Certificate No:
TAE00004AT

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
3WA1...

Issued to
Siemens AG
REGENSBURG, **Germany**

is found to comply with
DNV rules for classification – Ships, offshore units, and high speed and light craft

Application :

Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV.
Rated voltage (V) up to 1150
Rated current (A) up to 6300

Issued at **Hamburg** on **2022-03-02**
This Certificate is valid until **2027-03-01**.
DNV local station: **Augsburg**

Approval Engineer: **Harald Amberger**

for **DNV**

Arne Schaarmann
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.

Product description

Ratings		3WA11 - 13 Air Circuit Breakers up to 6300A (AC)								
Size		I			II	III				
Type		3WA11			3WA12	3WA13				
Operating voltage U_e	V	≤690 (≤1000 E Class)			≤690 (≤1150 E Class)	≤690 (≤1150 E Class)				
Insulation voltage U_i	V	1000			1000 (1150 E Class)	1000 (1150 E Class)				
Impulse withstand voltage U_{imp}	kV	12								
Frequency	Hz	50/60								
Number of poles		3/4								
Type of release		Electronic								
Method of installation		Fixed and withdrawable								
Selectivity category		B								
Breaking capacity										
Current In (40°C)	A	3WA11 630 up to 2500				3WA12 800 up to 4000, (up to 3200 C Class)				
Breaking Class		N	S	M	E	S	M	H	E	C
Ultimate Short-Circuit Breaking Capacity I_{cu}										
AC500V	kA	55	66	85	85	66	85	100	100	130
AC690V	kA	42	50	66	85	50	66	85	85	100
AC1000V	kA				50				85	
AC1150V	kA								50	
Service Short-Circuit Breaking Capacity I_{cs}	kA	$I_{cs} = I_{cu}$								
Making Capacity I_{cm}										
AC500V	kA	121	145	187	187	145	187	220	220	286
AC690V	kA	88	105	145	187	105	145	187	187	220
AC1000	kA				105				187	
AC1150	kA								105	
Short-time withstand current I_{cw} (1s, 690V)	kA	42	50	66	85	50	66	85	85	100

Current I_n (40°C)	A	3WA13, 4000 up to 6300				
Breaking Class		H	C,3 pole	C,4 pole	E,3 pole	E,4 pole
Ultimate Short-Circuit Breaking Capacity I_{cu}						
AC500V	kA	100	150	130	150	130
AC690V	kA	85	150	130	150	130
AC1000V	kA				125	125
AC1150V	kA				70	70
Service Short-Circuit Breaking Capacity I_{cs}	kA	$I_{cs} = I_{cu}$				
Making Capacity I_{cm}						
AC500V	kA	220	330	286	330	286
AC690V	kA	187	330	286	330	286
AC1000	kA				275	275
AC1150	kA				154	154
Short-time withstand current I_{cw} (1s, 690V)	kA	85	130	120	130	120

Further ratings acc. manufacturer documentation.

Application/Limitation

Location Classes:
Temperature: B, Humidity: B, Vibration: A, EMC:A, Enclosure: IP20, IP00 for main terminals.
Required protection acc. DNV rules shall be provided upon installation on ships

Suitable for use in an IT system with a capacity of 1.2 times the maximum trip current (max. 50kA)
3WA11 class N, S, M up to 500V, class E up to 690V
3WA12 class C, H, S up to 500V, class E up to 690V
3WA13 class H, C up to 500V, class E up to 690V

ACB Trip relays: Communication port for monitoring purpose only.

Operating instruction of the manufacturer to be observed

Type Approval documentation

Tests carried out

IEC 60947-2 including Annex H, vibration test, dry heat test, damp heat test, cold test and EMC test.

Marking of product

Acc. IEC 60947-2 subclause 5.2

Name and place of manufacturer

OEZ s.r.o. / Siemens AG
Sedivska 339, 56151 Letohrad
Czech Republic

Siemens Electrical Apparatus Ltd,
Suzhou, Jiangsu Province
CHINA

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 Routine Tests (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.

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE