

# CERTIFICATE

Issued to:  
Applicant:  
**Mitsubishi Electric Corporation Fukuyama Works**  
**1-8 Midori-Machi**  
**Fukuyama-City**  
**Hiroshima-Pref 720 8647, Japan**

Licensee:  
**Mitsubishi Electric Corporation Fukuyama Works**  
**1-8 Midori-Machi**  
**Fukuyama-City**  
**Hiroshima-Pref 720 8647, Japan**

Product : Moulded-Case Circuit-Breaker  
Trade name(s) : MITSUBISHI ELECTRIC  
Type(s)/model(s) : NF400-CW, NF400-HEW, NF400-SW, NF630-CW, NF630-HEW and NF630-SW

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 60947-2:2017
- 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 3 May 2018 and expires upon withdrawal of one of the above mentioned standards.

Certificate number: 33-103652

DEKRA Certification B.V.



drs. G.J. Zoetbrood  
Managing Director



Henk Schendstok  
Certification Manager

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DUTCH ACCREDITATION  
COUNCIL



**SPECIFICATION OF THE CERTIFIED PRODUCT****Product data**

Product	: Moulded-Case Circuit-Breaker
Trade name(s)	: MITSUBISHI ELECTRIC
Type(s)/model(s)	: NF400-CW, NF400-HEW, NF400-SW, NF630-CW, NF630-HEW and NF630-SW
Rated insulation voltage (Ui)	: 690 V
Rated impulse withstand voltage (Uimp)	: 8 kV
Rated frequency	: 50 / 60 Hz
Suitable for isolation	: Suitable
Method of mounting	: Fixed
Degree of protection	: IP20 (only from front side)
Rated tightening torque for terminals (Nm)	: 50 Nm for M10
Line/load terminal Connection	: Immaterial : Prepared copper conductor with cable lug

**Product data – type NF400-CW**

Number of poles	: 2P, 3P for AC; 2P for DC
Protected pole	: 2 or 3
Rated operational voltage (Ue)	: 415 Vac, 400 Vac, 380 Vac, 230 / 200 Vac; 250 Vdc
Reference temperature (°C)	: 40 °C
Rated current (In)	: 400 A, 350 A, 300 A, 250 A
Conventional thermal current (Ith)	: Equal to In
Rated ultimate short-circuit breaking capacity (Icu)	: 36 kA at 415 / 400 Vac, 40 kA at 380 Vac 50 kA at 230 / 200 Vac, 20 kA at 250 Vdc
Rated service short-circuit breaking capacity (Ics)	: 50% Icu
Selectivity category	: A
Safety distance (screen-circuit breaker)	: Left / Right: 100 mm Up / Down: 100 mm Front / Back: 170 mm
Instantaneous release	: Magnetic type, fixed, 2 poles in series: 10 In for AC, 14 In for DC single pole: 12 In for AC, 16,8 In for DC
Inverse time delay release	: Thermal type, fixed, In
Time setting of the inverse time delay release	: Fixed, 2I <sub>r</sub> tripping time declared by the manufacturer: 50 s - 8 min
EMC environment	: A and B
Circuit-breaker for use in IT systems	: Yes, 12 In at 415 Vac

**Product data – type NF400-HEW**

Number of poles	: 3P, 4P (N pole without protection)
Protected pole	: 3
Rated operational voltage (Ue)	: 415 Vac, 400 Vac, 380 Vac, 230 / 200 Vac
Reference temperature (°C)	: Independent
Rated current (In)	: 400 A (200 - 400 A adjustable)
Conventional thermal current (Ith)	: Equal to In
Current rating for four-pole circuit-breakers	: Equal to In
Rated ultimate short-circuit breaking capacity (Icu)	: 70 kA at 415 / 400 / 380 Vac 100 kA at 230 / 200 Vac
Rated service short-circuit breaking capacity (Ics)	: 100% Icu

Rated short-time withstand current (I <sub>cw</sub> )	: 5 kA / 0,25 s
Selectivity category	: B
Safety distance (screen-circuit breaker)	: Left / Right: 150 mm Up / Down: 200 mm Front / Back: 170 mm
Instantaneous release	: Ii (instantaneous tripping setting): Electronic type, adjustable, (4 / 6 / 8 / 10 / 12 / 14 / 16) x 400 A
Short time delay release	: Isd (short time delay tripping setting): Electronic type, adjustable, (2 / 2,5 / 3 / 3,5 / 4 / 5 / 6 / 7 / 8 / 10) x I <sub>n</sub> for I <sub>n</sub> = 200 - 350 A (2 / 2,5 / 3 / 3,5 / 4 / 5 / 6 / 7 / 8 / 10) x I <sub>r</sub> for I <sub>n</sub> = 400 A
Time setting of the short time delay release	: tsd (short time delay tripping setting): 0,06 s - 0,3 s (0,06 / 0,1 / 0,2 / 0,3 s) 0,06 s, with tolerance of ± 0,02 s 0,1 s, with tolerance of ± 0,03 s 0,2 s, with tolerance of ± 0,04 s 0,3 s, with tolerance of ± 0,06 s
Inverse time delay release	: Ir (inverse time delay tripping setting): Electronic type, adjustable, I <sub>n</sub> for I <sub>n</sub> = 200 / 225 / 250 / 300 / 350 A (0,5 / 0,6 / 0,7 / 0,8 / 0,9 / 1) x I <sub>n</sub> for I <sub>n</sub> = 400 A
Time setting of the inverse time delay release	: tr (inverse time delay tripping setting): 12 s - 150 s (12 / 60 / 100 / 150 s), with tolerance of ± 20% (at 2 Ir) 2Ir tripping time declared by the manufacturer: when tr = 12 s: 12 s ± 20% when tr = 60 s: 60 s ± 20% when tr = 100 s: 100 s ± 20% when tr = 150 s: 150 s ± 20%
EMC environment	: A
Circuit-breaker for use in IT systems	: Yes, 12 I <sub>n</sub> at 415 Vac

#### Product data – type NF400-SW

Number of poles	: 2P, 3P, 4P (N pole without protection) for AC; 2P for DC
Protected pole	: 2 or 3
Rated operational voltage (U <sub>e</sub> )	: 415 Vac, 400 Vac, 380 Vac, 230 / 200 Vac; 250 Vdc
Reference temperature (°C)	: 40 °C
Rated current (I <sub>n</sub> )	: 400 A, 350 A, 300 A, 250 A
Conventional thermal current (I <sub>th</sub> )	: Equal to I <sub>n</sub>
Current rating for four-pole circuit-breakers	: Equal to I <sub>n</sub>
Rated ultimate short-circuit breaking capacity (I <sub>cu</sub> )	: 45 kA at 415 Vac, 50 kA at 400 / 380 Vac 85 kA at 230 / 200 Vac, 40 kA at 250 Vdc
Rated service short-circuit breaking capacity (I <sub>cs</sub> )	: 100% I <sub>cu</sub>
Selectivity category	: A
Safety distance (screen-circuit breaker)	: Left / Right: 100 mm Up / Down: 100 mm Front / Back: 170 mm
Instantaneous release	: Magnetic type, fixed, 2 poles in series: 14 I <sub>n</sub> for AC, 19,6 I <sub>n</sub> for DC single pole: 16,8 I <sub>n</sub> for AC, 23,52 I <sub>n</sub> for DC
Inverse time delay release	: Thermal type, fixed, I <sub>n</sub>
Time setting of the inverse time delay release	: Fixed, 2Ir tripping time declared by the manufacturer: 50 s - 8 min

EMC environment : A and B  
Circuit-breaker for use in IT systems : Yes, 16,8 In at 415 Vac

**Product data – type NF630-CW**

Number of poles : 2P, 3P for AC; 2P for DC  
Protected pole : 2 or 3  
Rated operational voltage (Ue) : 415 Vac, 400 Vac, 380 Vac, 230 / 200 Vac; 250 Vdc  
Reference temperature (°C) : 40 °C  
Rated current (In) : 630 A, 600 A, 500 A  
Conventional thermal current (Ith) : Equal to In  
Rated ultimate short-circuit breaking capacity (Icu) : 36 kA at 415 / 400 Vac, 40 kA at 380 Vac  
50 kA at 230 / 200 Vac, 20 kA at 250 Vdc  
Rated service short-circuit breaking capacity (Ics) : 50% Icu  
Selectivity category : A  
Safety distance (screen-circuit breaker) : Left / Right: 100 mm  
Up / Down: 100 mm  
Front / Back: 170 mm  
Instantaneous release : Magnetic type, fixed,  
2 poles in series: 10 In for AC, 14 In for DC  
single pole: 12 In for AC, 16,8 In for DC  
Inverse time delay release : Thermal type, fixed, In  
Time setting of the inverse time delay release : Fixed,  
2I<sub>r</sub> tripping time declared by the manufacturer:  
50 s - 8 min  
EMC environment : A and B  
Circuit-breaker for use in IT systems : Yes, 12 In at 415 Vac

**Product data – type NF630-HEW**

Number of poles : 3P, 4P (N pole without protection)  
Protected pole : 3  
Rated operational voltage (Ue) : 415 Vac, 400 Vac, 380 Vac, 230 / 200 Vac  
Reference temperature (°C) : Independent  
Rated current (In) : 630 A (300 - 630 A adjustable)  
Conventional thermal current (Ith) : Equal to In  
Current rating for four-pole circuit-breakers : Equal to In  
Rated ultimate short-circuit breaking capacity (Icu) : 70 kA at 415 / 400 / 380 Vac  
100 kA at 230 / 200 Vac  
Rated service short-circuit breaking capacity (Ics) : 100% Icu  
Rated short-time withstand current (Icw) : 7,6 kA / 0,25 s  
Selectivity category : B  
Safety distance (screen-circuit breaker) : Left / Right: 150 mm  
Up / Down: 200 mm  
Front / Back: 170 mm  
Instantaneous release : li (instantaneous tripping setting):  
Electronic type, adjustable,  
(4 / 6 / 8 / 10 / 12 / 15) x 630 A  
Short time delay release : Isd (short time delay tripping setting):  
Electronic type, adjustable,  
(2 / 2,5 / 3 / 3,5 / 4 / 5 / 6 / 7 / 8 / 10) x In for In = 300 - 600 A  
(2 / 2,5 / 3 / 3,5 / 4 / 5 / 6 / 7 / 8 / 10) x Ir for In = 630 A

Time setting of the short time delay release	: tsd (short time delay tripping setting): 0,06 s - 0,3 s (0,06 / 0,1 / 0,2 / 0,3 s) 0,06 s, with tolerance of $\pm 0,02$ s 0,1 s, with tolerance of $\pm 0,03$ s 0,2 s, with tolerance of $\pm 0,04$ s 0,3 s, with tolerance of $\pm 0,06$ s
Inverse time delay release	: Ir (inverse time delay tripping setting): Electronic type, adjustable, In for In = 300 / 350 / 400 / 500 / 600 A (0,5 / 0,6 / 0,7 / 0,8 / 0,9 / 1) x In for In = 630 A
Time setting of the inverse time delay release	: tr (inverse time delay tripping setting): 12 s - 150 s (12 / 60 / 100 / 150 s), with tolerance of $\pm 20\%$ (at 2 Ir) 2Ir tripping time declared by the manufacturer: when tr = 12 s: 12 s $\pm 20\%$ when tr = 60 s: 60 s $\pm 20\%$ when tr = 100 s: 100 s $\pm 20\%$ when tr = 150 s: 150 s $\pm 20\%$
EMC environment	: A
Circuit-breaker for use in IT systems	: Yes, 12 In at 415 Vac

**Product data – type NF630-SW**

Number of poles	: 2P, 3P, 4P (N pole without protection) for AC; 2P for DC
Protected pole	: 2 or 3
Rated operational voltage (Ue)	: 415 Vac, 400 Vac, 380 Vac, 230 / 200 Vac; 250 Vdc
Reference temperature (°C)	: 40 °C
Rated current (In)	: 630 A, 600 A, 500 A
Conventional thermal current (Ith)	: Equal to In
Current rating for four-pole circuit-breakers	: Equal to In
Rated ultimate short-circuit breaking capacity (Icu)	: 50 kA at 415 / 400 / 380 Vac 85 kA at 230 / 200 Vac, 40 kA at 250 Vdc
Rated service short-circuit breaking capacity (Ics)	: 100% Icu
Selectivity category	: A
Safety distance (screen-circuit breaker)	: Left / Right: 100 mm Up / Down: 100 mm Front / Back: 170 mm
Instantaneous release	: Magnetic type, fixed, 2 poles in series: 14 In for AC, 19,6 In for DC single pole: 16,8 In for AC, 23,52 In for DC
Inverse time delay release	: Thermal type, fixed, In
Time setting of the inverse time delay release	: Fixed, 2Ir tripping time declared by the manufacturer: 50 s - 8 min
EMC environment	: A and B
Circuit-breaker for use in IT systems	: Yes, 16,8 In at 415 Vac

**TESTS****Test requirements**

EN 60947-2:2017

**Test result**

The test results are laid down in DEKRA test file 331314600.

**Additional information**

The referred test reports are 3313146.50 and also based on CQC CB test certificate CN42482 issued on 2018-01-25 with CQC CB test report 00901-CB2017CQC-074710 issued on 2017-12-11.

The product also complies with IEC 60947-2:2016.

**Conclusion**

The examination proved that all requirements were met.

**Factory location**

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