

3RT, 3RH Contactors for Special Applications

3RT25 Contactors

4-pole, 2 NO + 2 NC, 5 ... 15 HP

Overview

AC and DC operation

EN 60947-4-1 (VDE 0660 Part 102).

The contactors are suitable for use in any climate. They are finger-safe according to EN 50274.

The accessories for the 3-pole SIRIUS contactors can also be used for the 4-pole versions.

With size S0, two auxiliary contacts 1 NO + 1 NC are included in the basic version.

Mountable auxiliary contacts

Size S00 and S0

4 auxiliary contacts, of which up to 2 can be NC contacts.

Application

The contactors are suitable for:

- Changing the polarity of hoisting gear motors
- Switching two separate loads

Note:

Single device for pole reversal; not suitable for reversing duty. 3RT25 contactors are not suitable for switching a load between two current sources.

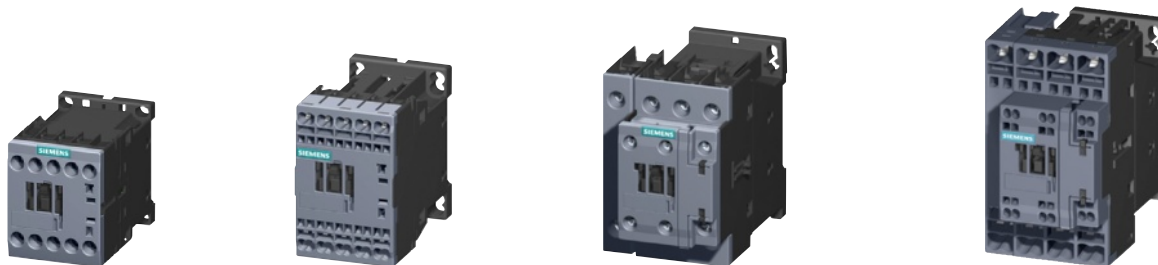
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Selection and ordering data

AC operation,
2 NO + 2 NC¹⁾



3RT25 1.-1....

3RT25 1.-2....

3RT25 2.-1....

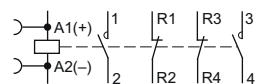
3RT25 2.-2....

Rated data		Auxiliary contacts		Rated control supply voltage	Screw terminals	Weight approx.	Spring-type terminals	Weight approx.
AC-3	AC-1	Ident. No.	Version	$U_s^{2)}$ 50/60 Hz				
Operational current I_e	Ratings of induction motors at 60 Hz and	Operational current I_e			Order No.		Order No.	
At 400 V	460 V					kg		kg
A	HP	A	NO NC V AC					

For screw and snap-on mounting onto TH 35 standard mounting rail

Size S00

Auxiliary switches can be retrofitted

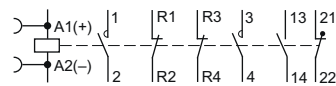


Rated current	HP	Operational current	NO	NC	V AC	Order No.	Weight approx.	Order No.	Weight approx.
9	5	18 / 16	--	--	--	24 110/120 220/240	0.220	3RT25 16-2AB00	0.240
							0.220	3RT25 16-1AK60	0.240
							0.220	3RT25 16-2AK60	0.240
							0.220	3RT25 16-1AP60	0.240
							0.220	3RT25 16-2AP60	0.240
12	7.5 ³⁾	22 / 20	--	--	--	24 110/120 220/240	0.220	3RT25 17-2AB00	0.240
							0.220	3RT25 17-1AK60	0.240
							0.220	3RT25 17-2AK60	0.240
							0.220	3RT25 17-1AP60	0.240
							0.220	3RT25 17-2AP60	0.240
16	10 ³⁾	22 / 20	--	--	--	24 110/120 220/240	0.220	3RT25 18-2AB00	0.240
							0.220	3RT25 18-1AK60	0.240
							0.220	3RT25 18-2AK60	0.240
							0.220	3RT25 18-1AP60	0.240
							0.220	3RT25 18-2AP60	0.240

Size S0

Terminal designations according to EN 50011

1 NO + 1 NC, identification number **11E**



Rated current	HP	Operational current	NO	NC	V AC	Order No.	Weight approx.	Order No.	Weight approx.
25	15	40 / 35	11 E	1	1	24 110/120 220/240	0.430	3RT25 26-2AC20	0.490
							0.430	3RT25 26-1AK60	0.490
							0.430	3RT25 26-2AK60	0.490
							0.430	3RT25 26-1AP60	0.490
							0.430	3RT25 26-2AP60	0.490

For other voltages see page 3/17.
For accessories and spare parts, see page 3/93.

- 1) Single device for pole reversal; not suitable for reversing duty.
- 2) For coil operating range, see page 3/17.
- 3) The NC contact can switch up to 5 HP.

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DC operation - DC solenoid system,
2 NO + 2 NC¹⁾



3RT25 1.-1....



3RT25 1.-2....



3RT25 2.-1....



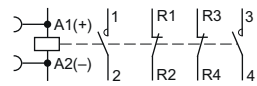
3RT25 2.-2....

Rated data		Auxiliary contacts		Rated control supply voltage U_s	Screw terminals		Weight approx.	Spring-type terminals		Weight approx.
AC-3	AC-1	Ident. No.	Version		Order No.	Order No.				
Operational current I_e	Ratings of induction motors at 60 Hz and	Operational current I_e								
At 400 V	460 V									
A	HP	A		NO NC V DC			kg			kg

For screw and snap-on mounting onto TH 35 standard mounting rail

Size S00

Auxiliary switches can be retrofitted



9	5	18 / 16	--	--	--	24 125	3RT25 16-1BB40 3RT25 16-1BG40	0.280 0.280	3RT25 16-2BB40 3RT25 16-2BG40	0.300 0.300
12	7.5²⁾	22 / 20	--	--	--	24 125	3RT25 17-1BB40 3RT25 17-1BG40	0.280 0.280	3RT25 17-2BB40 3RT25 17-2BG40	0.300 0.300
16	10²⁾	22 / 20	--	--	--	24 125	3RT25 18-1BB40 3RT25 18-1BG40	0.280 0.280	3RT25 18-2BB40 3RT25 18-2BG40	0.300 0.300

Size S0

Terminal designations according to EN 50011

1 NO + 1 NC, identification number **11E**



20	15	40 / 35	11 E	1	1	24 125	3RT25 26-1BB40 3RT25 26-1BG40	0.620 0.620	3RT25 26-2BB40 3RT25 26-2BG40	0.680 0.680
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For other voltages see page 3/17.

For accessories and spare parts, see page 3/93.

¹⁾ Single device for pole reversal; not suitable for reversing duty.

²⁾ The NC contact can switch up to 5 HP.

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More information

Contactors	Type	3RT25 16	3RT25 17	3RT25 18	3RT25 26
	Size	S00	S00	S00	S0
	Width	45	45	45	45

General data

Permissible mounting position¹⁾

Mechanical endurance

Operating cycles	30 million	10 million
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Electrical endurance at $I_e/AC-1$

Operating cycles	Approx. 0.5 million
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Rated insulation voltage U_i (pollution degree 3)

V	690
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Permissible ambient temperature

• During operation	°C	-25 ... +60
• During storage	°C	-55 ... +80

Degree of protection acc. to EN 60947-1, Appendix C

- Terminal compartment

IP20	IP20
IP20	IP00

Touch protection acc. to EN 50274

Finger-safe

Short-circuit protection of contactors without overload relays

Main circuit

Fuse links, gG operational class:	• Type of coordination "1"	A	35	63
LV HRC 3NA, DIAZED 5SB, NEOZED 5SE	• Type of coordination "2"	A	20	35
Acc. to IEC 60947-4-1/EN 60947-4-1	• Weld-free	A	10	16

Control

Solenoid coil operating range

See 3RT23 16	See 3RT23 17	See 3RT23 26
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Power consumption of the solenoid coils (when coil is cold and $1.0 \times U_s$)

See 3RT23 16	See 3RT23 17	See 3RT23 26
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Operating times for $0.8 \dots 1.1 \times U_s$

Total break time = Opening delay + Arcing time

See 3RT23 16	See 3RT23 17	See 3RT23 26
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Main circuit

AC capacity

Utilization categories AC-1, switching resistive loads

• Rated operational currents I_e	At 40 °C up to 690 V	A	18	22	40
	At 60 °C up to 690 V	A	16	20	35
• Rated power for AC loads P.f. = 0.95 (at 60 °C)	At 230 V	kW	6.5	7.5	15
	400 V	kW	11	13	26
• Minimum conductor cross-section for loads with I_e	At 40 °C	mm ²	2.5	2.5	10

Utilization categories AC-2 and AC-3

• Rated operational currents I_e (at 60 °C)	Up to 400 V	A	9	12	16	25 / 20 ²⁾
• Rated power for slipping or squirrel-cage motors at 50 and 60 Hz	At 230 V	kW	3	3	4	5.5
	NO contact at 400 V	kW	4	5.5	7.5	11
	NC contact at 400 V	kW	4	4	4	11

Load rating with DC

Utilization category DC-1, switching resistive load ($L/R \leq 1$ ms)

• Rated operational currents I_e (at 60 °C)	- 1 conducting path	Up to 24 V	A	16	20	35
		60 V	A	16	20	20
		110 V	A	2.1	2.1	4.5
		220 V	A	0.8	0.8	1
		440 V	A	0.6	0.6	0.4
	- 2 conducting paths in series	Up to 24 V	A	16	20	35
		60 V	A	16	20	35
		110 V	A	12	12	35
		220 V	A	1.6	1.6	5
		440 V	A	0.8	0.8	1

Utilization category DC-3/DC-5³⁾, shunt-wound and series-wound motors ($L/R \leq 15$ ms)

• Rated operational currents I_e (at 60 °C)	- 1 conducting path	Up to 24 V	A	16	20	20
		60 V	A	0.5	0.5	5
		110 V	A	0.15	0.15	2.5
		220 V	A	0.75	0.75	1
		440 V	A	--	--	0.09
		- 2 conducting paths in series	Up to 24 V	A	16	20
	60 V		A	5	5	35
	110 V		A	0.35	0.35	15
	220 V		A	--	--	3
	440 V		A	--	--	0.27

¹⁾ In accordance with the corresponding 3-pole 3RT2. contactors.

²⁾ For AC operation: 25 A; for DC operation: 20 A.

³⁾ For $U_s > 24$ V the rated operational currents I_e for the NC contact conducting paths are 50 % of the values for the NO contact conducting paths.