

CERTIFICATE

Issued to:
Applicant:
**MITSUBISHI ELECTRIC CORPORATION
FUKUYAMA WORKS
1-8, MIDORI-MACHI FUKUYAMA-CITY
HIROSHIMA-PREF, JAPAN**

Manufacturer/Licensee:
**MITSUBISHI ELECTRIC CORPORATION
FUKUYAMA WORKS
1-8, MIDORI-MACHI FUKUYAMA-CITY
HIROSHIMA-PREF, JAPAN**

Product(s) : Air Circuit Breaker
Trade name(s) : MITSUBISHI
Type(s)/model(s) : AE2000-SW, AE2500-SW, AE3200-SW, AE4000-SWA

The product and any acceptable variation thereto is specified in the Annex to this certificate and the documents therein referred to.

DEKRA hereby declares that the above-mentioned product has been certified on the basis of:

- a type test according to the standard EN 60947-2:2006 + A1:2009 + A2:2013; IEC 60947-2:2006 + A1:2009 + A2:2013;
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2116095

DEKRA hereby grants the right to use the KEMA-KEUR certification mark.

The KEMA-KEUR certification mark may be applied to the product as specified in this certificate for the duration of the KEMA-KEUR certification agreement and under the conditions of the KEMA-KEUR certification agreement.

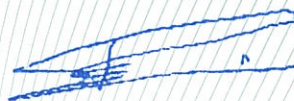
This certificate is issued on: 17 October 2014 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 3305693.01

DEKRA Certification B.V.



drs. G.J. Zoetbrood
Managing Director



F.S. Strikwerda
Certification Manager

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DUTCH ACCREDITATION
COUNCIL



SPECIFICATION OF THE CERTIFIED PRODUCT
Product data

product	:	Air Circuit Breaker
trade name(s)	:	MITSUBISHI
type(s)	:	AE2000-SW, AE2500-SW, AE3200-SW, AE4000-SWA
number of poles	:	3 poles or 4 poles
protected pole	:	3 or 4
rated operational voltage (U _e)	:	240 Vac / 400 Vac / 440 Vac / 500 Vac / 600 Vac / 690 Vac
rated insulation voltage (U _i)	:	1000 V for main circuit 500 V for control circuits
rated impulse withstand voltage (U _{imp})	:	12 kV for main circuit 6 kV for control circuits
rated current (I _n)	:	2000 A, 2500 A, 3200 A, 4000 A
rated operational current (I _e)	:	(0,5 - 1,0) x I _n
conventional thermal current (I _{th})	:	Equal to I _n
current rating for four-pole circuit-breakers	:	Equal to I _n
rated frequency	:	50 / 60 Hz
rated ultimate short-circuit breaking capacity (I _{cu})	:	75 kA (INST: 600 / 690 Vac), 85 kA (INST: 440 / 500Vac), 100 kA (INST: 240 / 400 Vac), 75 kA (MCR: 690 / 600 / 500 / 440 / 240 Vac)
rated service short-circuit breaking capacity (I _{cs})	:	100% I _{cu}
rated short-time withstand current (I _{cw})	:	75 kA / 1 s (240 / 400 / 440 / 500 / 600 / 690 Vac) 50 kA / 3 s (240 / 400 / 440 / 500 / 600 / 690 Vac)
suitable for isolation	:	Suitable
utilization category	:	B
safety distance (screen-circuit breaker)	:	Left / Right: 50 mm, Up / Down: 100 mm, Front / Back: 0 mm
electronic trip unit type(s)	:	WS1 and WL1 are used with types of AE2000-SW and AE2500-SW; WS2 and WL2 are used with types of AE4000-SWA and AE3200-SW.
instantaneous release	:	I _i (instantaneous tripping setting): For electronic trip unit of WS1 and WL1: (2 / 4 / 6 / 8 / 10 / 12 / 16) x I _r For electronic trip unit of WS2 and WL2: (2 / 4 / 6 / 8 / 10 / 12) x I _r
short time delay release	:	I _{sd} (short time delay tripping setting): For electronic trip unit of WS1, WS2, WL1 and WL2: (1,5 / 2 / 2,5 / 3 / 4 / 5 / 6 / 7 / 8 / 9 / 10) x I _r
time setting of the short time delay release	:	I _{tsd} (short time delay tripping setting): For electronic trip unit of WS1, WS2, WL1 and WL2: 0,06 / 0,1 / 0,2 / 0,3 / 0,4 / 0,5 s, with tolerance of ± 20%
inverse time delay release	:	I _r (inverse time delay tripping setting): For electronic trip unit of WS1, WS2, WL1 and WL2: (0,5 / 0,55 / 0,6 / 0,65 / 0,7 / 0,75 / 0,8 / 0,85 / 0,9 / 0,95 / 1) x I _n
time setting of the inverse time delay release	:	I _{tr} (inverse time delay tripping setting): For electronic trip unit of WS1 and WS2: 12 / 25 / 50 / 100 / 150 s, with tolerance of ± 20%

	For electronic trip unit of WL1 and WL2: 5 / 10 / 15 / 20 / 25 / 30 s, with tolerance of $\pm 20\%$
MCR release	: 75 kA (690 / 600 / 500 / 440 / 240 Vac)
time setting	: Instantaneous
method of mounting	: Fixed or Withdrawable
degree of protection	: IP20 (from front side)
EMC environment	: A
circuit-breaker for use on phase- earthed systems	: N / A
circuit-breaker for use in IT systems	: Yes, 48 kA at 500 Vac
reference temperature	: Independent
shunt release	: 100 - 250 Vac, 380 - 500 Vac, 50 Hz; 24 - 48 Vdc, 100 - 250 Vdc;
under-voltage release	: 100 - 120 Vac, 200 - 240 Vac, 380 - 460 Vac, 50 Hz; 24 Vdc, 48 Vdc, 100 - 110 Vdc, 120 - 125 Vdc;
closing coil	: 100 - 250 Vac, 50 Hz; 24 - 48Vdc, 100 - 250 Vdc;
stored energy motor	: 100 - 125 Vac, 200 - 250 Vac, 50 Hz 24 Vdc, 48 Vdc, 100 - 125 Vdc, 200 - 250 Vdc;
line/load terminal connection	: Immaterial Copper busbar for AE4000-SWA: (150 x 10) mm ² x 4; Copper busbar for AE2000-SW, AE2500-SW, AE3200-SW are according to standard

TESTS**Test requirements**

EN 60947-2:2006 + A1:2009 + A2:2013
IEC 60947-2:2006 + A1:2009 + A2:2013

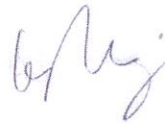
Test result

The test results are laid down in DEKRA test file 3305693.01 and reports 3305693.50 and also based on CQC CB certificate CN26156 issued on 2013-04-27 with CQC TRF C009-CB2011CQC-039730 issued on 2013-01-16.

Conclusion

The examination proved that all test requirements were met.

Tested by : CQC and King Wang



Checked by : Eric Wang

**Factory locations**

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1-8, MIDORI-MACHI FUKUYAMA-CITY HIROSHIMA-PREF, JAPAN