno Electric Co., Ltd.

Nishinomiya, Japan

is found to comply with

ISPS Code - SOLAS Chapter XI-2 Regulation 6 Ship Security Alert System
IMO Resolution MSC.147(77) Revised Performance Standards for a Ship Security Alert
System

Det Norske Veritas' Rules for Classification of Ships, High Speed & Light Craft and Det
Norske Veritas' Offshore Standards

Application

Approved for use in Sea Areas A1, A2 and A3 as defined in SOLAS Ch. IV.

Place and date
Høvik, 2008-12-05
for Det Norske Veritas AS

This Certificate is valid until
2012-12-31

Olaf Jansen
Head of Section

Local Office
DNV Kobe

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Surveyor

Product description:

Hardware alternatives:

Furuno Felcom 12*				
Transceiver unit	Antenna	Power supply	Junction box	Alert button**
IC-212	IC-112	PR-240	IC-312	IC-307

Furuno Felcom 15				
Transceiver unit	Antenna	Power supply	Junction box	Alert button**
IC-215	IC-115	PR-240	IC-315	IC-307

Furuno Felcom 16				
Transceiver unit	Antenna	Power supply	Junction box	Alert button**
IC-216	IC-116	PR-240	IC-315	IC-307

* Furuno FELCOM 12 may be used as SSAS equipment after the "SSAS Kit for FELCOM 12", as supplied by manufacturer, has been fitted and new software has been installed.

** The system is designed / intended for two alert buttons. Please also refer to the installation manual for further guidance.

NOTE: Only cables supplied for this specific purpose, as supplied from the maker may be used when connecting the SSAS equipment. Please also refer to the Installation Manual for further guidance on cable supply options.

Software:

Software version, Felcom 12: 1650112-103

Software version, Felcom 15: 1650159-03/05

Software version, Felcom 16: 1650160-03/05

Application/Limitation:

The sea areas referred to on page 1 are as defined in SOLAS Chapter IV regulation 2.

The SSAS is to be installed and used according to the manufacturer's guidelines.

The SSAS is not to be used in area with hazardous/explosive atmospheres requiring explosion proof/intrinsically safe equipment.

Type Approval documentation:

Tests carried out

- IEC-60945 Ed. 4 (2002): "Maritime Navigation and Radiocommunication Equipment and Systems - General Requirements - Methods of testing and required test results".

- Det Norske Veritas' "Ship Security Alert System Type Approval Programme"

(A-849.01), Appendix A, Performance Tests.

- IMO Resolution MSC.147(77) "Adoption of the Revised Performance Standards for a Ship Security Alert System".

Marking of product

The products are to be marked with CE marking only.

Certificate retention survey

The retention survey is to be performed at least every second year and at renewal of this certificate.

The scope of the retention/renewal survey is to verify that the conditions stipulated for the type approval area complied with and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

END OF CERTIFICATE

Notice: This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.

If any person suffers loss or damage which is proved to have been caused by any negligent act or omission of Det Norske Veritas, then Det Norske Veritas shall pay compensation to such person for his proved direct loss or damage. However, the compensation shall not exceed an amount equal to ten times the fee charged for the service in question, provided that the maximum compensation shall never exceed USD 2 million. In this provision "Det Norske Veritas" shall mean the Foundation Det Norske Veritas as well as all its subsidiaries, directors, officers, employees, agents and any other acting on behalf of Det Norske Veritas.