



Marine & Offshore

Certificate number: 14415/D0 BV

File number: ACE 02/039/32

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: AE630-SW, AE1000-SW, AE1250-SW, AE1600-SW, AE2000-SWA, AE2000-SW, AE2500-SW, AE3200-SW
& AE4000-SWA.**Requirements:**BV Rules for the Classification of Steel Ships.
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: 18 Jun 2025****For Bureau Veritas Marine & Offshore,**At BV KOBE, on 18 Jun 2020,
Shinichi Takemoto

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.

The electronic version is available at: <http://www.veristarm.com/veristarnb/jsp/viewPublicPdfTypepec.jsp?id=xosfyduynp>

BV Mod. Ad.E 530 June 2017

This certificate consists of 3 page(s)

THE SCHEDULE OF APPROVAL

1. PRODUCT DESCRIPTION :

1.1 - Approval's range:

Product Type	Number of poles	Rated Voltage (V AC)	Maximum operating current (A)	Breaking capacity (kA, rms)			Remarks
				Icu	Ics	Ue	
		Ue	45°C at A.T				Characteristics as per IEC 60947-2. C.B.'s have been equipped with Electronic trip relay type WS1G1-P WS2G1-P WM1G1-P WM2G1-P WS1NA-P WS2NA-P WM1NA-P WM2NA-P
AE630-SW(2)(3)	3	690	125 ~ 630	65	65	690V AC	
AE1000-SW(2)(3)	3	690	400 ~ 1000	65	65	690V AC	
AE1250-SW(2)(3)	3	690	625 ~ 1250	65	65	690V AC	
AE1600-SW(2)(3)	3	690	800 ~ 1600	65	65	690V AC	
AE2000-SWA(2)(3)	3	690	1000 ~ 2000	65	65	690V AC	
AE2000-SW(1)(2)	3	690	625 ~ 2000	75	75	690V AC	
		500		85	85	500V AC	
AE2500-SW(1)(2)	3	690	1250 ~ 2500	75	75	690V AC	
		500		85	85	500V AC	
AE3200-SW(1)(2)	3	690	1600 ~ 3200	75	75	690V AC	
		500		85	85	500V AC	
AE4000-SWA(1)(2)	3	690	2000 ~ 4000	75	75	690V AC	
		500		85	85	500V AC	

(1) Icw 1s = 75 kA. with Ue = 500/600/690 V AC

(2) Utilization category = B

(3) Icw 1s = 65 kA. with Ue = 500/600/690 V AC

2. DOCUMENTS AND DRAWINGS :

Specifications dated 24 Nov 2004.

3. TEST REPORTS :

Mitsubishi Electric Corporation test reports dated: 12/Nov./2004, 04/Nov./2004,

N° LEN046085 dated 05/Nov./2004,

N° LEN040107 dated 14/Feb./2005.

Dekra's certificate No. 3305692.01, dated 17.Oct.2014.

Dekra's certificate No. 3305693.01, dated 17.Oct.2014.

Mitsubishi Electric Corporation test reports N° KGA200051 and KGA200052, dated 26 Mar 2020.

4. APPLICATION / LIMITATION :

4.1 - According to BV Rules for the Classification of Steel Ships.

4.2 - Each equipment is to be supplied with manual(s) for installation, use and maintenance.

5. PRODUCTION SURVEY REQUIREMENTS :

5.1 - The CIRCUIT BREAKERS (LOW VOLTAGE) 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 sites:

MITSUBISHI ELECTRIC CORPORATION Fukuyama Works

1-8 Midori-machi,
720-8647 Fukuyama
JAPAN

Mitsubishi Electric Low Voltage Equipment (Xiamen) Co., Ltd.

2F, No.122-126, Yingyao Road,
Jimei District, Xiamen, Fujian Province,
P.R.China

6. MARKING OF PRODUCT :

According to IEC 60947 specifications.

7. OTHERS :

7.1 - It is **mitsubishi electric corporation Fukuyama Works**'s 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.

7.2 - This Certificate supersedes The Type Approval Certificate n° 14415/C1 BV issued on 04 Nov 2019 by the Society.

***** END OF CERTIFICATE *****