DNV·GL

Certificate No:
TAE00002ND

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
AE 4000-SW - AE 6300-SW

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 :

Product approved by this certificate is accepted for installation on all vessels classed by DNV GL.
Rated voltage (V) Up to 690
Rated current (A) Up to 6300

Issued at **Høvik** on **2018-02-22**
This Certificate is valid until **2023-01-18**.
DNV GL local station: **Hiroshima**

Approval Engineer: **Nicolay Horn**

for **DNV GL**

Andreas Kristoffersen
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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Product description

Low voltage Circuit Breakers:

Type	AE 4000-SW	AE 5000-SW	AE 6300-SW
Rated insulation voltage AC (V)	1000	1000	1000
Rated operational voltage AC (V)	690	690	690
Rated impulse voltage AC (kV)	12	12	12
Rated Current 40 °C (A)	2000-4000	2500-5000	3150-6300
Rated Frequency Hz	50-60	50-60	50-60
Rated Short-circuit Service Breaking cap (Icu/Ics)			
690V (kA)	85	85	85
500V (kA)	138	138	138
Rated Short-circuit Service Making cap. (Icm)			
690V (kA)	187	187	187
500V (kA)	304	304	304
Rated Short-current withstand current cap. 1 sec. (Icw)			
690 V (kA)	85	85	85
500 V (kA)	100	100	100
Utilization category	B	B	B

Electronic Trip Relay	WS1	WS2	WS3 (LTD+STD+INST/MCR, GFR
	WM1	WM2	WM3 (LTD+STD+INST/MCR, GFR
	WB1	WB2	WB3 (INST/MCR)

Application/Limitation

Tested for use in IT net in accordance with IEC 60947-2 Annex H.

Location Classes:

Temperature: B, Humidity: B, Vibration: A

Type Approval documentation

Tests carried out

Regulation for Performance of Tests, Edition 2012.
IEC 60947-2 Ed. 3.0 (2003), Annex H, IEC 60947-2 Ed. 4.1 (2009).

Marking of product

Manufacturers label containing data and manufacturers type number.

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 according to 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, 3.5 year and at renewal.

END OF CERTIFICATE