

EC Type-Examination (Module B)

Directive for Marine Equipment

Certificate No.: **DK-0200-MarED-152 version 5**
Issued by FORCE Certification A/S - EC-notified body number 0200

This is to certify that:

FORCE Certification A/S did undertake the relevant type approval procedures for the equipment identified below which was found to be in compliance with the Life Saving Appliance requirements of Marine Equipment Directive (MED) 96/98/EC, as amended, last amended by Directive 2015/559/EU (11th Amendment) subject to any conditions in the schedule attached hereto.

Applicant and Manufacturer: **Alcares ApS**
Rugmarken 10
3650 Ølstykke
Denmark

Identification of Marine Equipment:
Annex 1.A Item: **ANNEX A.1, item A.1/1.2c**

Product Type: **Position-Indicating Lights for Lifejackets and Survival Suits**

Product Designation: **Jack AF (Constant Light)**
Jack AF-Alk (Constant Light)

Specified Standard: **LSA code MSC.48(66) adopted on 4 June 1996 and**
MSC.81(70) adopted on 11th December 1998

Amendments to LSA code:
MSC.207(81) adopted on 18 May 2006
MSC.218(82) adopted on 8 December 2006

Amendments to testing methods:
MSC.226(82) adopted on 8 December 2006
MSC.323(89) adopted on 20 May 2011

The examined samples are found to fulfil the requirements stated in:

The International Testing Standard IMO Res. MSC.81(70) and the applicable reg. SOLAS 74 as amended, where the relevant requirements are specified in ANNEX A.1, item A.1/1.2c of The Directive.

Documentation for observance of relevant requirements stated in ANNEX B (Module B) of the Directive and the basis for the type examination are described in the appendix to this certificate.

This certificate will remain valid unless cancelled or revoked, provided the conditions in the attached appendix are complied with and the equipment remains satisfactory in service.

The certificate will not be valid if the manufacturer makes any changes or modifications to the approved equipment, which have not been notified to, and agreed with the notified body named on this certificate.

Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be reapproved prior to it/they being placed on board vessels to which the amended regulations or standards apply.

This certificate replaces former EC-type examination certificate DK-0200-MarED-152 version 4 dated 2015-06-18 due to adding alternative battery

FORCE Certification A/S task No.: 116-26028

FORCE Certification A/S ID No.: Dk-0200-MarED-01055

Date of issue: 2016-07-04

Date of expiry: 2020-06-18


Niels Jørgen Sibbernsen
Certification manager


Søren Bo Jensen
Examiner



The Mark of Conformity may only be affixed to the above type approved equipment and a Manufacturer's Declaration of Conformity may only be issued when the production/product assessment module (D, E or F), ANNEX B of the Directive is fully complied with and controlled by a written inspection agreement with a notified body.

Extracts from this EC Type-Examination Certificate may only be reproduced with a written permission from FORCE Certification A/S

Appendix to EC Type-Examination Certificate

Directive for Marine Equipment

Certificate No.: DK-0200-MarED-152 version 5

Issued by FORCE Certification A/S - EC-notified body number 0200

Applicant and manufacturer: **Alcares ApS**
Frydensbergvej 26
3660 Stenløse
Denmark

Identification of Marine Equipment:

Annex 1.A Item: **ANNEX A.1, item A.1/1.2c**

Product Type: **Position-Indicating Lights for Lifejackets and Survival Suits**

Product Designations: **Jack AF (Constant Light)**
Jack AF-Alk (Constant Light)

Design:



Jack AF

Appendix to EC Type-Examination Certificate

Directive for Marine Equipment



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History:

Issue/change:	Document:	Date:
- Original certificate	DK-0200-MarED-152 version 1	2010-07-14
- Use of Lithium battery from Great Powers. Updating of certificate to 6 th Amendment.	DK-0200-MarED-152 version 2	2011-12-15
- Update of certificate – 7 th Amendment, new version , use of alternative battery and separated "List of materials"	DK-0200-MarED-152 version 3	2013-09-30
- New expiry date	DK-0200-MarED-152 version 4	2015-06-18
- Alternative batteries.	DK-0200-MarED-152 version 5	2016-07-04

Appendix to EC Type-Examination Certificate

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Documentation for observance of the relevant requirements:

Test House	File No.	Testing/Inspection of:
FORCE Technology	109-24341.b	Type Testing of Jack MF*
FORCE Certification A/S	DK-0200-MarED-137 ver. 1	(Type identical light Jack MF*)
Delta - Danish Electronics, Lights and Acoustics	DELTA-L102003-3168 rev. 1	Light Test
	DELTA-L102003-3169	Light Test
	DELTA-L102007-3227	Chromaticity Test, Drop Test
	DELTA-A506584	Vibration Test
FORCE Technology		
Delta - Danish Electronics, Lights and Acoustics	110-26415.c	Supplementary testing of Jack AF
	DELTA-L102253-3434	Supplementary testing of Jack AF
FORCE Technology		
Delta - Danish Electronics, Lights and Acoustics	110-26415.d	Supplementary testing of the use of alternative battery (Jack A-ALK)
	DELTA-L102253-3433	Supplementary testing of the use of alternative battery (Jack A-ALK)
FORCE Technology	110-34454	Use of alternative batteries:
Delta - Danish Electronics, Lights and Acoustics	DELTA-L102372-3524	Supplementary testing of the use of lithium battery from Great Powers
Delta - Danish Electronics, Lights and Acoustics	DELTA -L102692-4191 rapport(UK)	Supplementary testing of the use of Reiden battery
Delta - Danish Electronics, Lights and Acoustics	DELTA L102798-4783	Supplementary testing of the use of Varta battery on type identical light
FORCE Technology	116-26028.b	Supplementary testing of the use of Varta battery on type identical light

*) Type testing was performed on lifejacket light model Jack MF which is type-identical to model Jack AF, except that model Jack AF has an automatic water activation mechanism (print circuit board).

Partial conclusion: The position indicating light designated "Jack AF" and "Jack AF-ALK" are found to fulfil the requirements in The International Testing Standard IMO Res. MSC.81(70) and the applicable reg. SOLAS 74 as amended, where the relevant requirements are specified in ANNEX A.1, item A.1/1.2c of the Directive, as well as the requirements in ANNEX B (Module B) of the Directive.

The following documentation was available: - Drawings
- Specification of battery
- Specification of print circuit

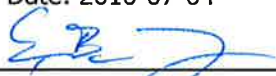
Description of quality management system: Module D certificate - DK-0200-MarED-QA-132/10
User Manual and marking: See report 109-24341.b
List of materials/manufacturers used for manufacturing the device: See "List of Materials for DK-0200-MarED-147" valid on the date of production.

Conclusion

Based on the above mentioned attestation it can be concluded that the position indicating light designated, "Jack AF" and "Jack AF-ALK" meet the conditions of EC type-examination in accordance with the Marine Equipment Directive (MED) 96/98/EC, as amended, last amended by Directive 2013/52/EU (9th Amendment)

FORCE Certification A/S task No.: 116-26028

Date: 2016-07-04


Søren Bo Jensen
Examiner