

# CERTIFICATE

KEMA No.: 2126832.01



Issued to:  
Applicant:

**Mitsubishi Electric Corporation**  
**Fukuyama Works**  
**1-8 Midori-Machi**  
**720 8647, HIROSHIMA-PREFECTURE, Japan**

Manufacturer/Licensee:

**Mitsubishi Electric Corporation**  
**Fukuyama Works**  
**1-8 Midori-Machi**  
**720 8647, HIROSHIMA-PREFECTURE, Japan**

Product(s) : moulded-case circuit-breaker  
Trade name(s) : MITSUBISHI  
Type(s)/model(s) : NF1000-SEW, NF1250-SEW, NF1600-SEW

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

KEMA 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;
- an inspection of the production location according to CENELEC Operational Document CIG 021
- a certification agreement with the number 2116095

KEMA 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: July 1, 2009 and expires upon withdrawal of one of the above mentioned standards.

KEMA Quality B.V.

drs. G.J. Zoetbrood  
Managing Director

H.R.M. Barends  
Certification Manager

ACCREDITED BY  
THE DUTCH COUNCIL  
FOR ACCREDITATION



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**SPECIFICATION OF THE CERTIFIED PRODUCT**

**Product data**

Product	:	moulded-case circuit-breaker
trade name(s)	:	MITSUBISHI
type(s)	:	NF1000-SEW, NF1250-SEW, NF1600-SEW
number of poles	:	3 poles
rated operational voltage (Ue)	:	230, 380, 400, 415 Vac
rated insulation voltage (Ui)	:	690 Vac
rated impulse withstand voltage (Uimp)	:	8 kV
rated frequency	:	50 Hz
suitable for isolation	:	yes
utilization category	:	B
safety distance (screen-circuit breaker)	:	back/front: 0 mm, top/bottom: 200 mm, left/right: 10 mm
electrical control circuits	:	no
shunt release	:	no
undervoltage release	:	no
auxiliary contact	:	no
degree of protection	:	IP 20 (from front)
method of mounting	:	fixed
EMC Environment	:	A

**Product data - type NF1000-SEW**

type reference	:	NF1000-SEW
rated operational current (Ie)	:	500, 600, 700, 800, 900, 1000 A adjustable
conventional thermal current (Ith)	:	equal to Ie
inverse time delay current setting (Ir)	:	0,5 - 1,0 In $\pm$ 10% in steps of 0,1 In when In is maximum
inverse time delay time setting (T <sub>L</sub> )	:	12, 60, 100, 150 s $\pm$ 20% (trip time at 2 Ir or 2 In)
short time delay current setting (Is)	:	2, 2½, 3, 3½, 4, 5, 6, 7, 8, 10 Ir or In $\pm$ 15%
short time delay time setting (Ts)	:	0,06 $\pm$ 0,02, 0,1 $\pm$ 0,03, 0,2 $\pm$ 0,04, 0,3 $\pm$ 0,06 s
instantaneous tripping current setting (Ii)	:	4, 6, 8, 10, 12 In maximum $\pm$ 15%
instantaneous tripping time setting (Ti)	:	< 200 ms
rated ultimate short-circuit breaking capacity (Icu)	:	125 kA at 230 Vac 85 kA at 380, 400, 415 Vac
rated service short-circuit breaking capacity (Ics)	:	63 kA at 230 Vac 43 kA at 380, 400, 415 Vac
rated short-time withstand current (Icw)	:	20 kA / 0,1 s
circuit-breaker for use on phase-earthed systems	:	No
circuit-breaker for use in IT systems	:	yes, 19,2 kA at 415 Vac

**Product data - type NF1250-SEW**

type reference	: NF1250-SEW
rated operational current (Ie)	: 600, 700, 800, 1000, 1200, 1250 A adjustable
conventional thermal current (Ith)	: equal to Ie
inverse time delay current setting (Ir)	: 0,5 - 1,0 In $\pm$ 10% in steps of 0,1 In when In is maximum
inverse time delay time setting (TL)	: 12, 60, 100, 150 s $\pm$ 20% (trip time at 2 Ir or 2 In)
short time delay current setting (Is)	: 2, 2½, 3, 3½, 4, 5, 6, 7, 8, 10 Ir or In $\pm$ 15%
short time delay time setting (Ts)	: 0,06 $\pm$ 0,02, 0,1 $\pm$ 0,03, 0,2 $\pm$ 0,04, 0,3 $\pm$ 0,06 s
instantaneous tripping current setting (Ii)	: 4, 6, 8, 10, 12 In maximum $\pm$ 15%
instantaneous tripping time setting (Ti)	: < 200 ms
rated ultimate short-circuit breaking capacity (Icu)	: 125 kA at 230 Vac 85 kA at 380, 400, 415 Vac
rated service short-circuit breaking capacity (Ics)	: 63 kA at 230 Vac 43 kA at 380, 400, 415 Vac
rated short-time withstand current (Icw)	: 20 kA / 0,1 s
circuit-breaker for use on phase-earthed systems	: no
circuit-breaker for use in IT systems	: yes, 19,2 kA at 415 Vac

**Product data - type NF1600-SEW**

type reference	: NF1600-SEW
rated operational current (Ie)	: 800, 1000, 1200, 1400, 1500, 1600 A adjustable
conventional thermal current (Ith)	: equal to Ie
inverse time delay current setting (Ir)	: 0,5 - 1,0 In $\pm$ 10% in steps of 0,1 In when In is maximum
inverse time delay time setting (TL)	: 12, 60, 100, 150 s $\pm$ 20% (trip time at 2 Ir or 2 In)
short time delay current setting (Is)	: 2, 2½, 3, 3½, 4, 5, 6, 7, 8, 10 Ir or In $\pm$ 15%
short time delay time setting (Ts)	: 0,06 $\pm$ 0,02, 0,1 $\pm$ 0,03, 0,2 $\pm$ 0,04, 0,3 $\pm$ 0,06 s
instantaneous tripping current setting (Ii)	: 4, 6, 8, 10, 12 In maximum $\pm$ 15%
instantaneous tripping time setting (Ti)	: < 200 ms
rated ultimate short-circuit breaking capacity (Icu)	: 125 kA at 230 Vac 85 kA at 380, 400, 415 Vac
rated service short-circuit breaking capacity (Ics)	: 63 kA at 230 Vac 43 kA at 380, 400, 415 Vac
rated short-time withstand current (Icw)	: 20 kA / 0,1 s
circuit-breaker for use on phase-earthed systems	: No
circuit-breaker for use in IT systems	: yes, 19,2 kA at 415 Vac



## TESTS

### Test requirements

EN 60947-2:2006

IEC 60947-2:2006

### Test result

The test results are laid down in KEMA test file 2126832.01 and are also based on CB Certificate CN10776 and TRF C009-CB2006CQC-10303 issued by CQC.

### Conclusion

The examination proved that all test requirements were met.

Tested by : E. Wang

Checked by : F. Fu

### Factory locations

Mitsubishi Electric Corporation, Fukuyama Works

1-8 Midori-Machi, 720 8647, HIROSHIMA-PREFECTURE, Japan