SIEMENS

Prüf-Nr./Q-Nr.: *Certificate No.:*	**3000j**
Dienststelle: *Department:*	**SI CP R&D VC 2 / Pester**
Ort: *Place:*	**Amberg**
Tag: *Date:*	**2019-08-14**
Anlagen: *Enclosures:*	**Product Description 3000j**

Typprüfbescheinigung / *Type Test Certificate*

Erzeugnis / *Product:* **Contactor, Reversing Starter, Wye Delta Starter**

Typ: *Type:* **3RT202, 3RT232, 3RT252, 3RA232, 3RA242, 3RA27, 3RA29**

Tech. Daten: *Specification:* **$U_{e\ max}$ = 690V AC-3: 400 V / 32 A**

Hersteller: *Manufacturer:* **Siemens AG SI CP**

Art der Prüfung / *Type of test:* **Type Test**

Prüfer / *Tested by:* **Mr. Stadlbauer**

Labor / *Laboratory:* **Type Test Center Siemens AG, Amberg DAkkS accredited Testing Laboratory**

Angewandte Prüfbestimmungen / *Test specifications applied:*
IEC 60947-4-1:2012-07
IEC 60947-5-1:2009-07

Durchgeführte Prüfungen / *Tests conducted:*
IEC 60947-4-1: Test Sequences I, II, III, IV, V, EMC and Annex F
IEC 60947-5-1: Test Sequences I, II/III, IV, V and Annex L

Prüfergebnis / *Test results:*
All requirements of the test specification are met.

Bemerkungen / *Remarks:* **Issued: 23.04.2010**
This test certificate covers contactors 3RT2.2, reversing starters 3RA232 and wye delta starters 3RA242 with ac and dc operating system and any accessories. For top or laterally mounted auxiliary contacts refer to Test certificate 3002.
Index i, dated 2018-04-09: Test summary 3000i replaces 3000h.
Index j, dated 2019-08-14: Additional types added.

i.V.
SI CP R&D VC Mr. Hartinger

i.V.
SI CP R&D PMM Mr. Royer

General

Type designation: 3RT2.2

Manufacturer: Siemens AG, SI CP
92220 Amberg, Werner-von-Siemens-Str. 48, Germany

Production site: Siemens AG, SI CP
92220 Amberg, Werner-von-Siemens-Str. 48, Germany

Siemens Ltd. Kalwa Works WSGR,
Thane Belapur Road, Thane 400601, India

Nomenclature breakdown

Series contactor 3RT2.2.-..

3RT20	23	-1	A	B4	0	-....
I	II	III	IV	V	VI	VII

I. Basic Type

3RT20 -	motor contactor, 3NO main contacts
3RT23 -	AC-1 contactor, 4NO main contacts AC-3 contactor, 4NO main contacts only in combination with .-4AA0
3RT25 -	reversing contactor, 2NO + 2NC main contacts

II. Size S0

23 -	4 kW
24 -	5,5 kW
25 -	7,5 kW
26 -	11 kW
27 -	15 kW
28 -	18,5 kW

III. Type of terminals

1 -	Screw Terminal for main and auxiliary contacts
2 -	Spring Terminal for main and auxiliary contacts
4 –	Ring lug terminals for main and auxiliary contacts

IV. Operating system

A -	AC operating system
B -	DC operating system
C –	AC operating system with factory assembled EMC protective unit varistor type
D, K –	DC operating system with factory assembled EMC protective unit varistor type
E –	AC operating system with factory assembled EMC protective unit RC combination type
F, V –	DC operating system with factory assembled EMC protective unit diode combination
N, X –	UC operating system

V. Operating voltage

24Vac through 600Vac or
12Vdc through 250Vdc

VI. Auxiliary contact arrangements

0 -	1 normally open and 1 normally closed
1 -	1 normally open, top mounted
2 -	1 normally closed, top mounted
3 -	1 normally open and 1 normally closed, top mounted
4 -	2 normally open and 2 normally closed, top mounted
8 -	any other, individual auxiliary contact arrangements

VII. Suffix letters and/or numbers specified commercial variations

-0CC0 –	contactor with communication interface
-.EM0 –	5NO main contacts
- 4AA0 -	motor contactor, 4NO main contacts, only for 3RT2326..
-1KS0	only for use with auxiliary contact 3RH2921-2XN22-0GS0
-.... –	any other commercial variation

Nomenclature breakdown / Accessories

3RT2926	-3	AF3	1
I	II	III	IV

I. Basic type

3RT2926 –	For use with 3RT2.2

II. Control type

3 –	Mechanical latch block

III. Control voltage

AB3 –	24 V ac/dc
AF3 –	110 V ac/dc
AP3 –	230 V ac/dc

IV. Type of terminals

1 -	Screw Terminal

3RT29	26	-1A	B	..
I	II	III	IV	V

I. Basic type

3RT29 -	Accessory for 3RT2 or 3RH2

II. Size

26 -	suitable for use with devices S0

III. Type of components, EMC protective unit

-1A -	special manufacturer's identification
-1B -	varistor without LED
-1C -	RC element with or without LED
-1D -	diode without LED
-1E or -1T -	diode combination (diode + zener diode) without LED
-1F -	zener diode without LED
-1J -	varistor with LED
-1L -	diode with LED
-1M -	diode combination with LED
-1N -	zener diode
-1Q -	LED-display

IV. Voltage ratings

A -	Special manufacturer's identification
B -	24 through 48 V ac / 24 through 70 V dc
C -	48 through 127 V ac / 70 through 150 V dc
D -	127 through 240 V ac / 150 through 250 V dc
E -	240 through 400 V ac
F -	400 through 600 V ac
G -	12 through 250 V dc
H -	24 through 250 V dc
J or P -	24 through 48 V ac / 12 through 24 V dc
K or Q -	48 through 127 V ac / 24 through 70 V dc
L or R -	127 through 240 V ac / 70 through 150 V dc
M -	24 through 70 V dc
N -	70 through 150 V dc
O -	150 through 250 V dc
S -	24 through 70 V ac / 24 through 70 V dc
T -	70 through 250 V ac / 70 through 250 V dc

V. .. - Suffix letters and/or numbers specifies Manufacturer's identification.

3RT2926	-4R	A12
I	II	III

I. Basic type

3RT29 -	Accessory for 3RT2 for use with devices S0

II. Type of function

4R -	Coilconnection module

III. Type of terminals and direction

A11 -	Coilconnection module top swrew terminals
A12 -	Coilconnection module top spring type terminals
B11 -	Coilconnection module bottom swrew terminals
B12 -	Coilconnection module bottom spring type terminals

3RT2926-4EB13	ring terminal end cover S0
3RT2926-4BB31	parallel connector
3RA2926-1A	link module for two contactors in series
3RV2925-5AB	feed-in terminal S0

3RA23	28	-8X	A	0	.	- .	.	..
I	II	III	IV	V	VI	VII	VIII	IX

I. Basic type
3RA23 - Reversing starter, basic contactor 3RT2

II.
23 - Basic contactor Type 3RT2023
24 - Basic contactor Type 3RT2024
25 - Basic contactor Type 3RT2025
26 - Basic contactor Type 3RT2026
27 - Basic contactor Type 3RT2027
28 - Basic contactor Type 3RT2028

III. Type of motor protection device
-8X - Without overload relays

IV. Type of mounting
A - Without determination
B - Direct mounting, air breaking contactor
E - Basic contactor with communication interface
Z - Costume's determination

V. Type of locking mechanism
0 - Without determination
1 - With mechanical interlock
2 - With electrical interlock
3 - With mechanical and electrical interlock
4 - With mechanical interlock inclusive wiring connectors
9 - Costumers determination

VI. Auxiliary contact arrangements each device
0 - 1 normally open
3 - 1 normally open and 1 normally closed
4 - 2 normally open and 2 normally closed
5 - 4 normally closed
6 - 2 normally open and 2 normally closed
7 - 3 normally open and 1 normally closed

VII. Type of terminals (Identical to the basic contactor 3RT2)
1 - Screw terminal
2 - Spring terminal
4 - Ring lug terminals

VIII. Operating system
. - Identical to the basic contactor 3RT2

IX. Operating voltage
.. - Identical to the basic contactor 3RT2

3RA24	17	-8X	E	3	.	-1	A	..
I	II	III	IV	V	VI	VII	VIII	IX

I. Basic type
3RA24 – Star-delta starter, basic contactor 3RT2

II. 23 - 3RT2024, 3RT2024, 3RT2024
24 - 3RT2026, 3RT2026, 3RT2024
25 - 3RT2026, 3RT2026, 3RT2024
26 - 3RT2027, 3RT2027, 3RT2026

III. Type of motor protection device
-8X - Without overload relays

IV. Type of interface
E - I/O Link module
F - Logic module
H - AS-I module

V. Type of locking mechanism
3 - With mechanical and electrical interlock

VI. Auxiliary contact arrangements each device
. - different auxiliary contact arrangements

VII. Type of terminals (Identical to the basic contactor 3RT2)
1 - Screw Terminal
2 - Spring Terminal

VIII. Operating system
A - AC operating system
B - DC operating system

IX. Operating voltage
.. - Identical to the basic contactor 3RT2

3RA27	1	1	-	1	A	A	0
I	II	III		IV	V	VI	VII

I **Basic type**
3RA27 Communication module

II **Size**
1 S0 and S00

III **Type of interface**
1 I/O Link module
2 AS-I module

IV **Terminal**
0 No terminals provided
1 Screw terminal
2 Spring (cage clamp) terminal

V **Kind of device**
A Direct starting module
B Reverse starting module
C Star-Delta starting module
D Coupling module

VI **Wiring set**
A Wiring-Set, complete
B Wiring-Set, spare part
E Spare part marking

VII **Unit pack**
00 Device single packaging
10 Device multiple packaging (10 pieces per packaging)

3RA29	1	1	-	0	0
I	II	III		IV	V

I **Basic type**
3RA29 Star-Delta starting module

II **Size**
1 S0 and S00

III **Type of function**
1 Coupling module
2 Function module

IV **Cover**
0 Sealable cover

V **Output**
0 No terminals

Accessory for star-delta-connection:

3RT1926-4BA31	link for star connection swrew
3RT2926-4BA32	link for star connection spring type
3RA2923-2BB1	connector for star-delta connection swrew
3RA2923-2BB2	connector for star-delta connection spring type

3RH29	1	1	-	1	A	A	0	0	-	....
I	II	III		IV	V	VI	VII	VIII		IX

I. 3RH29 - Accessories

II. Suitable for contactor and contactor relay sizes
- 1 - Front mounted versions suitable for devices size S00 and S0
  Laterally mounted versions for devices size S00
- 2 - Laterally mounted versions for devices size S0

III. 1 - Accessories, auxiliary contact blocks

IV. Type of terminals
- 1 - Screw terminal
- 2 - Cage Clamp terminal
- 4 - Ring type terminal

V. Design
- A - Front mounted, 1 pole, entry of conductors top
- B - Front mounted, 1 pole, entry of conductors bottom
- D - Laterally mounted, 2 pole, marking according to DIN EN 50 012
- E - Laterally mounted, 2 pole, marking according to DIN EN 50 005
- F - Front mounted, 4 pole, marking according to DIN EN 50 005
- G - Front mounted, 4 pole, marking according to DIN EN 50 011
- H - Front mounted, 4 pole, marking according to DIN EN 50 012
- L - Front mounted, 2 pole, entry of conductors top
- M - Front mounted, 2 pole, entry of conductors bottom
- N - Front mounted, solid-state compatible
- X - Manufacturer's version

VI. Switching function
- A - Standard switching
- B - Make-before-break, 1 NO/NC contact pair
- C - Make-before-break, 2 NO/NC contact pairs
- E - Laterally mounted, solid-state compatible
- F - Front mounted, solid-state compatible

VII. Contact arrangement NO
- 0 - Non NO
- 1 - 1 NO
- 2 - 2 NO
- 3 - 3 NO
- 4 - 4 NO

VIII. Contact arrangement NC

0 - Non NC
1 - 1 NC
2 - 2 NC
3 - 3 NC
4 - 4 NC

IX. .... – Suffix letters and/or numbers specifies commercial variation

Technical Data

Test item particulars:	
- kind of equipment ..... :	Contactor
- number of poles ..... :	3 up to 5
- kind of current ..... :	ac
- interrupting medium: ..... :	Air
- method of operation ..... :	Electromagnetic
- method of control ..... :	voltage
Rated and limiting values, main circuit:	
- rated operational voltage Ue (V) ..... :	Max. 690
- rated insulation voltage Ui (V) ..... :	690
- rated impulse withstand voltage Uimp(kV) ..... :	6
- conventional free air thermal current Ith (A) ..... :	Max. 50A
- rated operational current Ie (A) or rated operational powers ..... :	See table 1
- rated frequency ..... :	50 / 60 Hz
- rated duties ..... :	8 hour duty
Short-circuit characteristic:	
- rated prospective short-circuit current "r" (kA) ..... :	1kA / 3kA
- rated conditional short-circuit current Iq (kA) ..... :	100 kA
Rated and limiting values of of control circuit:	
- kind of current :	ac / dc
- rated frequency (or d.c.) :	50 Hz / 60 Hz / dc
- rated control circuit voltage Uc (nature: a.c. / d.c.) ..... :	24Vac through 600Vac or 12Vdc through 250Vdc
- rated control supply voltage Us (nature: a.c. / d.c.) ..... :	-
- nature of external control circuit devices :	-
Rated and limiting values for switching elements:	
- voltages:	
- rated operational voltage Ue (V) ..... :	230 / 690
- rated insulation voltage Ui (V) ..... :	300 / 690
- rated impulse withstand voltage Uimp (kV) ..... :	4 / 6

- currents: - conventional free air thermal current Ith (A) ..... : - rated operational current Ie (A) ..... :	 10A AC-12: 690V / 10A AC-15: 230V / 10A 400V / 3A 500V / 2A 690V / 1A DC-13: 24V / 10A 60V / 2A 125V / 0,9A 250V / 0,3A 600V / 0,1A
- rated frequency (Hz) ..... :	50/60Hz/dc
Contact elements may be classified as follows:	
- one of the following form letters (see figure 4) .....:	[ ] form A – single gap make-contact element [ ] form B – single gap break-contact element [ ] form C – single gap make-break three terminal change-over contact element [X] form X – double gap make-contact element [X] form Y – double gap break-contact element [ ] form Za – double gap make-break four terminal change-over contact element, same polarity [ ] form Zb – double gap make-break four terminal change-over contact element, electrical separated
- short-circuit characteristic: - kind of protective device ..... :	 fuse: diazed 10A/690V fuse: neozed 10A/400V automatic cut off C-Char 10A/230V

	TABLE 1: rated operational current Ie and short circuit protection				
Motor contactor	rated operational current Ie AC-3 (A) 400V	rated operational current Ie AC-3 (A) 500V	rated operational current Ie AC-3 (A) 690V	Short circuit protection fuse LV HRC gL/gG 690V / 100kA Type 1	Short circuit protection fuse LV HRC gL/gG 690V / 100kA Type 2
3RT2023-..	9	9	9	63A	25A
3RT2024-..	12	12	9	63A	25A
3RT2025-..	17	17	13	63A	25A
3RT2026-..	25	18	13	100A	35A
3RT2027-..	32	32	21	125A	50A
3RT2028-..	38	32	21	125A	50A
3RT2326-…-4AA0	32	21	21	80A	50A
AC-1 contactor ($I_{e,AC-3}$=15,5A/500V $I_{e,AC-3}$=13A/690V)	rated operational current Ie AC-1 (A) 400V	rated operational current Ie AC-1 (A) 500V	rated operational current Ie AC-1 (A) 690V		
3RT2324-..	30	30	30	63A	20A
3RT2325-..	35	35	35	63A	20A
3RT2326-..	40	40	40	63A	20A
3RT2327-..	50	50	50	63A	20A
Contactor 2NO + 2NC contacts	rated operational current Ie AC-3 (A) 400V	rated operational current Ie AC-3 (A) 500V	rated operational current Ie AC-3 (A) 690V		
3RT2526-.A..	25* / 25**	-	-	63A	35A
3RT2526-.B/ -.N/ -.X	20* / 25**	-	-	63A	35A

* rating for NC contact ** rating for NO contact

	TABLE 2: short circuit protection			
Motor contactor	fuse BS88 415V/80kA		fuse LV HRC type aM 690V/100kA	
	Coordination type 1	Coordination type 2	Coordination type 1	Coordination type 2
3RT2023-1..	63A	25A	32A	20A
3RT2024-1..	63A	25A	32A	20A
3RT2025-1..	63A	25A	32A	20A
3RT2026-1..	100A	35A	50A	20A
3RT2027-1..	125A	50A	50A	25A
3RT2028-1..	125A	50A	50A	25A