

# Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

<b>Manufacturer</b>	<b>Siemens AG</b>
<b>Address</b>	Werner-von-Siemens-Strasse 48, Amberg, 92220
<b>Type</b>	Circuit Breakers (Env Tested)
<b>Description</b>	SIRIUS Innovation - Circuit Breaker and accessories Refer to the Appendix for further details.
<b>Trade Name</b>	3RV2
<b>Application</b>	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – 2013.
<b>Specified Standard</b>	IEC 60947-2:2016-06+A1:2019-07 IEC 60947-4-1:2009-09 + A1:2012-07 IEC 60947-5-1:2016-05
<b>Ratings</b>	Refer to the Appendix for further details.
<b>Other Conditions</b>	Correction factor for ambient air temperature above 60° C (above 40°C for 36/40 A version, size S0) is to be obtained from manufacturer.

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## Type Approval Certificate

This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

**Previous Version:** 11/20009 (E3)

The Design Appraisal Document HTS/ETS 41366-21/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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## Appendix

### TYPE

Circuit breaker

3RV20	21	-4A	A	1	8	..
I	II	III	IV	V	VI	VII

#### I. Basic Type

- 3RV20 – Circuit Breaker for motor protection
- 3RV21 - Circuit Breaker for motor protection with overload function
- 3RV23 - Circuit Breaker for starter combination
- 3RV24 - Circuit Breaker for transformer protection

#### II. Size of terminal for main circuit

- 11 – Up to 16 A, Size S00
- 21 – up to 40 A, Size S0
- 23 - only for setting ranges 12.5 up to 25 A, Size S0
- 31 – from 14 A up to 80 A, standard short circuit breaking capacity, 65kA / 400V, Size S2
- 32 – from 14 A up to 80 A, higher short circuit breaking capacity, 100kA / 400V, Size S2
- 41 – from 40 A up to 100 A, standard short circuit breaking capacity, 65kA / 400V, Size S3
- 42 – from 40 A up to 100 A, higher short circuit breaking capacity, 100kA / 400V, Size S3

III. Setting Ranges Suffix	From	to (A)	Size
-0A	0.11	0.16	S00, S0
-0B	0.14	0.2	S00, S0
-0C	0.18	0.25	S00, S0
-0D	0.22	0.32	S00, S0
-0E	0.28	0.4	S00, S0
-0F	0.35	0.5	S00, S0
-0G	0.45	0.63	S00, S0
-0H	0.55	0.8	S00, S0
-0J	0.7	1	S00, S0
-0K	0.9	1.25	S00, S0
-1A	1.1	1.6	S00, S0
-1B	1.4	2	S00, S0
-1C	1.8	2.5	S00, S0
-1D	2.2	3.2	S00, S0
-1E	2.8	4	S00, S0
-1F	3.5	5	S00, S0
-1G	4.5	6.3	S00, S0
-1H	5.5	8	S00, S0
-1J	7	10	S00, S0

-1K	9	12.5	S00, S0
-4S	9.5	14	S2
-4A	10	16	S00, S0, S2
-4T	12	17	S2
-4B	13	20	S0, S2
-4C	16	22	S0
-4D	18	25	S0, S2
-4N	23	28	S0
-4E	27	32	S0
-4E	22	32	S2
-4P	30	36	S0
-4P	28	36	S2
-4U	32	40	S2
-4F	34	40	S0
-4F	28	40	S2, S3
-4V	35	45	S2
-4G	36	45	S2
-4H	40	50	S2
-4H	36	50	S3
-4W	42	52	S2
-4Q	47	57	S2
-4X	49	59	S2
-4J	54	65	S2
-4J	45	63	S3
-4K	62	73	S2
-4K	57	75	S3
-4R	70	80	S2
-4R	65	84	S3
-4Y	75	93	S3
-4M	80	100	S3

#### IV. Tripping Class

A - setting ranges with instantaneous tripping and overload tripping

Class 10

B - setting ranges with instantaneous tripping and overload tripping

Class 20(only up to 65A)

C - with instantaneous tripping and without overload tripping

#### V. Type of Terminals

1 - Screw Terminal

2 - spring terminals (only up to 32A)

4 - Ring lug terminals (only up to 32A)

VI. Auxiliary Switches  
(Combinations with certified accessories Type 3RV29...)

- 0 - without
- 1 - 1NO + 1NC, side mounted
- 2 - 2NO, side mounted
- 3 - 2NC, side mounted
- 4 - 1NO/NC Changeover, top mounted
- 5 - 1NO + 1NC, top mounted
- 6 - 2NO, top mounted

VII. Others

- .. - Manufacturer's identification

Circuit Breaker according UL489

3RV2721	-0A	D	1	0
I	II	III	IV	V

I. Basic type

- 3RV2711 - circuit Breaker acc. UL489, adjusted to 13 times rated current up to 15 A
- 3RV2811 - circuit Breaker acc. UL489, adjusted to 20 times rated current up to 15 A
- 3RV2721 - circuit Breaker acc. UL489, adjusted to 13 times rated current from 20 A up to 22 A
- 3RV2821 - circuit Breaker acc. UL489, adjusted to 20 times rated current from 20 A up to 22 A
- 3RV2742 - circuit Breaker acc. UL489, adjusted to 13 times rated current from 10 A up to 70 A

II. Rated Current

- 0A - 0.16 A
- 0B - 0.2 A
- 0C - 0.25 A
- 0D - 0.32 A
- 0E - 0.4 A
- 0F - 0.5 A
- 0G - 0.63 A
- 0H - 0.8 A
- 0J - 1.0 A
- 0K - 1.25 A
- 1A - 1.6 A
- 1B - 2.0 A
- 1C - 2.5 A

-1D - 3.2 A  
-1E - 4.0 A  
-1F - 5.0 A  
-1G - 6.3 A  
-1H - 8.0 A  
-1J - 10 A  
-5A - 10 A  
-5R - 10 A  
-1K - 12.5 A  
-4A - 15 A  
-5B - 15 A  
-5S - 15 A  
-4B - 20 A  
-5C - 20 A  
-4C - 22 A  
-5D - 25 A  
-5E - 30 A  
-5F - 35 A  
-5G - 40 A  
-5H - 45 A  
-5J - 50 A  
-5L - 60 A  
-5Q - 70 A

### III. Tripping Class

D - with instantaneous tripping and fixed current overload tripping

### IV. Type of Terminal

1 - Screw Terminals

### V. Auxiliary Switches

0 - without

### Infeed system:

3RV2917-1A Infeed, left side with 2 sockets

3RV2917-1E Infeed, right side with 2 sockets

3RV2917-4A Expansion module with 2 sockets

3RV2917-4B Expansion module with 3 sockets

3RV2917-5CA00 Plug for 3RV2, Screw terminal Size S00

3RV2917-5AA00 Plug for 3RV2, Spring terminal Size S00

3RV1927-5AA00 Plug for 3RV2, Screw terminal Size S0

3RV2927-5AA00 Plug for 3RV2, Spring terminal Size S0

3RV2917-7AA00 Contactor Base for contactor 3RT2.1

3RV2927-7AA00 Contactor Base for contactor 3RT2.1 and 3RT2.2

3RV2917-5BA00 Extension plug  
 3RV2917-5E Broadened Extension plug  
 3RV2917-5D Terminal Block for integration of external components  
 3RV2917-6A End Cover

Accessories:

Auxiliary contacts:

3RV2901	-1	A
I	II	III

I - Basic type

3RV2901 - Auxiliary contact blocks for 3RV2

3RV2921 - Alarm switch for 3RV2

II - Type of terminals

-1 - Screw Terminal

-2 - Spring terminals

-4 - Ring lug terminals

III - Contact arrangements

A - 1NO + 1NC, side-mounting

B - 2NO, side-mounting

C - 2NC, side-mounting

D - 1NO + 1NC changeover, top-mounting

E - 1NO + 1NC, top-mounting

F - 2NO, top-mounting

G - 1NO + 1NC changeover, top-mounting, micro switch

J - 2NO + 2NC, side-mounting

M - 2NO + 2NC, side-mounting, alarm switch

Undervoltage trip units, Shunt releases:

3RV2902	-1	A	B4
I	II	III	IV

I - Basic type

3RV2902 - Undervoltage trip units, Shunt releases for 3RV2

3RV2922 - Undervoltage trip unit with leading auxiliary contacts for 3RV2

II - Type of terminals

-1 - Screw Terminal

-2 - Spring terminals  
-4 - Ring lug terminals

III – Type of Accessory

A - Undervoltage trip unit  
C - Undervoltage trip unit with leading auxiliary contacts  
D - Shunt trip unit

IV – Rated voltage for Undervoltage trip unit

B4 - 24V, dc  
B0 - 24V, 50Hz  
F0 - 110V, 50Hz; 120V, 60Hz  
M1 - 208V, 60Hz  
P0 - 230V, 50Hz; 240V, 60Hz  
V0 - 400V, 50Hz; 440V, 60Hz  
V1 - 415V, 50Hz; 480V, 60Hz  
S0 - 500V, 50Hz; 600V, 60Hz  
G6 - 100V, 50 Hz; 110V, 60Hz  
N0 - 220V, 50Hz  
N6 - 200V, 50Hz; 220V, 60Hz  
Q0 - 380V, 50Hz  
U0 - 240V, 50Hz

IV – Rated voltage for Shunt trip unit

B0 - 20-24V, 50/60Hz  
F0 - 90-110V, 50/60Hz  
P0 - 210-240V, 50/60Hz  
V0 - 350-415V, 50/60Hz  
S0 - 500V, 50/60Hz

3RV2928-1A Isolator Module, Size S00, S0  
3RV2938-1A Isolator Module, Size S2  
3RV2928-1K Type E Adapter for screw terminal, Size S00, S0  
3RV2938-1K Type E Adapter for screw terminal, Size S2  
3RV2948-1K Terminal block with phase barriers, Size S3  
3RV2908-0P Sealing Cap  
3RV2901-0H Cover  
3RV2928-4AA00 Cover for ring-lug-terminals (main terminals)  
3RV2908-4AA10 Cover for ring-lug-terminals (auxiliary switch, top mounting)  
3RV2928-0B Plug-in lugs for screw mounting  
8US1251-5DS10 Adapter for SIRIUS Circuit breaker, Size S00, screw terminals, 200mm  
8US1251-5DT10 Adapter for SIRIUS Circuit breaker, Size S00, screw terminals, 260mm  
8US1251-5NT10 Adapter for SIRIUS Circuit breaker, Size S0, screw terminals, 260mm  
8US1251-5DT11 Adapter for SIRIUS Circuit breaker Size S00, spring terminals, 260mm



8US1251-5NT11 Adapter for SIRIUS Circuit breaker Size S0, spring terminals, 260mm  
8US1251-5DS11 Adapter for SIRIUS Circuit breaker Size S00, spring terminals, 200mm  
8US1261-5MS13 Adapter for SIRIUS Circuit breaker, Size S2, screw terminals, 200mm  
8US1211-4TR00 Adapter for SIRIUS Circuit breaker, Size S3, screw terminals, 215mm  
8US1998-1DA10 Vibration & Shock Kit, Size S2  
3RV2928-1H Terminal Block, Size S00, S0  
3RV2925-5AB 3-phase Line-Side Terminal, Size S00, S0  
3RV2925-5EB 3-phase Line-Side Terminal for Self-protected Motor Starter, Size S00, S0  
3RV1915-1AB 3-phase busbar for 2 devices 45mm distance, Size S00, S0  
3RV1915-1BB 3-phase busbar for 3 devices 45mm distance, Size S00, S0  
3RV1915-1CB 3-phase busbar for 4 devices 45mm distance, Size S00, S0  
3RV1915-1DB 3-phase busbar for 5 devices 45mm distance, Size S00, S0  
3RV1915-2AB 3-phase busbar for 2 devices 55 mm distance, Size S00, S0  
3RV1915 2BB 3-phase busbar for 3 devices 55 mm distance, Size S00, S0  
3RV1915-2CB 3-phase busbar for 4 devices 55 mm distance, Size S00, S0  
3RV1915-2DB 3-phase busbar for 5 devices 55 mm distance, Size S00, S0  
3RV1915-3AB 3-phase busbar for 2 devices 63 mm distance, Size S00, S0  
3RV1915-3CB 3-phase busbar for 4 devices 63 mm distance, Size S00, S0  
3RV2915-5B 3-phase Line-Side Terminal, connection from below, Size S00, S0  
3RV1915-6AB Cover for tags, Size S00, S0  
3RV2935-5A 3-phase Line-Side Terminal, Size S2  
3RV2935-5E 3-phase Line-Side Terminal for Self-protected Motor Starter, Size S2  
3RV1935-1A 3-phase busbar for 2 devices 55mm distance, Size S2  
3RV1935-1B 3-phase busbar for 3 devices 55mm distance, Size S2  
3RV1935-1C 3-phase busbar for 4 devices 55mm distance, Size S2  
3RV1935-3A 3-phase busbar for 2 devices 75 mm distance, Size S2  
3RV1935-3B 3-phase busbar for 3 devices 75 mm distance, Size S2  
3RV1935-3C 3-phase busbar for 4 devices 75 mm distance, Size S2  
3RV1935-6A Cover for tags, Size S2  
3RT2946-4GA07 Type E Terminal for screw terminal, Size S3  
3RV2948-1LA00 Terminal cover for Size S3  
3RA2943-3L 1-phase Terminal for 3RV2.4 and 3RT2.4, Size S3  
3RT2946-4EA2 Terminal Cover, Size S3  
3RT1946-4EA1 Terminal Cover for cable lug and bar connection, Size S3  
3RT2946-4F Auxiliary conductor terminal, Size S3

**PLACES OF  
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