



Marine & Offshore

Certificate number: 71191/A0 BV

File number: MPA2201361

Product code: 2633H

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

MITSUBISHI ELECTRIC CORPORATION Fukuyama Works
Fukuyama - JAPAN

for the type of product

CIRCUIT BREAKERS (LOW VOLTAGE)

Type: DSN63, DSN125, DSN250.

Requirements:

Bureau Veritas Rules for the Classification of Steel Ships.

IEC60947-3 (2008). amd. 1 (2012) & amd.2 (2015).

IEC 60947-2 (2016).

This certificate is issued to attest that Bureau Veritas Marine & Offshore did undertake the relevant approval procedures for the product identified above which was found to comply with the relevant requirements mentioned above.

This certificate will expire on: 17 May 2027

For Bureau Veritas Marine & Offshore,

At BV KOBE, on 17 May 2022,

Shinichi Takemoto

This certificate was created electronically and is valid without signature



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 Marine & Offshore. 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 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 Marine & Offshore 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.

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BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION:

DSN type : switch without overcurrent trip .

PRODUCT TYPE	Number of poles	Rated voltage (V) U _i	Maximum operating current (A)	Breaking capacity KA (ac)	Remarks
DSN63-CV	2/3	500AC 250DC	50/60/63	0.4/0.48/0.504 AC 0.2/0.24/0.252 DC	Ambient temp: 45°C Frequency: 50/60 Hz
DSN63-SV	2/3/4	500AC 250DC	50/60/63	0.4/0.48/0.504 AC 0.2/0.24/0.252 DC	
DSN125-CV	2/3	500AC 250DC	100/125	0.8/1.0 AC 0.4/0.5 DC	
DSN125-SV	2/3/4	690AC 250DC	100/125	0.8/1.0 AC 0.4/0.5 DC	
DSN250-CV	2/3	500AC 250DC	225/250	1.8/2.0 AC 0.9/1.0 DC	
DSN250-SV	2/3/4	690AC 250DC	225/250	1.8/2.0 AC 0.9/1.0 DC	

2. DOCUMENTS AND DRAWINGS:

In accordance with the manufacturer's drawings and documents, at latest and at any subsequent issue endorsed by Bureau Veritas:

- 2.1 - Information for Application file dated 25-11-2010
- 2.2 - Operating Characteristics: LN852A626, 628, 629, 637, 638, 639, 640, 641
- 2.3 - Outline and dimension drawings
- 2.4 - IEC 60947-2 gap analysis, dated 27.Feb.2017.
- 2.5 - Technical specification Ref: LEN-170277-R1 dated 29 Aug. 2017.

3. TEST REPORTS:

- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF32-SV, NF63-CV types.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF63-SV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF63-HV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF63-HRV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF125-CVF type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF125-CV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF125-SV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF125-HV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF250-CV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF250-SV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF250-HV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF125-RV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF250-RV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF125-UV type.
- Mitsubishi Electric Corp. Type Test Report dated 25.11.2010 for NF250-UV type.
- Mitsubishi Electric Corp. Environmental Test Report dated 25.11.2010.
- Mitsubishi Electric Corp. Environmental Test Report dated 16.02.2011.
- Environmental Test KGA170281, dated 27-Oct-2017
- Type Test Ref KGA170033, dated 01-Mar-2017.
- Type Test Ref KGA170034, dated 01-Mar-2017.
- Type Test Ref KGA170035, dated 01-Mar-2017.
- Dry heat test dated 05 Apr 2022.

4. APPLICATION / LIMITATION:

- 4.1 - Approval also valid for ships to be granted with the notations: AUT-UMS, AUT-CCS, AUT-PORT and AUT-IMS.
4.2 - According to BV Rules for the Classification of Steel Ships, IEC 60947-2.
4.3 - The manufacturer should be consulted if a circuit-breaker is to be located where the temperature may exceed 60 °C.

5. PRODUCTION SURVEY REQUIREMENTS :

- 5.1 - The above products are to be supplied by **mitsubishi electric corporation Fukuyama Works** in compliance with the type described in this certificate.
5.2 - This type of product is within the category HBV of Bureau Veritas Rule Note NR320 and as such does not require a BV product certificate.
5.3 - **mitsubishi electric corporation Fukuyama Works** has to make the necessary arrangements to have its works recognised by Bureau Veritas in compliance with the requirements of NR320 for HBV products.
5.4 - For information, **mitsubishi electric corporation Fukuyama Works** has declared to Bureau Veritas the following production site:

mitsubishi electric corporation Fukuyama Works
1-8 Midori-machi,
720-8647 Fukuyama
JAPAN

6. MARKING OF PRODUCT:

According to IEC 60947 specifications.

7. OTHERS:

- 7.1 - It is **mitsubishi electric corporation Fukuyama Works** responsibility to inform shipbuilders or their sub-contractors of the proper methods of fitting, use and general maintenance of the approved equipment and the conditions of this approval.

*** END OF CERTIFICATE ***