

File E31519  
Project 10CA65262

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REPORT

on

MAGNETIC MOTOR CONTROLLERS

Siemens AG  
Amberg, Germany

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DESCRIPTION

PRODUCT COVERED:

USL, CNL - Type No. 3RT60, 3RT63 or 3RT65 followed by 15, 16, 17 or 18 followed by -1, -2 or -4 followed by a character, followed by a character and a number followed by 0, 1, 2, 3, 4, 5, 6 or 8 may be followed by suffix letters and/or numbers.

GENERAL:

These devices are open types 4 or 8 pole contactors for use in industrial applications.

These devices are intended to be used in combination with listed overload relays type 3RU6.

ENGINEERING CONSIDERATIONS (NOT FOR UL REPRESENTATIVE USE):

USL - Indicates investigated to UL Standard UL 508 17<sup>th</sup> Edition, updated April 15, 2010 (Industrial Control Equipment).

CNL - Indicates Investigated to Canadian National Standard(s) C22.2 No. 14-10, reaffirmed September 2010

Note: CNL = Canadian National Standards - Listed.  
USL = United States Standards - Listed.

## RATINGS:

## Horsepower for Types 3RT6015, 3RT6315

Voltage	1-ph	3-ph	FLA/LRA
110-120 V	1/4	--	5.8/ 34.8
200 V	1/2	--	5.6/ 33.6
208 V	1/2	--	5.4/ 32.4
220/240 V	3/4	--	6.9/ 41.4
208 V	--	1 1/2	6.6 / 44
220/240 V	--	2	6.8 / 50
380-415 V	--	3	6.1 / 43
440/480 V	--	3	4.8 / 32
550/600 V	--	5	6.1 / 36.8

## Horsepower for Types 3RT6016, 3RT6316, 3RT6317

Voltage	1-ph	3-ph	FLA/LRA
110-120 V	1/3	--	7.2/ 43.2
200 V	1	--	9.2/ 55.2
208 V	1	--	8.8/ 52.8
220/240 V	1	--	8.0/ 48
208 V	--	2	7.5 / 55
220/240 V	--	3	9.6 / 64
380-415 V	--	3	6.1 / 43
440/480 V	--	5	7.6 / 46
550/600 V	--	7 1/2	9.0 / 50.8

## Horsepower for Types 3RT6017

Voltage	1-ph	3-ph	FLA/LRA
110-120 V	1/2	--	9.8/ 58.8
200 V	1 1/2	--	11.5/ 69
208 V	1 1/2	--	11/ 66
220/240 V	2	--	12/ 72
208 V	--	3	10.6 / 71
220/240 V	--	3	9.6 / 64
380-415 V	--	5	9.7 / 61
440/480 V	--	7 1/2	11 / 63.5
550/600 V	--	10	11 / 64.8

## Horsepower for Types 3RT6018

Voltage	1-ph	3-ph	FLA/LRA
110-120 V	1	--	16/ 96
200 V	2	--	13.8/ 82.8
208 V	2	--	13.2/ 79.2
220/240 V	2	--	12/ 72
208 V	--	3	10.6 / 71
220/240 V	--	5	15.2 / 92
380-415 V	--	7 1/2	14.0 / 84
440/480 V	--	10	14.0 / 81
550/600 V	--	10	11 / 64.8

## Horsepower for Types 3RT6515

Voltage	1-ph NO - NC	3-ph NO - NC	FLA/LRA NO - NC
110-120 V	1/4	--	5.8 / 34.8
220/240 V	3/4	--	6.9 / 41.4
220/240 V	--	2	6.8 / 50
440/480 V	--	3	4.8 / 32

## Horsepower for Types 3RT6516

Voltage	1-ph NO - NC	3-ph NO - NC	FLA/LRA NO - NC
110-120 V	1/3	--	7.2 / 43.2
220/240 V	1	--	8 / 48
220/240 V	--	3	9.6 / 64
440/480 V	--	5	7.6 / 46

## Horsepower for Types 3RT6517

Voltage	1-ph	3-ph	FLA/LRA
	NO - NC	NO - NC	NO - NC
110-120 V	1/2 - 1/3	--	9.8/58.8 - 7.2/43.2
220/240 V	2 - 1	--	12/72 - 8/48
220/240 V	--	3	9.6 / 64
440/480 V	--	7.5 - 5	11/63.5 - 7.6/46

## Horsepower for Types 3RT6518

Voltage	1-ph	3-ph	FLA/LRA
	NO - NC	NO - NC	NO - NC
110-120 V	1 - 1/3	--	16/96 - 7.2/43.2
220/240 V	2 - 1	--	12/72 - 8/48
220/240 V	--	5 - 3	15.2/92 - 9.6/64
440/480 V	--	10 - 5	14.0/81 - 7.6/46

## Horsepower for Types 3RT6016 (Elevator Use)

Voltage	1-ph	3-ph	FLA/LRA
	--	NO	NO
208 v	--	1	4.6 / 33
220/240 V	--	1 1/2	6.0 / 40
440/480 V	--	3	4.8 / 32
550/600 V	--	3	3.9 / 25.6

## Horsepower for Types 3RT6017 (Elevator Use)

Voltage	1-ph	3-ph	FLA/LRA
	--	NO	NO
208 v	--	1 1/2	6.6 / 44
220/240 V	--	2	6.8 / 50
440/480 V	--	5	7.6 / 46
550/600 V	--	5	6.1 / 36.8

## Horsepower for Types 3RT6018 (Elevator Use)

Voltage	1-ph	3-ph	FLA/LRA
	--	NO	NO
208 v	--	2	7.5 / 55
220/240 V	--	2	6.8 / 50
440/480 V	--	5	7.6 / 46
550/600 V	--	5	6.1 / 36.8

General Purpose Rating - Main Contacts 600 V ac, 20 A

AC Resistance - 3RT6315 600 V ac, 16 A  
3RT6316 600 V ac, 18 A  
3RT6317 600 V ac, 20 A

Auxiliary Contacts - A600/Q600 for the basic device 1-, 2- or 4-pole auxiliary contact blocks Type 3RH6911 are front or laterally mounted, for ratings refer to File E44653 Vol. 11 Sec. 30 or Vol. 12 Sec. 23. The auxiliary contact 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 240 V dc

Model 3RT6018 may be marked: "May Replace NEMA Size 0 Contactor" or equivalent.

Standard Short Circuit Ratings:

Type No.	Fuse		comb. Motor Cntlr. 3RV2.1 or 3RV2.2	Circuit Breaker		Short Circuit Current	Voltage
	Class K5, RK5 or CC	Class J		Bkr TM	Bkr I		
3RT601	45 A	60 A	12.5 A 16 A	-	-	5 kA	600 V 480 V
3RT631	45 A	60 A	12.5 A 16 A	-	-	5 kA	600 V 480 V
3RT651	45 A	60 A	12.5 A 16 A	-	-	5 kA	600 V 480 V

## High Capacity Short Circuit Ratings:

Type No.	Fuse Class J	Comb. Mtr. Ctrl. 3RV2.1 or 3RV2.2	Circuit Breaker		Short Circuit	Voltage
			Bkr TM	Bkr I		
3RT6015	25 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6016	35 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6017	45 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6018	60 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6315	25 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6316	35 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6317	45 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6515	25 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6516	35 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6517	45 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V
3RT6518	60 A		-	-	100 kA	600 V
		16 A	-	-	65 kA	480 V
		12.5 A	-	-	30 kA	600 V

## Group Installation:

Maximum Short-circuit rating in Group Installations (only in combination with Manual Motor Controller 3RV6)

Type No.	Man Mtr. Ctrl.			Short Circuit	Voltage
	3RV6.1 or 3RV6.2				
3RT601	16 A <sup>1)</sup>	-	-	65 kA	480 V
	12.5 A <sup>2)</sup>	-	-	30 kA	600 V
3RT631	16 A <sup>1)</sup>	-	-	65 kA	480 V
	12.5 A <sup>2)</sup>	-	-	30 kA	600 V
3RT651	16 A <sup>1)</sup>	-	-	65 kA	480 V
	12.5 A <sup>2)</sup>	-	-	30 kA	600 V

1) Branch Circuit Protective Device for 480V-Ratings: 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.

2) Branch Circuit Protective Device for 600V-Ratings: Max. Class J 100A

## NOMENCLATURE BREAKDOWN:

3RT60	15	-1	A	B4	0	-....
I	II	III	IV	V	VI	VII

## I. Basic Type

3RT60 - 3 main contacts + 1 to 5 auxiliary contacts  
 3RT63 - 4 NO main contacts + 1 to 4 auxiliary contacts  
 3RT65 - 2 NO + 2NC main contacts + 1 to 4 auxiliary contacts

## II. Size S00

## 3RT60:

15 - rated 3 hp at 480 V  
 16 - rated 5 hp at 480 V  
 17 - rated 7 1/2 hp at 480 V  
 18 - rated 10 hp at 480 V

## 3RT63:

15 - rated AC Resistance 16 A at 600 V  
 16 - rated AC Resistance 18 A at 600 V  
 17 - rated AC Resistance 20 A at 600 V

## 3RT65:

15 - rated 3 hp at 480 V  
 16 - rated 5 hp at 480 V  
 17 - rated 7 1/2 / 5 hp at 480 V  
 18 - rated 10 / 5 hp at 480 V

## III. Type of Terminals

1 - Screw Terminal  
 2 - Spring Terminal  
 4 - Ring lug terminals (Wire binding Screw)

## IV. Operating system

A - AC operating system  
 B - DC operating system  
 H - DC operating system; operating limits 0.7 ... 1.25 x operating voltage  
 F - DC operating system with integrated diode  
 J - DC operating system with integrated diode; operating limits 0.7 ... 1.25 x operating voltage, for devices between 24 V and 110 V only.  
 G - DC operating system with integrated bridge rectifier for AC control voltage  
 P - AC operating system with integrated supressor Diode  
 S or U - DC operating system with integrated supressor diode  
 K - DC operating system with integrated supressor diode; operating limits 0.7 ... 1.25 x operating voltage  
 L - DC operating system with integrated varistor; operating limits 0.7 ... 1.25 x operating voltage  
 Q - Identifies factory assembled EMC protective device; operating limits 0.7 ... 1.25 x operating voltage  
 C, D, E, I, N, O, R, T, X, Y or Z - Identifies factory assembled EMC protective device.

- M - DC operating system
- V - DC operating system with integrated diode
- W - Identifies factory assembled EMC protective device

V.     Operating voltage

- 24 Vac through 600 Vac
- 12 Vdc through 240 Vdc

VI.    Auxiliary Contact Arrangements

- 0 - non auxiliary contact
- 1 - 1 normally open
- 2 - 1 normally closed
- 3 - 1 normally open and 1 normally closed
- 4 - 2 normally open and 2 normally closed
- 5 - 3 normally open and 2 normally closed
- 6 - 2 normally open and 3 normally closed
- 8 - any other, individual auxiliary contact arrangements

VII.   Suffix letters and/or numbers specified commercial variations

- OCC0 - contactor with communication interface
- 0LAA0 - contactors with factory assembled resistor
- ..... - any other commercial variation