



Marine & Offshore
Division

Certificate number: 03923/F0 BV

File number: ACE 03/017/01

Product code: 2645H

This certificate is not valid when presented without the full attached schedule composed of 7 sections

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TYPE APPROVAL CERTIFICATE

This certificate is issued to

MERSEN FRANCE SB S.A.S
SAINT BONNET DE MURE - FRANCE

for the type of product

FUSES / FUSES COMBINATION UNITS (LOW VOLTAGE)

Types - series: FR14GG, FR14AM, FR22GG, FR22AM (With striker).

Requirements:

BV Rules for the Classification of Steel Ships.
IEC 60269-1 (2014), IEC 60269-2 (2014).

This certificate is issued to attest that BUREAU VERITAS did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate is a renewal of certificate N° 03923/E1 BV expiring on 26/01/2015

This certificate will expire on: 26 Jan 2020

For BUREAU VERITAS,

At BV LYON, on 20 Jan 2015,

Jean-Marc Cabuzel



This certificate remains valid until the date stated above, unless cancelled or revoked, provided the conditions indicated in the subsequent page(s) are complied with and the product remains satisfactory in service. This certificate will not be valid if the applicant makes any changes or modifications to the approved product, which have not been notified to, and agreed in writing with BUREAU VERITAS. Should the specified regulations or standards be amended during the validity of this certificate, the product(s) is/are to be re-approved prior to it/they being placed on board vessels to which the amended regulations or standards apply. This certificate is issued within the scope of the General Conditions of BUREAU VERITAS Marine & Offshore Division available on the internet site www.veristar.com. Any Person not a party to the contract pursuant to which this document is delivered may not assert a claim against BUREAU VERITAS for any liability arising out of errors or omissions which may be contained in said document, or for errors of judgement, fault or negligence committed by personnel of the Society or of its Agents in establishment or issuance of this document, and in connection with any activities for which it may provide.

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

Designation			Rated Voltage	Rated Current	Breaking Capacity	Remarks
Fuse-Link	Fuse-carrier	Fuse-base	(V)	(A)	(kA)	
Cylindrical						
FR14GG			500	2 - 50	120 kA	With striker
FR14AM			690	1 - 16	120 kA	With striker
			500	20 - 50	120 kA	With striker
FR22GG			690	2 - 80	120 kA	With striker
FR22GG			500	100 - 125	120 kA	With striker
FR22AM			690	1 - 80	120 kA	With striker
FR22AM			500	100 - 125	120 kA	With striker

2. DOCUMENTS AND DRAWINGS:

According to documents filed in ACE 03/017/01.

Gap analysis between IEC 60269-1 2006/2014, dated 02.Dec.2014 (includes gap analysis on IEC 60269-2).

Gap analysis between IEC 60269-4 2006/2013, dated 02.Dec.2014.

3. TEST REPORTS:

3.1 - Tested according to IEC 269-1 (1986) [equivalent to EN 60269-4 (2006)] and IEC 269-2-1 (2004).

3.2 - COFRAC Test Report issued by FERRAZ SHAWMUT Saint Bonnet de Mure Tests Center:

- n° 832502/1 to 832502/12 dated January 2009.
- n° 832504/1 to 832504/14 dated September 2009.
- n° 835201/1 to 835201/16 dated November 2009.
- n° 832503/1 to 832503/17 dated April 2009.

4. APPLICATION / LIMITATION:

According to BV Rules for the Classification of Steel Ships.

5. PRODUCTION SURVEY REQUIREMENTS:

5.1 - The described products are to be supplied by **MERSEN FRANCE SB S.A.S**, in accordance with the type described in this certificate and Bureau Veritas Rules for the Classification of Steel Ships.

5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320.

5.3 - **MERSEN FRANCE SB S.A.S**, has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products:

Name of Production Sites	Address	Country
MERSEN FRANCE SB S.A.S ,	15 Rue de Vaucanson, 69720 Saint Bonnet de Mure	FRANCE
NOLAM Tunisia	Rue de Nabeul lot n° 4 - Zone Industrielle de M'Ghira	TUNISIA

6. MARKING OF PRODUCT:

The items prescribed below shall be marked on a easily visible place of fuse surface in an indelible way.

- (1) Rated voltage (V)
- (2) Rated current (A)
- (3) Rated breaking capacity
- (4) Fusing Factor
- (5) Manufacturer's name
- (6) Model N°
- (7) Approved class name.

7. OTHERS:

7.1 - This approval is given on the understanding that the Society reserves the right to require check tests to be carried out on the units at any time and that **MERSEN FRANCE SB S.A.S**, will accept full responsibility for informing shipbuilders, shipowners or their sub-contractors of the proper methods of use and general maintenance of the units and the conditions of this approval.

7.2 - This certificate supersedes the Type Approval Certificate n° 03923/E1 BV issued on 23.12.2013. by the Society.

*** END OF CERTIFICATE ***