DNV·GL

Certificate No:
TAE000014N

TYPE APPROVAL CERTIFICATE

This is to certify:

That the Circuit Breaker

with type designation(s)
3RV2

Issued to
Siemens AG GWA
Amberg, Germany

is found to comply with
DNV GL rules for classification – Ships and 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**
Rated Current (A)	**0,16 - 80**
Frequency (Hz)	**50/60**

This Certificate is valid until **2021-06-02**.

Issued at **Hamburg** on **2016-06-03**

for **DNV GL**

DNV GL local station: **Augsburg**

Approval Engineer: **Harald Amberger**

Duy Nam Le
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

Ratings **Circuit breaker 3RV2…**	
Operational voltage Ue	690V
Insulation voltage Ui	690V
Impulse withstands voltage Uimp	6kV
Operational current Ie (40°C)	3RV2.1…: max. 16A 3RV2.2…: max. 40A 3RV2.3…: max. 80A
Range of settings	3RV2.1…: 0,11-0,16A up to 11-16A 3RV2.2…: 0,11-0,16A up to 34-40A 3RV2.3…: 9,5-14A up to 70-80A

Short-circuit capacity I_{CU}, I_{CS} acc. to IEC 60947-2

		240VAC		400/415VAC		440/460VAC		500/525VAC		690VAC	
	I_n	I_{CU}	I_{CS}	I_{CU}	I_{CS}	I_{CU}	I_{CS}	I_{CU}	I_{CS}	I_{CU}	I_{CS}
Type	A	kA	kA	kA	kA	kA	kA	kA	kA	kA	kA
Size S00											
3RV2.1.	0.16…1.6	100	100	100	100	100	100	100	100	100	100
	2.0…3.2	100	100	100	100	100	100	100	100	10	10
	4.0…6.3	100	100	100	100	100	100	100	100	6	4
	8.0…12.5	100	100	100	100	50	50	42	42	6	4
	15; 16	100	100	55	30	50	10	10	5	4	4
Size S0											
3RV2.2.[1]	0.16…1.6	100	100	100	100	100	100	100	100	100	100
	2.0…3.2	100	100	100	100	100	100	100	100	10	10
	4.0…6.3	100	100	100	100	100	100	100	100	6	4
	8.0…12.5	100	100	100	100	50	50	42	42	6	4
	16…25	100	100	55	25	50	10	10	5	4	2
	28; 32	100	100	55	25	30	10	10	5	4	2
	36; 40	100	100	20	10	12	8	6	3	3	2
Size S2											
3RV2.31	14…20	100	100	65	30	50	25	12	6	5	3
	25	100	100	65	30	50	15	12	6	5	3
	32…80	100	100	65	30	50	15	8	4	4	2
Size S2											
3RV2.32	14…25	100	100	100	50	65	30	18	10	8	5
	32…80	100	100	100	50	65	30	15	8	6	4

Further ratings according manufacturer documentation.

[1] For 3RV2.23 only ratings for 690VAC are valid

Accessories; Basic types	
3RV2901-	Auxiliary switches
3RV2921-	Signaling switches
3RV2928/38-	Isolator modules
3RV2902-	Undervoltage trip units. Shunts release
3RV2922-	Undervoltage trip unit with leading auxiliary contacts
3RV1915/35-	Three-phase busbars
3RV2915/25/35-	Three-phase infeed terminals
3RV1927/2917/27	Infeed system
8SU1…	Busbar adapters for 60 mm systems

Ratings and mounting locations according manufacturer documentation.

Application/Limitation

Location Classes:
Temperature: D, Humidity: B, Vibration: A, Enclosure: IP20,

For installation inside switchboards/ enclosures onboard ships and offshore units.
Back-up fuse required if short-circuit current at the place of installation > Icu.
With Uimp=6kV; Overvoltage category II applies for applications in IT systems > 600 V.

Type Approval documentation

Tests carried out

IEC 60947-2, IEC 60947-4-1, IEC 60947-5-1, cold, dry heat, damp heat, vibration, inclination, flame retardancy.

Marking of product

Manufacturers label containing data and manufacturers type number.

Name and place of manufacturer

Siemens AG, GWA
Werner-von-Siemens-Str. 48
92220 Amberg
Germany

Siemens San. ve Tic. A.Ş
Esentepe Mah. Yakaclk Cad. No.111
34870 Kartal-Istanbul
Turkey

Siemens s.r.o
Volanovská 516
541 01 Trutnov
Česká republika

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 Production Sample Tests (PST) and Routines (RT) checked (if not available tests according to PST and 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 2½ year.

END OF CERTIFICATE