DNV·GL

Certificate No:
TAE00003NE

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
AE630-SW - AE4000-SWA

Issued to
Mitsubishi Electric Corporation Fukuyama Works
Fukuyama City, HIROSHIMA, Japan

is found to comply with
DNV GL rules for classification – Ships, offshore units, and high speed and light craft

Application :

Products approved by this certificate are accepted for installation on all vessels classed by DNV GL.
Rated voltage (V) up to 690
Rated current (A) up to 4000

Issued at **Høvik** on **2019-09-04**
This Certificate is valid until **2024-09-03**.
DNV GL local station: **Hiroshima**

Approval Engineer: **Nicolay Horn**

for **DNV GL**

Trond Sjåvåg
Head of Section

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid.
The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.

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Job Id: **262.1-009021-3**
Certificate No: **TAE00003NE**

Name and place of manufacturer

Mitsubishi Electric Cooperation Fukuyama Works Fukuyama City, HIROSHIMA, Japan	Mitsubishi Electric Low Voltage Equipment (Xiamen) Co., Ltd Fujian Province, P.R. China

Product description

Low voltage circuit breakers Type AE-SW(A):

Type	AE630-SW	AE1000-SW	AE1250-SW	AE1600-SW	AE2000-SWA
Rated insulation voltage AC (V)	1000	1000	1000	1000	1000
Rated operational voltage AC (V)	690	690	690	690	690
Rated Current (A)	125-630*	400-1000*	625-1250*	800-1600*	1000-2000*
Rated Frequency Hz	50-60	50-60	50-60	50-60	50-60
Rated Short-circuit Service Breaking cap (Icu/Ics)					
690V	65/65	65/65	65/65	65/65	65/65
Power factor	0.23	0.23	0.23	0.23	0.17/0.23
500V	65/65	65/65	65/65	65/65	65/65
Power factor	0.16	0.16	0.16	0.16	0.16
Utilization category	B	B	B	B	B
Rated Short-current withstand current cap. 1 sec. (Icw)					
690 V	65	65	65	65	65
500 V	65	65	65	65	65

Type	AE2000-SW	AE2500-SW	AE3200-SW	AE4000-SWA
Rated insulation voltage AC (V)	1000	1000	1000	1000
Rated operational voltage AC (V)	690	690	690	690
Rated Current (A)	625-2000*	1250-2500*	1600-3200*	2000-4000*
Rated Frequency Hz	50-60	50-60	50-60	50-60
Rated Short-circuit Service Breaking cap (Icu/Ics)				
690V	75/75	75/75	75/75	75/75
Power factor	0.17/0.23	0.17/0.23	0.17/0.23	0.17/0.23
500V	85/85	85/85	85/85	85/85
Power factor	0.17/0.18	0.17/0.18	0.17/0.18	0.17/0.18
Utilization category	B	B	B	B
Rated Short-current withstand current cap. 1 sec. (Icw)				
690 V	75	75	75	75
500 V	75	75	75	75

* Fixed

Application/Limitation

Location Classes:
Temperature: B, Humidity: B, Vibration: A, EMC:A, Enclosure: IP20,

Type Approval documentation

Tests carried out

IEC 60947-1, IEC 60947-2. Test sequence I, II and combined.
Environmental tests.

Marking of product

MITSUBISHI – Type designation – Electrical data

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval is complied with and that no alterations are made to the product design or choice of materials.

The main elements of the assessment are:

- Inspection on factory samples, selected at random from the production line (where practicable)
- Results from Routines (RT) checked (if not available tests RT to be carried out)
- Review of type approval documentation
- Review of possible change in design, materials and performance
- Ensuring traceability between manufacturer's product type marking and Type Approval Certificate.

Assessment to be performed at 2 and 3.5 year and at renewal.

END OF CERTIFICATE