

Typprüfbescheinigung / Type Test Certificate

Erzeugnis / Product: **Compact Starter**Typ: **3RA61, 3RA62, 3RA64,**
Type: **3RA65, 3RA68, 3RA69**Tech. Daten: **$U_e \max = 690V$**
Specification: **$I_e \max = 32A$** Hersteller: **Siemens AG**
Manufacturer: **DF CP**Art der Prüfung / Type of test: **Type Test**Prüfer / **Mr. Stadlbauer**
Tested by:Labor / **LOVAG registered and DAkkS accredited**
Laboratory: **Testing Laboratory**
Siemens AG, Amberg

Angewandte Prüfbestimmungen / Test specifications applied:

IEC 60947-6-2:2002-10 + A1:2007-01**IEC 60947-5-1:2003-11 + A1:2009-04**

Durchgeführte Prüfungen / Tests conducted:

IEC 60947-6-2: Test Sequences I, II, III, IV, V, VIII and Annex G**IEC 60947-5-1: Test Sequences I to V**

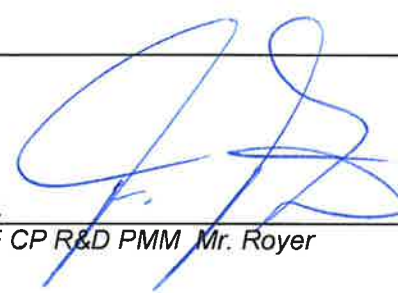
Prüfergebnis / Test results:

All requirements of the test specification are met.Bemerkungen / Remarks: **Issued: 2009-01-27****Index a, dated 2009-03-23: Test-reports nos. 07017TMI01, 07017TMI02, 07017TMI03 replaced by 07017TMI01a, 07017TMI02a, 07017TMI03a.****Index b, dated 2009-08-13: Test-reports nos. 07017TMI04 and 07017TMI05 covering 3RA64 and 3RA65 added. Standard IEC60947-5-1 updated since test-report 07017TMI03a covers also AMD 1 dated 2009-04.****Index c, dated 2010-07-27: Test-report no. 10029TMI according IEC 60947-6-2, Annex G (IT-System) added.****Index d, dated 2017-07-19: Test-reports replaced by Product description 2916d. 3RA68 added.**

i.V.


DF CP R&D VC Mr. Hartinger

i.V.


DF CP R&D PMM Mr. Royer**SIEMENS AG****Digital Factory****Dr. Jan Mrosik, CEO**

Product description

Certificate No.: 2916d

Type designation: *3RA61.., 3RA62.., 3RA64.., 3RA65..,
3RA68.., 3RA69..*

Manufacturer: *Siemens AG,GWA
Werner-von-Siemens-Str. 48, 92220 Amberg*

Production site: *Siemens AG,GWA
Werner-von-Siemens-Str. 48, 92220 Amberg*

*Siemens, NST
Volanovska 516
54101 Trutnov, Czech Republic*

Nomenclature Breakdown: Compact starter series 3RA6..

3RA61 2 0 -0 A B3 0
I II III IV V VI VII

- I. Basic Type
 - 3RA61 - Compact-Starter, Direct, without communication
 - 3RA62 - Compact-Starter, Reversing, without communication
 - 3RA64 - Compact-Starter, direct, with communication
 - 3RA65 - Compact-Starter, Reversing, with communication

- II. Integrated auxiliary contacts
 - 0 - without integrated auxiliary contacts
 - 2 - 1 NC and 1 NO integrated auxiliary contacts, Compact-Starter, Direct
 - 5 - 2 NO integrated auxiliary contacts, Compact-Starter, Reversing

- III. Auxiliary contacts
 - 0 - without auxiliary contacts

- IV. Type of Terminal
 - 0 - without main and control circuit terminals
for use with 3RA68 Infeed System and AS-I communication
 - 1 - screw-type terminals
 - 2 - spring-loaded terminals

- V. Setting ranges
 - A - 0.1 to 0.4 A
 - B - 0.32 to 1.25 A
 - C - 1 to 4 A
 - D - 3 to 12 A
 - E - 8 to 32 A

- VI. Operating voltage
 - B3 - 24 V ac/dc
 - E3 - 42 to 70 V ac/dc
 - P3 - 110 to 240 V ac/dc
 - B4 - 24 V dc for compact starter with communication

- VII. Terminals and Mounting
 - 0 - without main and control circuit terminals for use with 3RA68
Infeed System and AS-i communication
 - 2 - with main and control circuit terminals and for mounting on Din Rail
 - 3 - without main circuit terminals, with control circuit terminals
for use with 3RA68 Infeed System
 - 4 - with main circuit terminals, without control circuit terminals for mounting
on Din Rail for use with AS-i communication

Nomenclature breakdown

Certificate No.: 2916d

Nomenclature Breakdown: External auxiliary switch

- 3RA6911-1A - External auxiliary switch 2 NO, screw terminal
- 3RA6912-1A - External auxiliary switch 2 NC, screw terminal
- 3RA6913-1A - External auxiliary switch 1 NO+1 NC, screw terminal
- 3RA6911-2A - External auxiliary switch 2 NO, spring type terminal
- 3RA6912-2A - External auxiliary switch 2 NC, spring type terminal
- 3RA6913-2A - External auxiliary switch 1 NO+1 NC, spring type terminal

Nomenclature Breakdown: Infeed system for 3RA6.. compact starters

3RA68 1 2 -0 A B
I II III IV V VI

I. Basic Type

3RA68 - Infeed system for 3RA6

II. accessory

- 1 - three-phase infeeds with screw type terminals
- 2 - expansion modules
- 3 - three-phase infeed with spring type terminals
- 6 - PE infeeds
- 7 - PE pick-offs
- 8 - terminal covers for screw type infeeds
- 9 - expansion plugs

III. accessory details

0 - without meaning

for 3RA681..

- 2 - 25/35mm² left
- 3 - 50/70mm² left

for 3RA682

- 2 - two socket expansion modules
- 3 - three socket expansion modules

IV. Type of Terminal infeed

- 0 - without meaning
- 1 - expansion plug for 3RA689..
- 3 - spring type terminal for 3RA687..
- 4 - screw type terminals for 3RA687..
- 5 - infeed in spring type terminals for 3RA683..
- 6 - PE-infeed in screw type terminals for 3RA686..
- 8 - screw type terminals for 3RA681..

V. Adapters

- A - without meaning
- E - PE expansion plugs

VI. Type of Terminal

- A - without meaning
- B - screw type terminal
- C - spring type terminal

Test item particulars:

- Type of CPS	:	direct and reversing compact starters, with and without communication
- number of poles	:	3
- kind of current	:	ac
- method of operation	:	manual / electromagnetic
- method of control	:	electronically controlled, I/O-Link communication system
- method of resetting after overload	:	manual, automatic
- method of rearming after short-circuit	:	manual

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)	:	le: 0,1 – 0,4A: 0,4A le: 0,32 – 1,25A: 1,25A le: 1 – 4A: 4A le: 3 – 12A: 12A le: 8 – 32A: 32A Infeed system (screw type): 100A Infeed system (spring type): 63A
- conventional enclosed thermal current Ithe (A)	:	--

- rated operational current Ie (A) or rated operational powers at the rated voltage and utilization category :

0,4A:

Ue	230V	400V	500V	690V
Ie AC 41	0,4A	0,4A	0,4A	0,4A
Ie AC 43	0,4A	0,4A	0,4A	0,4A
Ie AC 44	0,4A	0,4A	0,4A	0,4A

1,25A:

Ue	230V	400V	500V	690V
Ie AC 41	1,25A	1,25A	1,25A	1,25A
Ie AC 43	1,25A	1,25A	1,25A	1,25A
Ie AC 44	1,25A	1,25A	1,25A	1,25A

4A:

Ue	230V	400V	500V	690V
Ie AC 41	4A	4A	4A	4A
Ie AC 43	4A	4A	4A	4A
Ie AC 44	4A	4A	4A	4A

12A:

Ue	230V	400V	500V	690V
Ie AC 41	12A	12A	12A	12A
Ie AC 43	12A	12A	12A	12A
Ie AC 44	12A	12A	10A	10A

		32A:				
		Ue	230V	400V	500V	690V
		Ie AC 41	32A	32A	32A	32A
		Ie AC 43	32A	32A	18A	17A
		Ie AC 44	20A	20A	18A	13A
- rated frequency	:	50/60Hz				
- rated duties	:	Uninterrupted duty				
Short-circuit characteristic:						
- rated service short-circuit breaking capacity Ics (kA)	:	Up to 12A:				
		Ue	230V	400V	500V	690V
		Ics	53kA	53kA	3kA	3kA
		32A:				
		Ue	230V	400V	500V	690V
		Ics	53kA	53kA	1kA	1kA
- Individual pole short circuit current I _{IT} (kA)	:	Up to 32A:				
		Ue	230V	400V	500V	690V
		I _{IT}	0,5kA	0,5kA	0,5kA	0,5kA
		I _{IT}	1,5kA	1,5kA	1,5kA	1,5kA
Electrical control circuits:						
- Type of current	:	ac / dc				
- Power consumption	:	Max. 9,3 VA				
- Rated frequency (or d.c.)	:	50/60Hz or dc				
- Rated control circuit voltage U _c (nature, and frequency if a.c.)	:	24V dc (Asi) 24V uc 42- 70V uc 110 – 240V uc				
- Rated control supply voltage U _s (nature, and frequency if a.c.), where applicable	:	24V dc (Asi) 24V uc 42- 70V uc 110 – 240V uc				
- nature of external control circuit devices (contacts, sensors, optocouplers, electronic active components, etc.)...	:	--				
Auxiliary circuits:						
- voltages:						
- rated operational voltage U _e (V)	:	Internal contacts: 77-78, 95-96-98: up to 400V 13-14, 21-22: up to 690V External contacts: 3RA691.. up to 690V				
- rated insulation voltage U _i (V)	:	690				
- rated impulse withstand voltage U _{imp} (kV)	:	6				

- currents:	
- conventional free air thermal current $I_{th}(A)$:	Internal contacts: 77-78: 5A 95-96-98: 3A 13-14, 21-22: 10A External contacts: 3RA691.. 10A
- conventional enclosed thermal current $I_{the}(A)$:	--
- rated operational current $I_e(A)$:	Internal contacts: 77-78: max. 5A 95-96-98: max. 3A 13-14, 21-22: max. 10A External contacts: 3RA691.. max. 10A
- rated uninterrupted current $I_u(A)$:	--
- rated frequency (Hz) :	50 / 60 or dc
Contact elements may be classified as follows:	
- utilization category (see clause 4.4)	AC-12, AC-15 DC-13
- one of the following form letters (see figure 4)	<input type="checkbox"/> form A – single gap make-contact element <input type="checkbox"/> form B – single gap break-contact element <input checked="" type="checkbox"/> form C – single gap make-break three terminal change-over contact element <input type="checkbox"/> form X – double gap make-contact element <input type="checkbox"/> form Y – double gap break-contact element <input type="checkbox"/> form Za – double gap make-break four terminal change-over contact element, same polarity <input checked="" type="checkbox"/> form Zb – double gap make-break four terminal change-over contact element, electrical separated
- short-circuit characteristic:	
- type and maximum ratings of short-circuit protective device :	Fuses for: Internal contacts: 77-78: NH 6A gLgG, Diazed 6A gLgG 95-96-98: NH 4A gLgG, Diazed 4A gLgG 13-14, 21-22: NH 10A gLgG, Diazed 10A gLgG External contacts: 3RA691.. NH 10A gLgG, Diazed 10A gLgG

Rated and limiting values of relays and releases		
(overload relays)		
- types of relay or release :		<input type="checkbox"/> a) release with shunt coil (shunt trip) <input type="checkbox"/> b) under voltage and under-current opening relay or release <input type="checkbox"/> c) overload time-delay relay the time-lag of which is: <input type="checkbox"/> 1) substantially independent of previous load (e.g. time-delay magnetic overload relay) <input type="checkbox"/> 2) dependent on previous load (e.g. thermal or electronic overload relay) <input checked="" type="checkbox"/> 3) dependent on previous load (e.g. thermal or electronic overload relay) and also sensitive to phase loss <input type="checkbox"/> d) instantaneous over-current relay or release (e.g. jam sensitive, see 3.2.29) <input type="checkbox"/> e) other relays or releases (e.g., control relay associated with devices for the thermal protection of the motor) <input type="checkbox"/> f) Stall relay or release
- characteristic values		
a) release with shunt coil, under-voltage (under-current) opening relay or release		
- rated voltage (current) :		-
- rated frequency :		-
- operating voltage (current) :		-
- operating time :		-
- inhibit time :		-
b) Overload relay:		
-designation and current settings :		Designation see nomenclature breakdown 0,1 – 0,4 A 0,32 – 1,25 A 1 – 4 A 3 – 12 A 8 – 32 A
-rated frequency, when necessary (for example in case of a current transformer operated overload relay) :		50 / 60 Hz
- time-current characteristics (or range of characteristics), when necessary :		available
- trip class according to classification in table 2, or the value of maximum tripping time, in seconds, under the conditions specified in 8.2.1.5.1, table 2, column D, when this time exceeds 40 s. :		Class 10E Class 20E
- number of poles :		3
Nature of the relay: thermal, magnetic, electronic, electronic without thermal memory :		electronic with thermal memory

Table 1:	Auxiliary circuits: Rated current based on utilization categories		
	AC-12	AC-15	DC-13
External contacts 3RA691..	24V / 10 A 230V / 10 A	230 V / 6A 400V / 3 A 289 / 500V / 2 A 400 / 690V / 1 A	24 V / 6A 60V / 0,9 A 125V / 0,55 A 250V / 0,27 A
Internal contacts 13-14 / 21-22 / 43-44	24V / 10 A 230V / 10 A	230 V / 6A 400V / 3 A 289/500V / 2 A 400 / 690V / 1 A	24 V / 10A 60V / 2 A 125V / 1 A 250V / 0,27 A 600V / 0,1 A
77-78	24V / 5 A 230V / 5 A	230V / 3 A 400 / 1 A	24V / 2 A 250V / 0,11 A
95-96-98	24V / 3 A 230V / 3 A	230V / 3A 400V / 1A	24V / 2 A 250V / 0,11 A