

CERTIFICATE OF COMPLIANCE

Certificate Number 20151027 – E31519
Report Reference E31519 - 19970618
Issue Date 2015-OCTOBER-27

Issued to: SIEMENS AG
DF CP R&D V 3
WERNER-VON-SIEMENS-STRASSE 48
92224 AMBERG, GERMANY

This is to certify that representative samples of Motor Controllers, Magnetic
(See following pages for additional information.)

Have been investigated by UL in accordance with the Standard(s) indicated on this Certificate.

Standard(s) for Safety: ANSI/UL 60947-1, "Low-Voltage Switchgear and Controlgear - Part 1: General Rules," ANSI/UL 60947-4-1, "Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-Starters - Electromechanical Contactors and Motor-Starters." CAN/CSA-C22.2 No. 60947-1 - 2013, "Low-Voltage Switchgear and Controlgear - Part 1: General Rules," and CAN/CSA-C22.2 No. 60947-4-1 - 2014, "Low-Voltage Switchgear and Controlgear - Part 4-1: Contactors and Motor-Starters - Electromechanical Contactors and Motor-Starters."

Additional Information: See the UL Online Certifications Directory at www.ul.com/database for additional information

Only those products bearing the UL Certification Mark should be considered as being covered by UL's Certification and Follow-Up Service.

Look for the UL Certification Mark on the product.



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This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

Product Covered:

USL, CNL – Type No. 3RT10, 3RT13, 3RT14 or 3RT16 followed by 43, 44, 45, 46 or 47, followed by –1, -2, –3 or -6 followed by A, B, C, D, E, F, G, H, J, K, M, P, Q, R, S or X followed by a character and a number followed by 0, 1, 2, 3, 4, 5, 6, 8 or 9 may be followed by -0LA2, -0GA0, -4 or any suffix letters and/or numbers.

USL, CNL - Accessory - Terminal Kit Type 3RT1946-4G, Auxiliary Terminal Kit Type 3RT1946-4F, Terminal housing, Types 3RT1946-4EA followed by 1 or 2.

General:

These devices are open types 3 or 4 pole contactors for use in industrial applications.

These devices are intended to be used in combination with certified overload relays type 3RU or 3RB.


Ratings:

Horsepower 3RT1044

Voltage	1-ph	3-ph	FLA	LRA
115 V	5 hp	--	56 A	--
200/208 V	10 hp	20 hp	62.1 A	516 A
230/240 V	15 hp	25 hp	68 A	562 A
460/480 V	-	50 hp	65 A	515 A
575/600 V	-	60 hp	62 A	494 A

Horsepower 3RT1045

Voltage	1-ph	3-ph	FLA	LRA
115 V	7 1/2 hp	--	80 A	--
200/208 V	15 hp	25 hp	78.2 A	646 A
230/240 V	15 hp	30 hp	80 A	674 A
460/480 V	-	60 hp	77 A	618 A
575/600 V	-	75 hp	77 A	618 A



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Horsepower 3RT1046

Voltage	1-ph	3-ph	FLA	LRA
115 V	10 hp	-	100 A	--
200/208 V	15 hp	30 hp	92 A	776 A
230/240 V	20 hp	30 hp	80 A	674 A
460/480 V	-	75 hp	96 A	773 A
575/600 V	-	100 hp	99 A	749 A

Horsepower 3RT1044 (Elevator Control)

Voltage	1 ph, 1 pole	1 ph, 3 pole	3-ph	FLA	LRA
120 V	3 hp	3 hp	-	54 A	449 A
230/240 V	7 1/2 hp	7 1/2 hp	15 hp	42 A	337 A
460/480 V	-	-	30 hp	40 A	337 A
575/600 V	-	-	40 hp	41 A	330 A

Horsepower 3RT1045 (Elevator Control)

Voltage	1 ph, 1 pole	1 ph, 2 pole	3-ph	FLA	LRA
120 V	3 hp	3 hp	-	54 A	449 A
230/240 V	10 hp	10 hp	20 hp	54 A	449 A
460/480 V	-	-	40 hp	52 A	412 A
575/600 V	-	-	50 hp	52 A	412 A

Horsepower 3RT1046 (Elevator Control)

Voltage	1 ph, 1 pole	1 ph, 2 pole	3-ph	FLA	LRA
120 V	5 hp	5 hp	-	68 A	562 A
230/240 V	10 hp	15 hp	25 hp	68 A	562 A
460/480 V	-	-	50 hp	65 A	515 A
575/600 V	-	-	60 hp	62 A	494 A

Horsepower 3RT1446 (3 NO main contacts)

Voltage	3-ph	FLA	LRA
230/240 V	15 hp	42 A	337 A
460/480 V	30 hp	40 A	337 A
575/600 V	40 hp	41 A	330 A

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Capacitive Switching 3RT1647

Voltage	1-ph	3-ph	Current
200/208 V	15 kVar	26 kVar	72 A
230/240 V	17 kVar	30 kVar	72 A
460/480 V	35 kVar	60 kVar	72 A
575/600 V	43 kVar	75 kVar	72 A

Horsepower 3RT1346-1AP00-4AA0

Voltage	1-ph	3-ph	FLA	LRA
115 V	10 hp	-	100 A	--
200/208 V	15 hp	30 hp	92 A	500 A
230/240 V	20 hp	30 hp	80 A	435 A
460/480 V	-	75 hp	96 A	543 A
575/600 V	-	100 hp	99 A	580 A

Main Contacts:

General Use Rating

-type 3RT1044: 600 V ac, 90 A
-type 3RT1045 or 3RT1046: 600 V ac, 105 A
-type 3RT1346-1AP00-4AA0: 600 V ac, 100 A

Auxiliary Contacts:

1-, 2-, or 4-pole auxiliary contact blocks type 3RH1921 are top or side mounted, for ratings refer to File E44653 Vol. 11, Sec. 2 or Vol. 12 Sec. 3. The auxiliary blocks are available as factory assembled (removable or not removable design) or available as separate devices for individual arrangements.

Coil Ratings:


24 through 600 V ac
12 through 250 V dc

Definite Purpose:

Electric Heating, 600 V ac, 250,000 c.
3RT1044: 90 A
3RT1045, 3RT1046: 105 A

AC General Use:

For Type 3RT1446, AC controlled: 600 V, 105 A
For Type 3RT1446, DC controlled: 600 V, 105 A



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Air conditioning, 600 V, 30,000 cycles
- type 3RT1044 68 FLA
- type 3RT1045 99 FLA
- type 3RT1046 99 FLA

AC Resistance:

For Type 3RT1343, 600 V, 90 A
For Type 3RT1344, 600 V, 100 A
For Type 3RT1346, 600 V, 110 A
For Type 3RT1446, AC controlled: 600 V, 140 A
For Type 3RT1446, DC controlled: 600 V, 131 A

Types 3RT1045 and 3RT1046,
100 A, 250,000 cycles at
600 V 1 pole / 1 phase,
600 V 2 poles / 1 phase or
600 V 3 poles / 3 phases
(min enclosure size 18-1/2 inches by 11-1/2 inches by 7-1/2 inches)

AC Resistance Air Heating:

Types 3RT1045 and 3RT1046, 100 A, 250,000 cycles at
600 V 1 pole / 1 phase,
600 V 2 poles / 1 phase or
600 V 3 poles / 3 phases
(min. enclosure size 18-1/2 inches by 11-1/2 inches by 7-1/2 inches)

AC Incandescent Lamps (AC Tungsten):

Types 3RT1045 and 3RT1046,
100 A at
277 V 1 pole / 1 phase,
480 V 2 poles / 1 phase or
480 V 3 poles / 3 phases
(min. enclosure size 18-1/2 inches by 11-1/2 inches by 7-1/2 inches)

AC Electrical Discharge Lamps (AC Standard Ballast):

Types 3RT1045 and 3RT1046,
100 A at
600 V 1 pole / 1 phase,
600 V 2 poles / 1 phase or
600 V 3 poles / 3 phases
(min. enclosure size 18-1/2 inches by 11-1/2 inches by 7-1/2 inches)



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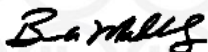
Certificate Number 20151027 – E31519
Report Reference E31519 - 19970618
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Short Circuit Ratings:

Type No.	Fuse rating / Class		Circuit Breaker		Short	Volt.
	Size / K5, RK5, RK1	Size / J	Bkr TM ¹	Bkr I ²		
	[A]	[A]	[A]	[A]	[kA]	[V]
3RT1044	250	225	250	50	5	600
3RT1045	300	300	300	100	10	600
3RT1046/3RT1446	350	400	400	150	10	600
3RT1346-1AP00-4AA0	300	400	-	-	10	600
3RT1647	250	250	-	-	10	600

¹ Note: UL Listed inverse time circuit breakers

² Note: UL Recognized instantaneous trip circuit breakers manufactured by Siemens, Type ED63A...



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High Capacity Short Circuit Ratings:

Type No.	Fuse Rating		CB Rating		3RV104 / Size S3 ³	Short Circuit Current	Voltage (V)
	Class RK5, K5, RK1 (A)	Class J (A)	Bkr TM (A)	Bkr I (A)	Size [A]		
3RT1044	-	200	-	-	-	100kA	600
	-	-	175	-	-	25kA	600
	-	-	-	-	63	30kA	600
	125	225	175	-	63	65kA	480
3RT1045	-	200	-	-	-	100 kA	600
	-	-	200	-	-	25kA	600
	-	-	-	-	75	30kA	600
	150	250	200	-	75	65kA	480
3RT1046	100	400	-	-	-	100kA	600
	-	-	250	-	-	25kA	600
	-	-	-	-	75	30kA	600
	200	-	250	-	100	65kA	480
3RT1446	200	400	-	-	-	65kA	480

³ Note: For Siemens UL Listed Combination Motor Controller Type 3RV104 (Size S3) covered in File E156943. These ratings are also applicable for short circuit ratings in group installations for Contactor 3RT104 in combination with Manual Motor Controller 3RV104 covered in File E47705. The appropriate BCPD need to be determined in accordance with the National Electrical Code, Article 430-53 and the application. The following devices are permitted.

Fuses: Classes RK1, RK5, J, G, T, CC or

Circuit Breakers: Listed Siemens type, with a marked short-circuit rating equal or larger than the available short-circuit current rating.

These devices were tested for group installation use at the above levels without any upstream branch circuit device.

NEMA Ratings: 3RT1046 meets ratings for NEMA Size 3



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High Capacity Short Circuit Ratings for Starters (Contactors plus Overload Relays)

Type No.	Fuse		Circuit Breaker		Short Circuit	Voltage
	Class K5, RK5, RK1	Class J	Bkr TM ¹	Bkr I		
3RT1044 + 3RU1146	-	200 A	-	-	100 kA	600 V
3RT1046 + 3RU1146	100 A	400 A	-	-	100 kA	600 V

Short Circuit Rating for Contactor, Fuse, Overload Relay combination according To UL 60947-4-1, for type "2" co-ordination.

Contactor	Overload Relay	Fuse Class LPJ [A]	Voltage for High Fault Current	High Fault Current [kA] according to UL60947-4-1	Standard Fault Current [kA] according to UL60947-4-1 at 600V
3RT1044	3RU1146-4J	90	600	100	5
3RT1044	3RU1146-4K	125	600	100	5
3RT1045	3RU1146-4L	175	600	100	10
3RT1046	3RU1146-4M	200	600	100	10



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NOMENCLATURE BREAKDOWN:

3RT10	44	-	1	A	..	0	-
I	II		III	IV	V	VI		VII

I. Basic Type

3RT10 – 3 main contacts + 1 to 8 auxiliary contacts
3RT13 - 4 main contacts + 1 to 8 auxiliary contacts
3RT14 - 3 main contacts + 1 to 8 auxiliary contacts, Resistive Load
3RT16 - 3 main contacts + 1 to 5 auxiliary contacts, Capacitive Switching

II. Size S3

43 – rated for 90 A resistive load
44 – rated for 460 V/40 hp/3 ph
45 – rated for 460 V/50 hp/3 ph
46 – rated for 460 V/60 hp/3 ph
47 – rated for capacitive switching 72 A

III. Type of Terminals

-1- Screw Terminal
-2- Cage Clamp for the terminals of the control circuits and without Terminal Kits for the main circuit
-3- Cage Clamp for the terminals of the control circuits
-6- Without Terminal Kits

IV. Operating System

A - AC operating system
B, H, M - DC operating system
C - AC operating system with EMC protective unit type 3RT1926 – varistor
D, K - DC operating system with EMC protective unit type 3RT1926 – varistor
E - AC operating system with EMC protective unit type 3RT1936 – RC element
F, Q, R - DC operating system with EMC protective unit type 3RT1936 – diode combination
P - AC operating system with EMC protective unit Zenerdiode
G - DC operating system with bridge rectifier for AC control voltage
S – DC operating system with integrated Diode combination
X – Commercial variations



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V. Operating Voltage

.. 24 V through 600 V ac or 12 through 250 V dc

VI. Auxiliary Contact Arrangements

0 - non auxiliary contact
1 - 1 normally open
2 - 1 normally closed
3 - 1 normally open and 1 normally closed top mounted
4 - 2 normally open and 2 normally closed top mounted
5 - 1 normally open and 1 normally closed side mounted
6 - 2 normally open and 2 normally closed side mounted
8 - manufacturer's identification
9 - customer's identification

VII Suffix Letters and/or numbers specifies commercial variations.

-0LA2 - with coil control unit 5070240, covered under E44653,
Vol. 11, Sec. 12
-0GA0 - with coil control unit 5070220, covered under E44653,
Vol. 11, Sec. 12
-4 ... - 3RT134 with horsepower ratings
.. - any other commercial variation

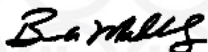
3RT1946-4EA .
I II

I. Basic Type – Accessories
3RT1946-4EA – Terminal covers

II.
1 - for devices without terminal kits for main contacts
2 - for devices with Screw terminals for main contacts

3RT1946-4F
I

I. Basic Type – Accessories
3RT1946-4F – Auxiliary line terminals



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