DNV·GL

Certificate No:
TAE00000N7

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
3VA

Issued to
Siemens AG Low Voltage
REGENSBURG, Germany

is found to comply with
Det Norske Veritas' Rules for Classification of Ships and Mobile Offshore Units

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.

Rated Voltage (V)	**690 V**
Rated Current (A)	**100 - 630**
Frequency (Hz)	**50 - 60**

This Certificate is valid until **2019-06-30**.

Issued at **Høvik** on **2015-11-25**

for **DNV GL**

DNV GL local station: **Augsburg**

Approval Engineer: **Nicolay Horn**

Marit Laumann
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

Moulded case circuit breaker: 3VA.

	3VA10	3VA11			3VA12
Number of poles	3, 4	1	2	3, 4	3,4
Rated insulation voltage AC (V)	800	800	800	800	800
Rated operational voltage AC(V)	690	415	415	690	690
Rated Current (A)	100	160	160	160	250
Rated Frequency Hz	0-400	0-400	0-400	0-400	0-400
Extremly Low Breaking cap (kA) Icu / Ics (class B)					
220 - 240 V, 50/60 Hz	25 / 25	-	-	-	-
380 - 415 V, 50/60 Hz	16 / 16	-	-	-	-
440 V, 50/60 Hz	8 / 8	-	-	-	-
500 V, 50/60 Hz	5 / 5	-	-	-	-
690 V, 50/60 Hz	5 / 5	-	-	-	-
Low Breaking cap (kA) Icu / Ics (class N)					
220 - 240 V, 50/60 Hz	36 / 36	25 / 25	36 / 36	36 / 36	-
380 - 415 V, 50/60 Hz	25 / 25	5 / 5	25 / 25	25 / 25	-
440 V, 50/60 Hz	16 / 16	-	-	16 / 16	-
500 V, 50/60 Hz	5 / 5	-	-	7 / 5	-
690 V, 50/60 Hz	5 / 5	-		7 / 5	-
Standard Breaking cap (kA) Icu / Ics (class S)					
220 - 240 V, 50/60 Hz	55 / 55	36 / 36	55 / 55	55 / 55	55 / 55
380 - 415 V, 50/60 Hz	36 / 36	6 / 6	36 / 36**)	36 / 36	36 / 36
440 V, 50/60 Hz	25 / 25	-	-	25 / 25	25 / 25
500 V, 50/60 Hz	7 / 5	-	-	7 / 5	10 / 10
690 V, 50/60 Hz	7 / 5	-	-	7 / 5	7 / 5
Medium Breaking cap (kA) Icu / Ics (class M)					
220 - 240 V, 50/60 Hz	-	-	-	85 / 85	85 / 85
380 - 415 V, 50/60 Hz	-	-	-	55 / 55	55 / 55
440 V, 50/60 Hz	-	-	-	36 / 36	36 / 36
500 V, 50/60 Hz	-	-	-	10 / 5	15 / 10
690 V, 50/60 Hz	-	-	-	10 / 5	10 / 5
High Breaking cap (kA) Icu / Ics (class H)					
220 – 240 V, 50/60 Hz	-	-	-	100 / 100	100 / 100
380 - 415 V, 50/60 Hz	-	-	-	70 /70	70 /70
440 V, 50/60 Hz	-	-	-	55 / 40 *)	36 / 36
500 V, 50/60 Hz	-	-	-	10 / 5	15 / 10
690 V, 50/60 Hz	-	-	-	10 / 5	10 / 5

*) 36 / 36 for In 125 A, 160 A
**) 25 / 25 for In 100 A, 125 A, 160 A

	3VA20	3VA21	3VA22	3VA23	3VA24
Number of poles	3, 4	3, 4	3, 4	3, 4	3, 4
Rated insulation voltage AC (V)	800	800	800	800	800
Rated operational voltage AC(V)	690	690	690	690	690
Rated Current (A)	100	160	250	400	630
Rated Frequency Hz	50-60	50-60	50-60	50-60	50-60
Standard Breaking cap (kA) Icu / Ics (class S)					
220 - 240 V	55 / 55	55 / 55	55 / 55	-	-
380 - 415 V	36 / 36	36 / 36	36 / 36	-	-
440 V	36 / 36	36 / 36	36 / 36	-	-
500 V	25 / 25	25 / 25	25 / 25	-	-
690 V	2 / 2	2.5 / 2.5	3 / 3	-	-
Medium Breaking cap (kA) Icu / Ics (class M)					
220 - 240 V	85 / 85	85 / 85	85 / 85	85 / 85	85 / 85
380 - 415 V	55 / 55	55 / 55	55 / 55	55 / 55	55 / 55
440 V	55 / 55	55 / 55	55 / 55	55 / 55	55 / 55
500 V	36 / 36	36 / 36	36 / 36	36 / 36	36 / 36
690 V	2 / 2	2.5 / 2.5	3 / 3	5 / 5	6 / 6
High Breaking cap (kA) Icu / Ics (class H)					
220 - 240 V	110 / 110	110 / 110	110 / 110	110 / 110	110 / 110
380 - 415 V	85 / 85	85 / 85	85 / 85	85 / 85	85 / 85
440 V	85 / 85	85 / 85	85 / 85	85 / 85	85 / 85
500 V	55 / 55	55 / 55	55 / 55	55 / 55	55 / 55
690 V	2 / 2	2.5 / 2.5	3 / 3	5 / 5	6 / 6
Very High Breaking cap (kA) Icu / Ics (class C)					
220 - 240 V	150 / 150	150 / 150	150 / 150	150 / 150	150 / 150
380 - 415 V	110 / 110	110 / 110	110 / 110	110 / 110	110 / 110
440 V,	110 / 110	110 / 110	110 / 110	110 / 110	110 / 110
500 V,	85 / 85	85 / 85	85 / 85	85 / 85	85 / 85
690 V	2 / 2	2.5 / 2.5	3 / 3	5 / 5	6 / 6
Extremely High Breaking cap (kA) Icu / Ics (class L)					
220 - 240 V	200 / 200	200 / 200	200 / 200	-	-
380 - 415 V	150 / 150	150 / 150	150 / 150	-	-
440 V	150 / 150	150 / 150	150 / 150	-	-
500 V	100 / 100	100 / 100	100 / 100	-	-
690 V	24 / 18	24 / 18	24 / 18	-	-

Technical data disconnecting switch (to IEC 60947-3):

	3VA11
Number of poles	3, 4
Rated operation voltage AC (V)	690
Rated operational voltage DC(V)	500 / 600
Rated operational current (A) In	63 - 160
Rated Frequency Hz	50/60
Rated making capacity(kA) Icm *	70 at 415V
Rated making capacity(kA) Icm	3
Rated permissible short-time current Icw (1s kA)	2

* With upstream circuit breaker or fuse

Application/Limitation

Suitable for use in an IT system with a capacity of 1.2 times the maximum trip current at up to 690 V.

Type Approval documentation

Tests carried out

Type tests according to: IEC 60947-2 & 3, vibration test, cold test, dry heat test, damp heat test, and EMC test

Marking of product

Siemens – 3VA Moulded Case Circuit-Breaker and Switch-Disconnector –Type designation.

Periodical assessment

The scope of the periodical assessment is to verify that the conditions stipulated for the Type approval are 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 least every second year.

END OF CERTIFICATE