Industrial Controls

SIRIUS 3R_1* in sizes S00/S0 to S12

Catalog Add-On IC 10 AO · 2012

SIRIUS

Answers for industry.

SIEMENS

Controls – Contactors and Contactor Assemblies – for Switching Motors

More information can be found on the Internet: see the opening information, page 8

Note:
Safety characteristics for contactors see Catalog IC 10 · 2012 → "Appendix" → "Standards and Approvals" → "Overview"

Introduction

Overview



Size			**S00**			**S0**				**S2**		
Type			3RT10 1			3RT10 2				3RT10 3		
3RT10 contactors												
Type AC, DC operation			**3RT10 15** (p. 3/15, 3/19)	**3RT10 16**	**3RT10 17**	**3RT10 23** (p. 3/16, 3/20)	**3RT10 24**	**3RT10 25**	**3RT10 26**	**3RT10 34** (p. 3/17, 3/21)	**3RT10 35**	**3RT10 36**
-3 AC												
I_e/AC-3/400 V		A	7	9	12	9	12	17	25	32	40	50
400 V		**kW**	**3**	**4**	**5,5**	**4**	**5,5**	**7,5**	**11**	**15**	**18,5**	**22**
230 V		kW	2,2	3	3	3	3	4	5,5	7,5	11	15
500 V		kW	3,5	4,5	5,5	4,5	7,5	10	11	18,5	22	30
690 V	3RT10/12	kW	4	5,5	5,5	5,5	7,5	11	11	18,5	22	22
1 000 V	3RT10/12	kW	--	--	--	--	--	--	--	--	--	--
AC-4 (for I_a = 6 x I_e)												
400 V		**kW**	**3**	**4**	**4**	**4**	**5,5**	**7,5**	**7,5**	**15**	**18,5**	**22**
400 V (200 000 operating cycles)	3RT10/12	kW	1,15	2	2	2	2,6	3,5	4,4	8,2	9,5	12,6
AC-1 (40 °C, ≤ 690 V)												
I_e	3RT10/12	**A**	**18**	**22**	**22**	**40**	**40**	**40**	**40**	**50**	**60**	**60**
3RT14 AC-1 contactors												
Type						--				--		
I_e/AC-1/40 °C/≤ 690 V		**A**				--				--		
Accessories for contactors												
Auxiliary switch blocks	On front		**3RH19 11**		(p. 3/35)	**3RH19 21**		(p. 3/35)		**3RH19 21**		(p. 3/35)
	Lateral		--		(p. 3/39)	**3RH19 21**		(p. 3/39)		**3RH19 21**		(p. 3/39)
Terminal covers			--			--				**3RT19 36-4EA2**		(p. 3/47)
Box terminal blocks			--			--				--		
Surge suppressors			**3RT19 16**		(p. 3/43)	**3RT19 26**		(p. 3/43)		**3RT19 26/36**		(p. 3/44)
3RU1 and 3RB2 overload relays (Protection Equipment → Overload Relays)												
3RU11, thermal, CLASS 10			**3RU11 16**	0,1 ... 12 A	(Chap. 7)	**3RU11 26**	1,8 ... 25 A	(Chap. 7)		**3RU11 36**	5,5 ... 50 A	(Chap. 7)
3RB20/21, solid-state, CLASS 5, 10, 20 and 30			**3RB20 16** **3RB21 16**	0,1 ... 12 A	(Chap. 7)	**3RB20 26** **3RB21 26**	3 ... 25 A	(Chap. 7)		**3RB20 36** **3RB21 36**	6 ... 50 A	(Chap. 7)
3RB22/23, solid-state, CLASS 5, 10, 20 and 30			**3RB2. 83 + 3RB29 06**	10 ... 100 A	(Chap. 7)	**3RB2. 83 + 3RB29 06**	10 ... 100 A	(Chap. 7)		**3RB2. 83 + 3RB29 06**	10 ... 100 A	(Chap. 7)
3RV10 motor starter protectors (Protection Equipment → Motor Starter Protectors)												
Type			**3RV10 11**	0,18 ... 12 A	(Chap. 5)	**3RV10 21**	9 ... 25 A	(Chap. 7)		**3RV10 31**	22 ... 50 A	(Chap. 7)
Link modules			**3RA19 11**		(Chap. 5)	**3RA19 21**		(Chap. 7)		**3RA19 31**		(Chap. 7)
3RA13 Reversing Contactor Assemblies												
Complete units	Type		**3RA13 15** (p. 3/60)	**3RA13 16**	**3RA13 17**		**3RA13 24** (p. 3/61)	**3RA13 25**	**3RA13 26**	**3RA13 34** (p. 3/62)	**3RA13 35**	**3RA13 36**
400 V		**kW**	**3**	**4**	**5,5**		**5,5**	**7,5**	**11**	**15**	**18,5**	**22**
Assembly kits/wiring modules			**3RA19 13-2A**		(p. 3/65)	**3RA19 23-2A**		(p. 3/65)		**3RA19 33-2A**		(p. 3/65)
Mechanical interlocks			**3RA19 12-2H**		(p. 3/64)	**3RA19 24-1A/-2B**		(p. 3/64)	3/64	**3RA19 24-1A/-2B**		(p. 3/64)
3RA14 Contactor Assemblies for Wye-Delta Starting												
Complete units	Type		**3RA14 15** (p. 3/69)	**3RA14 16**		**3RA14 23** (p. 3/70)		**3RA14 25**		**3RA14 34** (p. 3/71)	**3RA14 35** (p. 3/72)	**3RA14 36**
400 V		**kW**	**5,5**	**7,5**		**11**		**15/18,5**		**22/30**	**37**	**45**
Assembly kits/wiring modules			**3RA19 13-2B**		(p. 3/74)	**3RA19 23-2B**		(p. 3/74)		**3RA19 33-2B/-2C**		(p. 3/74)

S3 3RT1. 4			**S6** 3RT1. 5			**S10** 3RT1. 6			**S12** 3RT1. 7	
3RT10 contactors • 3RT12 vacuum contactors										
3RT10 44 (p. 3/18, 3/22)	**3RT10 45**	**3RT10 46**	**3RT10 54** (p. 3/23)	**3RT10 55**	**3RT10 56**	**3RT10 64** (p. 3/23)	**3RT10 65**	**3RT10 66**	**3RT10 75** (p. 3/23)	**3RT10 76**
						3RT12 64 (p. 3/28)	**3RT12 65**	**3RT12 66**	**3RT12 75** (p. 3/28)	**3RT12 76**
65	80	95	115	150	185	225	265	300	400	500
30	**37**	**45**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
18,5	22	22	37	45	55	55	75	90	132	160
37	45	55	75	90	110	160	160	200	250	355
45	55	55	110	132	160	200	250	250	400	400/500
30	37	37	75	90	90	90/315	132/355	132/400	250/560	250/710
30	**37**	**45**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
15,1	17,9	22	29	38	45	54/78	66/93	71/112	84/140	98/161
100	**120**	**120**	**160**	**185**	**215**	**275/330**	**330**	**330**	**430/610**	**610**
3RT14 AC-1 contactors										
3RT14 46		(Chap. 4)	**3RT14 56**		(Chap. 4)	**3RT14 66**		(Chap. 4)	**3RT14 76**	(Chap. 4)
140			**275**			**400**			**690**	
Accessories for contactors										
3RH19 21		(p. 3/35)				**3RH19 21**		(p. 3/35)		
3RH19 21		(p. 3/39)				**3RH19 21**		(p. 3/39)		
3RT19 46-4EA1/2		(p. 3/47)	**3RT19 56-4EA1/2/3**		(p. 3/47)	**3RT19 66-4EA1/2/3**		(p. 3/47)		
--			**3RT19 55/56-4G**		(p. 3/47)	**3RT19 66-4G**		(p. 3/47)		
3RT19 26/36		(p. 3/44)	**3RT19 56-1C** (RC element)		(p. 3/44)	**3RT19 56-1C** (RC element)		(p. 3/44)		
3RU1 and 3RB2 overload relays (Protection Equipment → Overload Relays)										
3RU11 46	18 ... 100 A	(Chap. 7)	**--**			**--**			**--**	
3RB20 46 **3RB21 46**	12,5 ... 100 A	(Chap. 7)	**3RB20 56** **3RB21 56**	50 ... 200 A	(Chap. 7)	**3RB20 66** **3RB21 66**	55 ... 630 A	(Chap. 7)	**3RB20 66** **3RB21 66**	160 ... 630 A (Chap. 7)
3RB2. 83 + 3RB29 06	10 ... 100 A	(Chap. 7)	**3RB2. 83 + 3RB29 56**	20 ... 200 A	(Chap. 7)	**3RB2. 83 + 3RB29 66**	63 ... 630 A	(Chap. 7)		
3RV10 motor starter protectors (Protection Equipment → Motor Starter Protectors)										
3RV10 41	45 ... 100 A	(Chap. 7)	**--**			**--**			**--**	
3RA19 41		(Chap. 7)	**--**			**--**			**--**	
3RA13 Reversing Contactor Assemblies										
3RA13 44 (p. 3/63)	**3RA13 45**	**3RA13 46**	**--**			**--**			**--**	
30	**37**	**45**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
3RA19 43-2A		(p. 3/65)	**3RA19 53-2A**		(p. 3/65)	**3RA19 63-2A**		(p. 3/65)	**3RA19 73-2A**	(p. 3/65)
3RA19 24-1A/-2B		(p. 3/64)	**3RA19 54-2A**		(p. 3/64)	**3RA19 54-2A**		(p. 3/64)		
3RA14 Contactor Assemblies for Wye-Delta Starting										
3RA14 44 (p. 3/73)	**3RA14 45**		**--**			**--**			**--**	
55	**75**		**--**			**--**			**--**	
3RA19 43-2B/-2C		(p. 3/74)	**3RA19 53-2B**		(p. 3/74)	**3RA19 63-2B**		(p. 3/74)	**3RA19 73-2B**	(p. 3/74)

Introduction

Note:

Safety characteristics for contactors see Catalog IC 10, Chapter 16, "Appendix" ➞ "Standards and Approvals" ➞ "Overview".

Connection methods

The contactors are available with screw terminals (box terminals or flat connectors) or with spring-type terminals.

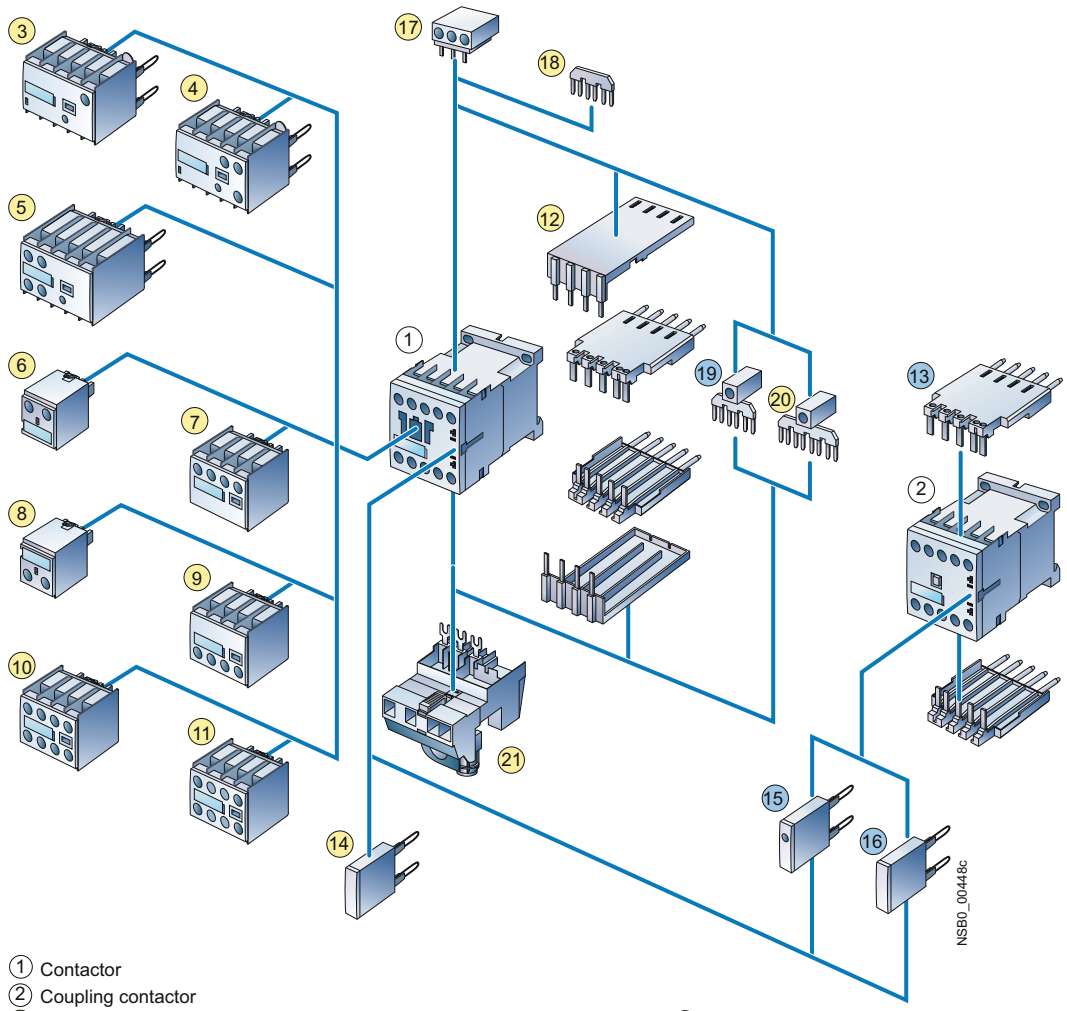
	Screw terminals
	Spring-type terminals
	The terminals are indicated in the corresponding tables by the symbols shown on orange backgrounds.

Overview

The SIRIUS family of controls

The SIRIUS modular system with its components for the switching, starting, protection and monitoring of motors and industrial systems stands for the fast, flexible and space-saving construction of control cabinets.

3RT1 contactors and coupling contactors Size S00 with mountable accessories



1. Contactor
2. Coupling contactor
3. Solid-state timing relay block, ON-delay
4. Solid-state timing relay block, OFF-delay
5. Auxiliary switch block with solid-state time delay (ON or OFF-delay or wye-delta function)
6. 1-pole auxiliary switch block, cable entry from above
7. 2-pole auxiliary switch block, cable entry from above
8. 1-pole auxiliary switch block, cable entry from below
9. 2-pole auxiliary switch block, cable entry from below
10. 4-pole auxiliary switch block (terminal designations according to EN 50012 or EN 50005)
11. 2-pole auxiliary switch block, standard version or solid-state compatible version (terminal designations according to EN 50005)
12. Solder pin adapter for contactors with 4-pole auxiliary switch block
13. Solder pin adapter for contactors and coupling contactors
14. Additional load module for increasing the permissible residual current
15. Surge suppressor with LED
16. Surge suppressor without LED
17. Three-phase feeder terminal
18. Link for paralleling (star jumper), 3-pole, without connection terminal
19. Link for paralleling, 3-pole, with terminal
20. Link for paralleling, 4-pole, with terminal
21. Connection module (adapter and plug) for contactors with screw-type connection

- For contactors
- For contactors and coupling contactors (interface)

Accessories see pages 3/35 to 3/49.

Reversing contactor assemblies see page 3/60.

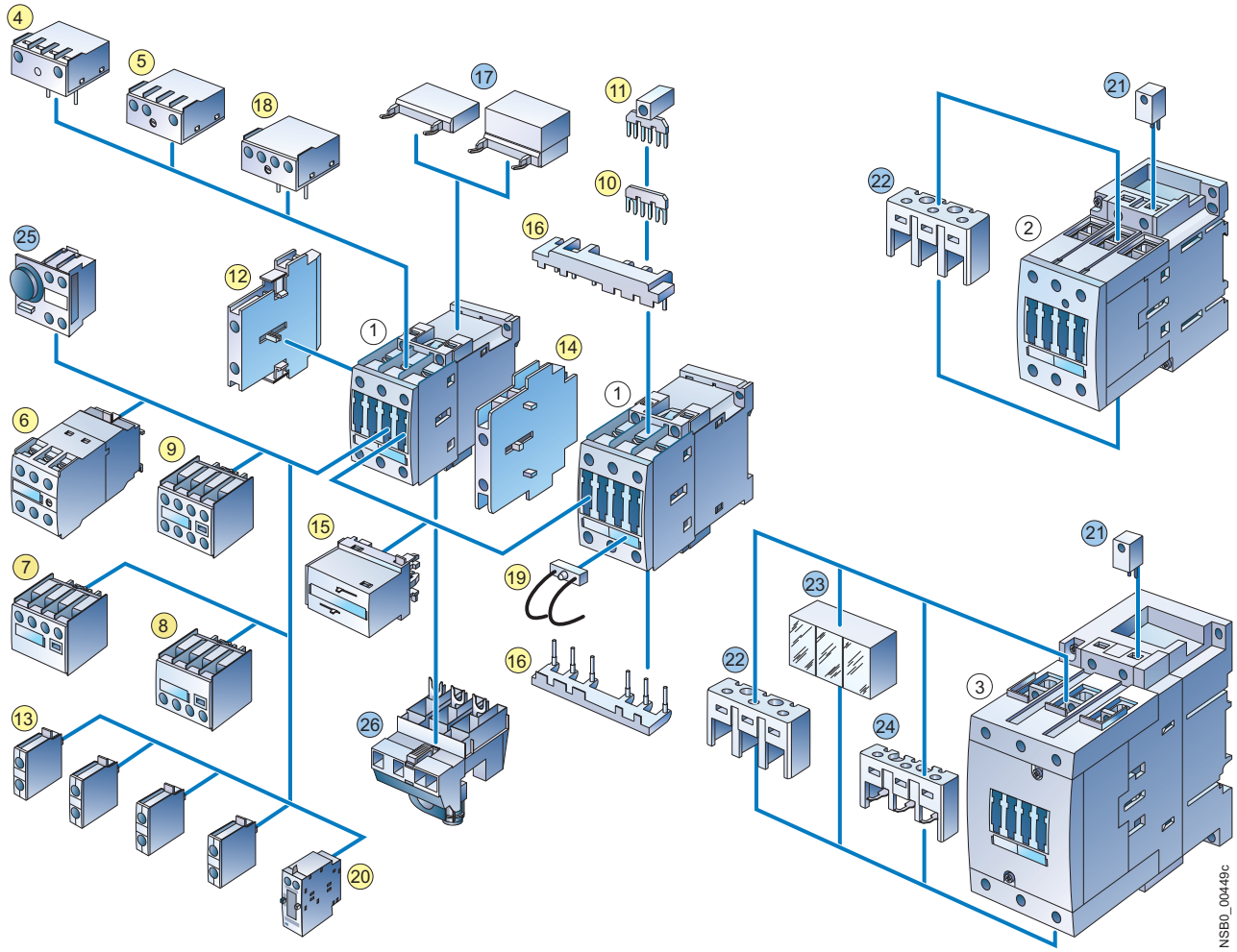
Assembly kit for reversing contactor assemblies (mech. interlocking, wiring modules) see page 3/66.

Mountable overload relays see chapter 7, "Protection Equipment" → "Overload Relays".

Fuseless load feeders see chapter 8, "Load Feeders and Motor Starters" → "3RA Fuseless Load Feeders".

General data

3RT1 contactors
Sizes S0 to S3 with mountable accessories



(1) Contactor, size S0
(2) Contactor, size S2
(3) Contactor, size S3

For sizes S0 to S3:

(4) Solid-state time-delay block, ON-delay
(5) Solid-state time-delay block, OFF-delay
(6) Auxiliary switch block, solid-state time-delay (ON or OFF-delay or star-delta function)
(7) 2-pole auxiliary switch block, cable entry from above
(8) 2-pole auxiliary switch block, cable entry from below
(9) 4-pole auxiliary switch block (terminal designations according to DIN EN 50,012 or DIN EN 50,005)
(10) Link for paralleling (star jumper), 3-pole, without terminal
(11) Link for paralleling, 3-pole, with terminal
(12) 2-pole auxiliary switch block, laterally mountable left or right (terminal designations according to DIN EN 50012 or DIN EN 50005)
(13) Single-pole auxiliary switch block (up to 4 can be snapped on)
(14) Mechanical interlock, laterally mountable
(15) Mechanical interlock, mountable to the front
(16) Wiring connectors on the top and bottom (reversing duty)
(17) Surge suppressors (page 3/186) (varistor, RC element, diode assembly), can be mounted on the top or bottom (different for S0 and S2/S3)
(18) Coupling link (interface) for mounting directly onto contactor coil
(19) LED module for indicating contactor operation

Only for size S0:

(25) Pneumatic delay block
(26) Connection module (adapter and connector)

Only for sizes S0 and S2:

(20) Mechanical latching block

Only for sizes S2 to S3:

(21) Coil repeat terminal for making contactor assemblies
(22) Terminal cover for box terminal

Only for sizes S3:

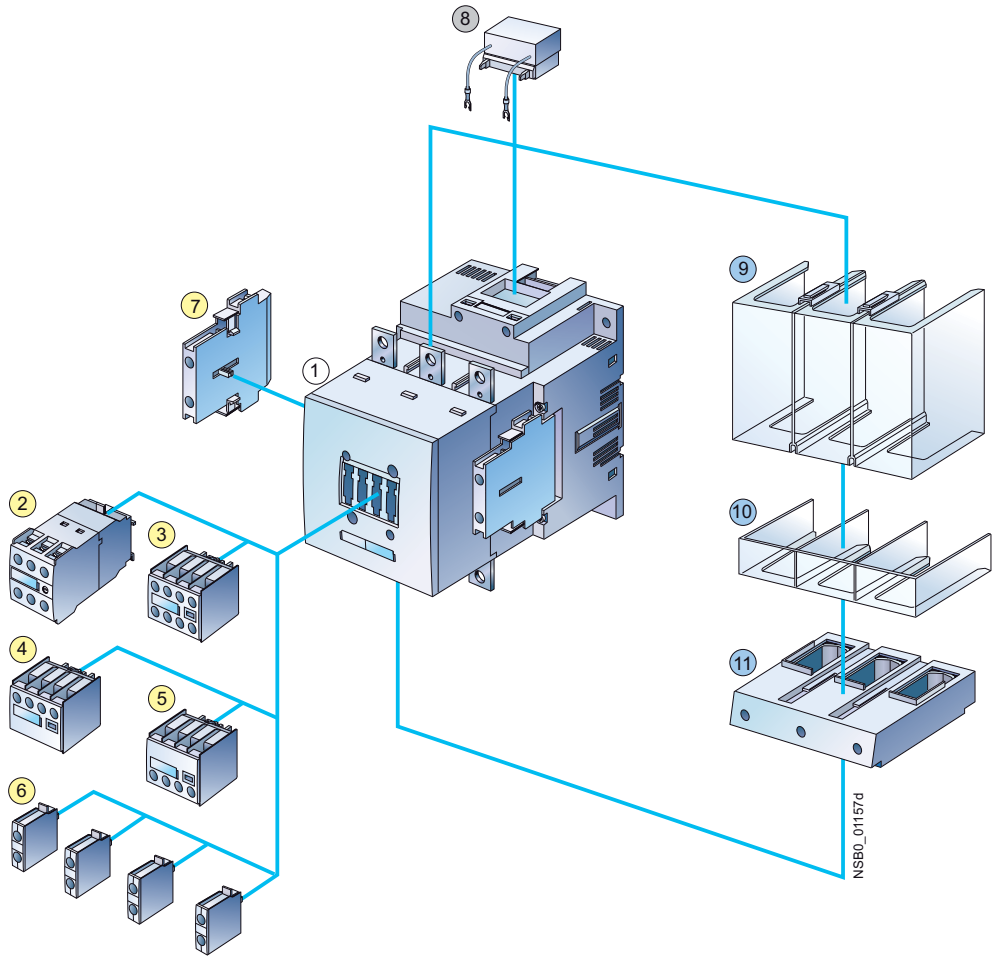
(23) Terminal cover for cable lug and bar connection
(24) Auxiliary conductor terminal, 3-pole

Accessories identical for sizes S0 to S3
Accessories differ according to size

Accessories see pages 3/35 to 3/49.

Reversing contactor assemblies see pages 3/61 to 3/63.

3RT1 contactors
Sizes S6 to S12 with mountable accessories
(illustration for basic unit)



① 3RT10 and 3RT14 air-break contactors, sizes S6, S10 and S12

② Auxiliary switch block, solid-state time-delay (ON or OFF-delay or wye-delta function)
③ 4-pole auxiliary switch block (terminal designations according to EN 50012 or EN 50005)
④ 2-pole auxiliary switch block, cable entry from above
⑤ 2-pole auxiliary switch block, cable entry from below
⑥ Single-pole auxiliary switch block (up to 4 can be snapped on)
⑦ 2-pole auxiliary switch block, laterally mountable left or right (terminal designations according to EN 50012 or EN 50005) (identical for S0 to S12)
⑧ Surge suppressor (RC element) for plugging into top of withdrawable coil

⑨ Terminal cover for cable lug and busbar connection, different for sizes S6 and S10/S12
⑩ Terminal cover for box terminal, different for sizes S6 and S10/S12
⑪ Box terminal block, different for sizes S6 and S10/S12

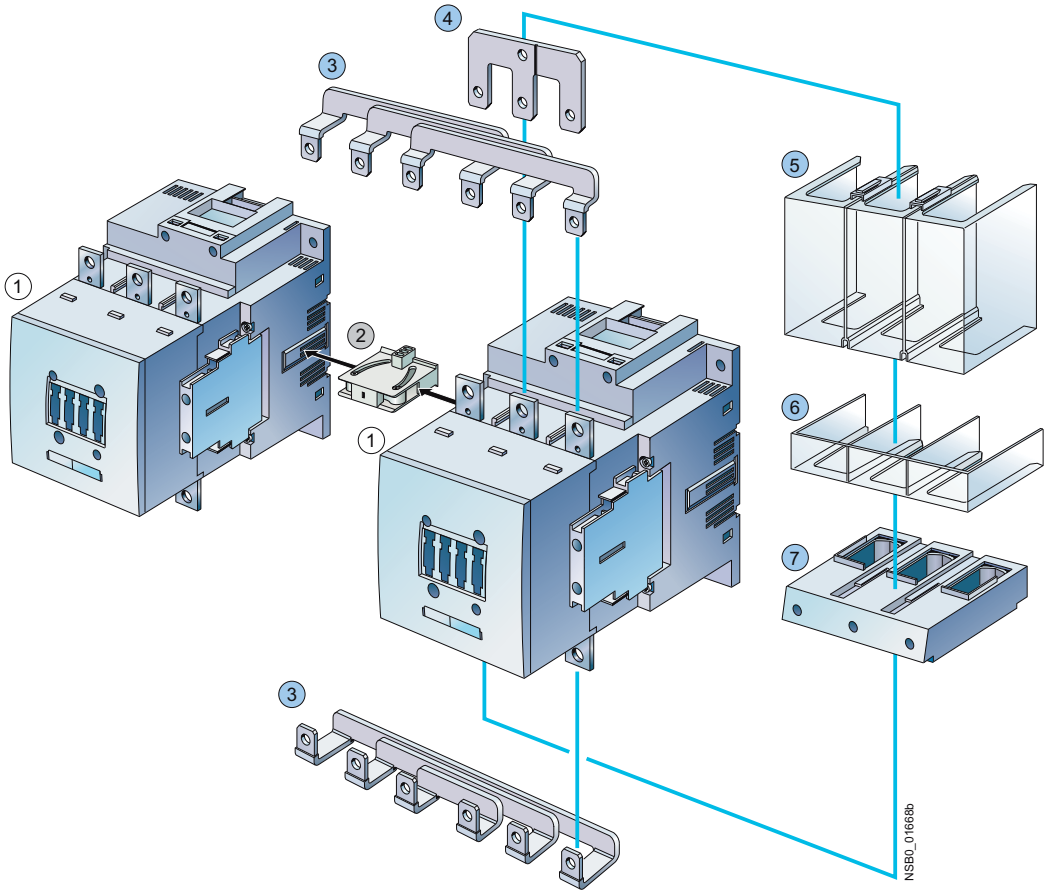
○ Accessories identical for sizes S0 to S12
○ Accessories identical for sizes S6 to S12
○ Accessories differ according to size

Accessories see pages 3/35 to 3/49.

Mountable overload relays see chapter 7, "Protection Equipment" → "Overload Relays".

General data

3RA1 contactor assemblies, 3RT1 contactors
Size S6 with accessories



① 3RT10 and 3RT14 air-break contactor, size S6

② Mechanical interlock, laterally mountable
③ Wiring modules on the top and bottom, 3RA1953-2A
④ Link for paralleling (star jumper), 3-pole, with through-hole, 3RT1956-4BA31
⑤ Terminal cover for cable lug and bar connection different for sizes S6 and S10/S12
⑥ Terminal cover for box terminal different for sizes S6 and S10/S12
⑦ Box terminal block, different for sizes S6 and S10/S12

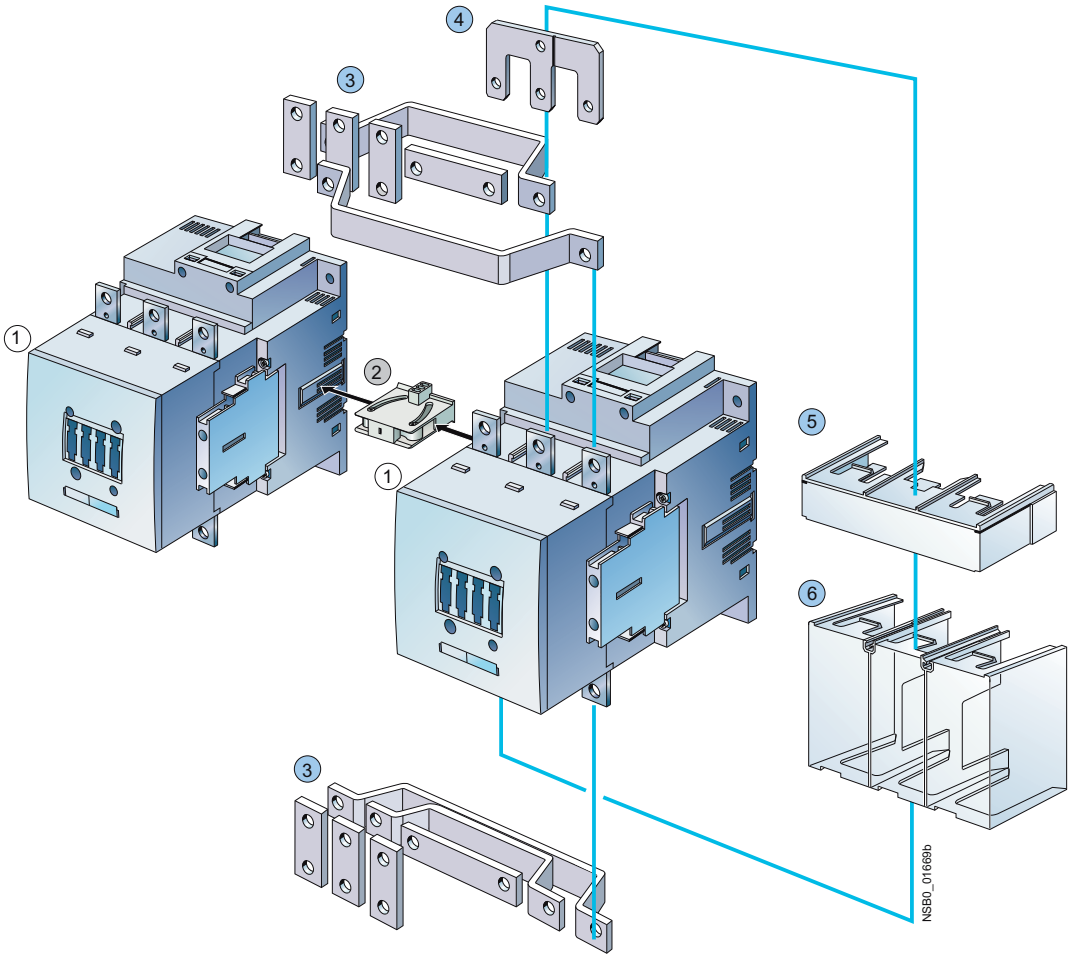
Accessories identical for sizes S6 to S12
Accessories differ according to size

Accessories see pages 3/35 to 3/49.

Components for reversing contactor assemblies see pages 3/64 to 3/66.

Mountable overload relays see chapter 7, "Protection Equipment" → "Overload Relays".

3RA1 contactor assemblies, 3RT1 contactors
Sizes S6, S10 and S12 with accessories



① 3RT10 and 3RT14 air-break contactor, sizes S6, S10 and S12 or 3RT12 vacuum contactor, sizes S10 and S12

② Mechanical interlock, laterally mountable
③ Wiring modules on the top and bottom, 3RA19
④ Link for paralleling (star jumper), 3-pole, with through-hole, 3RT19 56-4BA31
⑤ Terminal cover for box terminal, differs according to sizes S6 and S10/S12
⑥ Terminal cover for cable lug and busbar connection, differs according to sizes S6 and S10/S12

Accessories identical for sizes S6 to S12
Accessories differ according to size

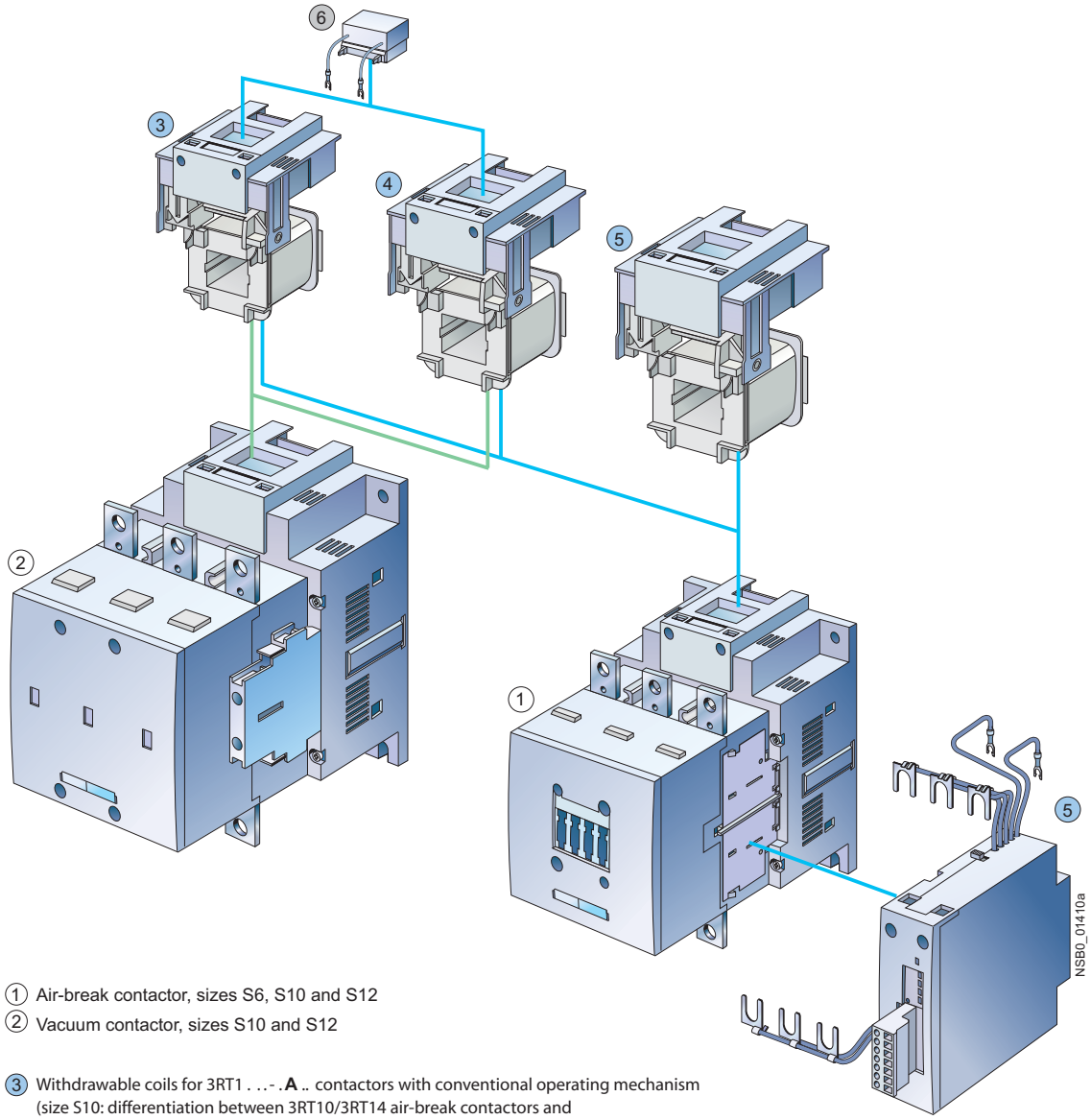
Accessories see pages 3/64 to 3/66 and 3/35 to 3/49.

Components for reversing contactor assemblies see pages 3/64 to 3/66.

Mountable overload relays see chapter 7, "Protection Equipment" → "Overload Relays".

General data

3RT1 contactors
Sizes S6 to S12 with accessories and spare parts



① Air-break contactor, sizes S6, S10 and S12
② Vacuum contactor, sizes S10 and S12

③ Withdrawable coils for 3RT1 . ..- .**A** .. contactors with conventional operating mechanism
(size S10: differentiation between 3RT10/3RT14 air-break contactors and 3RT12 vacuum contactors)
(size S12: the same for air-break and vacuum contactors)

④ Withdrawable coils for 3RT1 . ..- .**N**.. contactors with solid-state operating mechanism.
(size S10: differentiation between 3RT10/3RT14 air-break contactors and 3RT12 vacuum contactors)
(size S12: the same for air-break and vacuum contactors)

⑤ Withdrawable coils and laterally mountable module (plug-on) for 3RT1. ..- .**P** .. and 3RT1 ...- .**Q** .. air-break contactors with solid-state operating mechanism and remaining lifetime indicator

⑥ Surge suppressor (RC element), plug-mountable on withdrawable coils
- 3RT1 . . . - . **A** .. with conventional operating mechanism
- 3RT1 . . . - . **N** .. with solid-state operating mechanism.

Identical for sizes S6 to S12
Different according to size

Surge suppressors see page 3/44,
withdrawable coils see pages 3/52 and 3/53.

Mountable overload relays see chapter 7,
"Protection Equipment" → "Overload Relays".

Overview

Standards

IEC 60947-1, EN 60947-1,
IEC 60947-4-1, EN 60947-4-1,
IEC 60947-5-1, EN 60947-5-1 (auxiliary switches)

The 3RT1 contactors are climate-proof. They are finger-safe according to EN 50274.

Connection methods

The 3RT1 contactors are available with screw terminals (box terminals) or spring-type terminals.

The size S3 contactors have removable box terminals for the main conductor connections. This permits connection of ring terminal lugs or busbars.

Contact reliability

If voltages ≤ 110 V and currents ≤ 100 mA are to be switched, the auxiliary contacts of the 3RT1 contactor or 3RH11 contactor relay should be used as they guarantee a high level of contact reliability.

These auxiliary contacts are particularly suitable for solid-state circuits with currents ≥ 1 mA at a voltage ≥ 17 V.

Short-circuit protection of the contactors

Short-circuit protection of contactors without overload relay see "Technical Specifications". Short-circuit protection of contactors with overload relay see the configuration manual "SIRIUS Configuration – Selection data for Fuseless Load Feeders" (see internet addresses for more information, page 8).

To assemble fuseless motor feeders you must select combinations of motor starter protector and contactor as explained in "Fuseless Load Feeders".

Motor protection

3RU11 thermal overload relays or 3RB20/3RB21 solid-state overload relays can be fitted to the 3RT1 contactors for protection against overload. The overload relays must be ordered separately.

Ratings of induction motors

The quoted rating (in kW) refers to the output power on the motor shaft (according to the nameplate).

Surge suppression

3RT1 contactors can be retrofitted with RC elements, varistors, diodes or diode assemblies (assembly of diode and Zener diode for short break times) for damping opening surges in the coil.

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (noise suppression diode 6 to 10 times; diode assembly 2 to 6 times, varistor +2 to 5 ms).

Sizes S00 to S3, up to 45 kW

Auxiliary contact complement

Size S00 contactors have an auxiliary contact integrated in the basic unit. The basic units of sizes S0 to S3 are delivered only with the main contacts and can be extended with auxiliary switch blocks.

For sizes S0 to S3, complete units with mounted auxiliary switch block 2 NO + 2 NC are available (terminal designation according to EN 50012); the auxiliary switch block can be removed (for more information see "Accessories" on page 3/29).

Note:

Auxiliary contact complement according to SUVA: Contactors with permanently mounted auxiliary switch block 2 NO + 2 NC are available for safety applications according to SUVA.

Surge suppression

The surge suppressors are plugged onto the front of size S00 contactors. Space is provided for them next to a snap-on auxiliary switch block.

For size S0 to S3 contactors, varistors and RC elements can be snapped on either on the top or directly below the coil terminals. Diode assemblies are available in 2 different versions on account of their polarity. Depending on the application they can be connected either only at the bottom (assembly with motor starter protector) or only at the top (assembly with overload relay).

The plug-in direction of the diodes and diode assemblies is specified by coding.
Exceptions: 3RT19 26-1T.00 and 3RT19 36-1T.00;
in this case the plug-in direction is marked with "+" and "-".

Coupling contactors are supplied either without overvoltage damping or with a varistor or diode connected as standard, according to the version.

Sizes S6 to S12, > 45 to 250 kW

- 3RT10, contactors for switching motors,
- 3RT12, vacuum contactors for switching motors,
- 3RT14, contactors for AC-1 applications (see Chapter 4).

Operating mechanism types

Two types of solenoid operation are available:

- Conventional operating mechanism
- Solid-state operating mechanism (with 3 performance levels)

Control supply voltage

The contactors have a UC operating mechanism which can be operated with AC (40 to 60 Hz) as well as with DC.

Withdrawable coils

For simple coil replacement, e. g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Auxiliary contact complement

Contactor sizes S6 to S12 are supplied with mounted auxiliary switch blocks.

Detailed information about the fitting of auxiliary switches see "Accessories", page 3/29.

- 3RT10 and 3RT14 contactors:
  Auxiliary contacts mounted laterally and on front
- 3RT12 vacuum contactors:
  Auxiliary contacts mounted laterally

Contactors with conventional operating mechanism

Version 3RT1. ..-.A:

The solenoid coil is switched directly on and off with the control supply voltage U_S by way of terminals A1/A2.

Multi-voltage range for the control supply voltage U_S:

Only one coil covers several close-lying control supply voltages which are used worldwide,
e. g. 110–115–120–127 V AC/DC or 220–230–240 V AC/DC.
Allowance is made in addition for am operating range of 0.8 times the lower ($U_{S\,min}$) and 1.1 times the upper ($U_{S\,max}$) rated control supply voltage within which the contactor switches reliably and no thermal overload occurs.

SIRIUS 3RT10 contactors, 3-pole, 3 ... 250 kW

Contactors with solid-state operating mechanism

The solenoid coil is supplied selectively with the power required for reliable switching and holding by upstream control electronics.

- Wide voltage range for the control supply voltage U_s: Compared with the conventional operating mechanism, the solid-state operating mechanism covers an even broader range of control supply voltages used worldwide within one coil variant. For example, the coil for 200 to 277 V AC/DC ($U_{s\ min}$ to $U_{s\ max}$) covers the voltages 200-208-220-230-240-254-277 V used worldwide.
- Extended operating range 0.7 to 1.25 x U_s: The wide range for the rated control supply voltage and the additionally allowed coil operating range of 0.8 x $U_{s\ min}$ to 1.1 x $U_{s\ max}$ results in an extended coil operating range of at least 0.7 to 1.25 x U_s, within which the contactors will operate reliably, for the most common control supply voltages of 24, 110 and 230 V.
- Bridging temporary voltage dips: Control voltage failures dipping to 0 V (at A1/A2) are bridged for up to approx. 25 ms to avoid unintentional tripping.
- Defined ON and OFF thresholds: For voltages above 0.8 x $U_{s\ min}$ the electronics will reliably switch the contactor ON, and for voltages below the value 0.5 x $U_{s\ min}$ it is reliably switched OFF. The hysteresis in the switching thresholds prevents the main contacts from chattering as well as increased wear or welding when operated in weak, unstable networks. This also prevents thermal overloading of the contactor coil if the voltage applied is too low (contactor does not close properly and is continuously operated with overexcitation).
- Low control power consumption when closing and in the closed state.

Electromagnetic compatibility (EMC)

The contactors with solid-state operating mechanism conform to the requirements for operation in industrial plants:

- Interference immunity
  - Burst (IEC 61000-4-4): 4 kV
  - Surge (IEC 61000-4-5): 4 kV
  - Electrostatic discharge, ESD (IEC 61000-4-2): 8/15 kV
  - Electromagnetic field (IEC 61000-4-3): 10 V/m
- Emitted interference
  - Limit value class A according to EN 55011

Note:

In connection with converters, the control cables must be routed separately from the load cables to the converter.

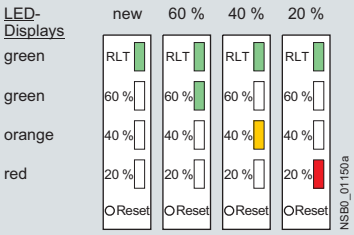
Indication of remaining lifetime (RLT)

Main contactor contacts are working parts which therefore must be replaced in good time when the end of their service life has been reached. The degree of contact erosion and thus the electrical endurance (= number of operating cycles) depends on the loading, utilization category, operating mode, etc. Up to now, routine checks/visual inspections by the maintenance personnel were needed in order to gain an insight into the state of the main contacts.

The remaining lifetime indication function now takes over this task. It does not count the number of operating cycles – which does not provide information about contact erosion – but instead electronically identifies, evaluates and stores the actual progress of erosion of each one of the three main contacts, and outputs a warning when specified limits are reached. The stored data are not lost even if the control supply voltage for A1/A2 fails. After replacement of the main contacts, measurement the remaining lifetime must be reset using the "RESET" button (hold down RESET button for about 2 seconds using a pen or similar tool).

Advantages:

- Signaling through relay contact or AS-i when remaining lifetime is 20 %, i. e. contact material wear is 80 %.
- Additional visual indication of various levels of erosion by means of LEDs on the laterally mounted solid-state module when remaining lifetime is 60 % (green), 40 % (orange) and 20 % (red).

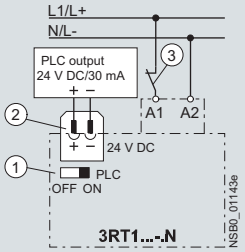


- Early warning to replace contacts
- Optimum utilization of contact material
- Visual inspection of the condition of contacts not necessary
- Reduction of ongoing operating costs
- Optimum planning of maintenance measures
- Avoidance of unforeseen plant downtimes

Version 3RT1. ..-.N: for 24 V DC PLC output

2 control options:

■ Control without a coupling link directly through a 24 V DC/≥ 30 mA PLC output (IEC 61131-2). Connection by means of 2-pole plug-in connection. The screwless spring-type connection is part of the scope of supply. The control supply voltage for supplying power to the solenoid operating mechanism must be connected to A1/A2.

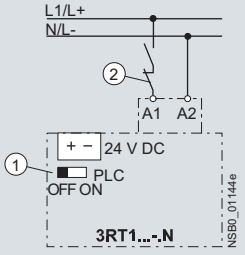


① Slide switch, must be in position PLC "ON"
② Plug-in connection, 2-pole
③ Shutdown in an emergency (EMERGENCY-STOP) – optional

Note:

Before start-up, the slide switch for PLC operation must be moved to the "PLC ON" position (setting ex works: "PLC OFF").

■ Conventional control by applying the control supply voltage at A1/A2 through a switching contact.

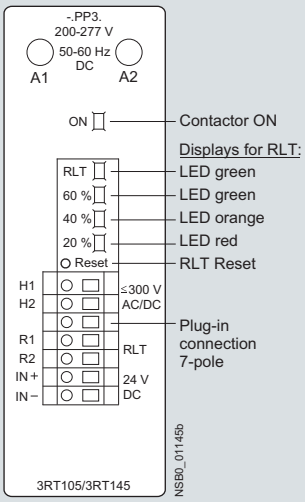


① Slide switch, must be in position PLC "OFF"
② Shutdown in an emergency (EMERGENCY-STOP) – optional

Note:

The slide switch must be in the "PLC OFF" position (= setting ex works).

Version 3RT1. ..-.P: for 24 V DC PLC output or PLC relay output, with remaining lifetime indicator (RLT).

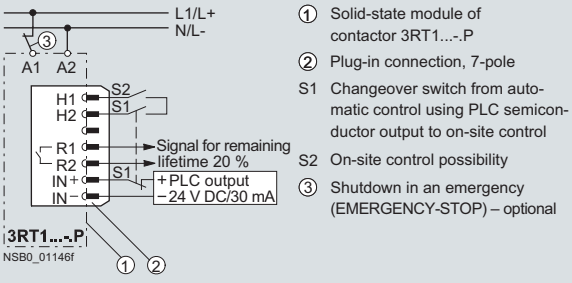


To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_S must be connected to terminals A1/A2 of the laterally mounted solid-state module. The control inputs of the contactor are connected to a 7-pole plug-in connection; the screwless spring-type connection is part of the scope of supply.

- The "Remaining Lifetime RLT" status signal is available at terminals R1/R2 through a floating relay contact (hard gold-plated, enclosed) and can be input to SIMOCODE, PLC or other devices for processing, for example.
  Permissible load rating capacity of the R1/R2 relay output:
  - I_e/AC-15/24 to 230 V: 3 A
  - I_e/DC-13/24 V: 1 A
- LED indications
  The following states are indicated by means of LEDs on the laterally mounted solid-state module:
  - Contactor ON (energized state): green LED ("ON")
  - Indication of remaining lifetime

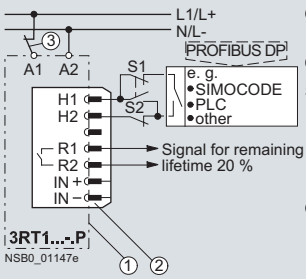
2 control options:

■ Contactor control without a coupling link directly through a 24 V DC/≥ 30 mA PLC output (IEC 61131-2) by way of terminals IN+/IN-.



Possibility of switching from automatic control to local control by way of terminals H1/H2, i. e. automatic control through PLC or SIMOCODE/PROFIBUS DP can be deactivated e. g. at start-up or in the event of a fault and the contactor can be controlled manually.

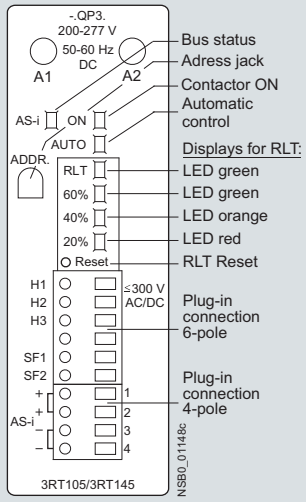
■ Contactor control through relay outputs at terminals H1/H2, e. g. by
- PLC or
- SIMOCODE



Contact loading: U_S/approx. 5 mA.

When operated through SIMOCODE, a communication link to PROFIBUS DP is also provided.

Version 3RT1. ..-.Q: Communication-capable with integrated AS-Interface and remaining lifetime indicator (RLT)



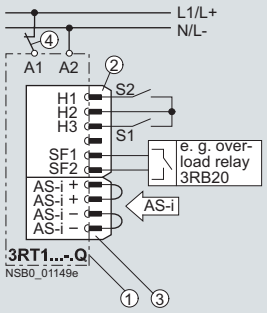
To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_S must be connected to terminals A1/A2 of the laterally mounted solid-state module. The contactor itself is controlled by way of the integrated AS-Interface interface. The inputs and outputs are connected to a 10-pole plug-in connection; the screwless spring-type connections (6-pole for external connection and 4-pole for AS-Interface connection) are part of the scope of supply.

- LED displays:
  The following states are indicated by means of LEDs on the laterally mounted solid-state module:
  - Contactor ON (energized state): green LED ("ON")
  - Automatic/local control: Green LED ("AUTO")
  - Bus status: Green/red dual LED ("AS-i")
  - Indication of remaining lifetime (RLT)
- AS-Interface addressing socket "ADDR":
  The contactor address can be assigned after installation.

SIRIUS 3RT10 contactors, 3-pole, 3 ... 250 kW

Control circuit:

- Contactor control through AS-Interface by way of terminals AS-i +/AS-i –. Each of these terminals is jumpered and connected twice to a 4-pole connector which is separate from the other control inputs.
  Advantages:
  - The AS-Interface cable is not interrupted if the connector is pulled out
  - The contactor remains functional through the local control inputs and its own 6-pole connector
- Control signals through AS-i:
  - Contactor ON/OFF
- Status signals through AS-i:
  - Contactor ON/OFF
  - Automatic/local control
  - Indication of remaining lifetime (RLT)
  - Signal through free input, e. g. overload relay tripped.



① Solid-state module of contactor 3RT1...-.Q
② Plug-in connection, 6-pole
③ Plug-in connection, 4-pole
S1 Changeover switch from automatic control using AS-Interface to on-site control
• S1 open: automatic mode
S2 On-site control possibility
④ Shutdown in an emergency (EMERGENCY-STOP) – optional

Possibility of switching from automatic control to local control by means of terminals H1/H2/H3, i. e. automatic control through AS-Interface can be deactivated e. g. during start-up or in the event of a fault and the contactor can be controlled manually.

Technical specifications

AS-Interface		
I/O configuration (hex) ID code (hex)		7 F
Power supply (acc. to AS-Interface Spec.)	V	26,5 ... 31,6
Power consumption, max.	mA	20
Contact loading at SF1/2	mA	3 ... 6
Watchdog function (disconnects outputs in the event of AS-Interface fault)		Built-in

Indication behavior of the LEDs

State		LEDs
AS-Interface Communication	OK	On
	Fault	On
Station address	0 (zero)	Flashing
		Flashing

Contactor diagnostics using the user program

• Inputs

Input signals			Device status
DI 0	"Ready"	0	Device not ready/manual operation
		1	Device ready/automatic mode
DI 1	"Running"	0	Contactor off
		1	Contactor on
DI 2	"Remaining lifetime"	0	Remaining lifetime RLT > 20 %
		1	Remaining lifetime RLT ≤ 20 %
DI 3	"Free input"	0	No input signal at SF1/2
		1	Input signal at SF1/2

• Outputs

Output signals			Device status
DO 0	"Running"	0	Contactor off
		1	Contactor on
DO 1		0	--
		1	--
DO 2		0	--
		1	--
DO 3		0	--
		1	--

Order No. scheme

Digit of the Order No.	1st - 3rd	4th	5th	6th	7th		8th	9th	10th h	11th h	12th h		13th h	14th h	15th h	16th h
	□□□	□	□	□	□	–	□	□	□	□	□	–	□	□	□	□
SIRIUS power contactors	**3 R T**															
1. generation		**1**														
Device type (e. g. 0 = 3-pole motor contactor, 3 = 4-pole AC-1 contactor)			□													
Size of the contactor (3 = S2, 4 = S3, 5 = S6, etc.)				□												
Power dependent on size (e. g. 45 = 37 kW)					□											
Connection type (1 = screw, 2 = spring)							□									
Operating range / solenoid coil circuit (e. g. A = AC standard / without)								□								
Rated control supply voltage (e. g. P0 = 230 V, 50 Hz)									□	□						
Auxiliary switches (e. g. S3: 0 = without auxiliary switches											□					
Special version													□	□	□	□
Example	**3 R T**	**1**	**0**	**4**	**5**	**–**	**1**	**A**	**P**	**0**	**0**					

The Order No. scheme is presented here merely for information purposes and for better understanding of the logic behind the order numbers.

For your orders, please use the order numbers quote in the catalog and in the Industry Mall.

Selection and ordering data

AC operation

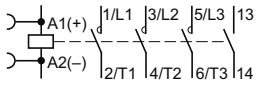
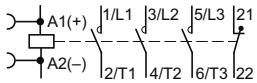
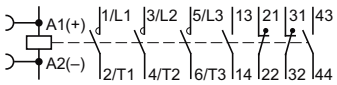
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 1.-1AP04-3MA0

3RT10 1.-2AP04-3MA0

3RT10 1.-1A...

3RT10 1.-2A...

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50/60 Hz	DT	Screw terminals		DT	Spring-type terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
400 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC						
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S00[1]												
• With auxiliary contact 1 NO, Ident. No. **10** 												
• With auxiliary contact 1 NC, Ident. No. **01** 												
7	**3**	18	**10**	1	--	24	▶	**3RT10 15-1AB01**		▶	**3RT10 15-2AB01**	
						110	▶	**3RT10 15-1AF01**		▶	**3RT10 15-2AF01**	
						230	▶	**3RT10 15-1AP01**		▶	**3RT10 15-2AP01**	
			01	--	1	24	▶	**3RT10 15-1AB02**		▶	**3RT10 15-2AB02**	
						110	▶	**3RT10 15-1AF02**		▶	**3RT10 15-2AF02**	
						230	▶	**3RT10 15-1AP02**		▶	**3RT10 15-2AP02**	
9	**4**	22	**10**	1	--	24	▶	**3RT10 16-1AB01**		▶	**3RT10 16-2AB01**	
						110	▶	**3RT10 16-1AF01**		▶	**3RT10 16-2AF01**	
						230	▶	**3RT10 16-1AP01**		▶	**3RT10 16-2AP01**	
			01	--	1	24	▶	**3RT10 16-1AB02**		▶	**3RT10 16-2AB02**	
						110	▶	**3RT10 16-1AF02**		▶	**3RT10 16-2AF02**	
						230	▶	**3RT10 16-1AP02**		▶	**3RT10 16-2AP02**	
12	**5,5**	22	**10**	1	--	24	▶	**3RT10 17-1AB01**		▶	**3RT10 17-2AB01**	
						110	▶	**3RT10 17-1AF01**		▶	**3RT10 17-2AF01**	
						230	▶	**3RT10 17-1AP01**		▶	**3RT10 17-2AP01**	
			01	--	1	24	▶	**3RT10 17-1AB02**		B	**3RT10 17-2AB02**	
						110	▶	**3RT10 17-1AF02**		▶	**3RT10 17-2AF02**	
						230	▶	**3RT10 17-1AP02**		▶	**3RT10 17-2AP02**	
With permanently mounted auxiliary switch block for safety applications according to SUVA 												
7	**3**	18	**22**	2	2	230	▶	**3RT10 15-1AP04-3MA0**		B	**3RT10 15-2AP04-3MA0**	
9	**4**	22	**22**	2	2	230	▶	**3RT10 16-1AP04-3MA0**		B	**3RT10 16-2AP04-3MA0**	
12	**5,5**	22	**22**	2	2	230	▶	**3RT10 17-1AP04-3MA0**		B	**3RT10 17-2AP04-3MA0**	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/50.

Multi-unit packing and reusable packaging see Catalog IC 10 · 2012, "Appendix" → "Ordering Notes", size S00 on request.

[1] For size S00: Coil operating range
at 50 Hz: 0,8 ... 1,1 × U_s,
at 60 Hz: 0,85 ... 1,1 × U_s.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RT10 contactors, 3-pole, 15 ... 250 kW

AC operation

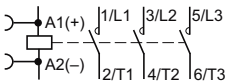
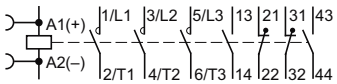
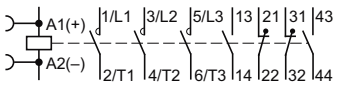
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 2.-1A.04

3RT10 2.-1AL24-3MA0

3RT10 2.-1A.00

3RT10 2.-3A.00

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	**Screw terminals**		DT	**Spring-type terminals** for coil terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
400 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC						
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S0												
												
9	**4**	40[1]	--	--	--	24	▶	**3RT10 23-1AB00**		B	**3RT10 23-3AB00**	
						110	▶	**3RT10 23-1AF00**		B	**3RT10 23-3AF00**	
						230	▶	**3RT10 23-1AP00**		▶	**3RT10 23-3AP00**	
12	**5,5**	40[1]	--	--	--	24	▶	**3RT10 24-1AB00**		B	**3RT10 24-3AB00**	
						110	▶	**3RT10 24-1AF00**		B	**3RT10 24-3AF00**	
						230	▶	**3RT10 24-1AP00**		▶	**3RT10 24-3AP00**	
17	**7,5**	40[1]	--	--	--	24	▶	**3RT10 25-1AB00**		B	**3RT10 25-3AB00**	
						110	▶	**3RT10 25-1AF00**		B	**3RT10 25-3AF00**	
						230	▶	**3RT10 25-1AP00**		▶	**3RT10 25-3AP00**	
25	**11**	40[1]	--	--	--	24	▶	**3RT10 26-1AB00**		B	**3RT10 26-3AB00**	
						110	▶	**3RT10 26-1AF00**		B	**3RT10 26-3AF00**	
						230	▶	**3RT10 26-1AP00**		▶	**3RT10 26-3AP00**	
With mounted auxiliary switch block (removable)[2]												
												
9	**4**	40[1]	**22**	2	2	24	▶	**3RT10 23-1AB04**			--	
						110	▶	**3RT10 23-1AF04**			--	
						230	▶	**3RT10 23-1AP04**			--	
12	**5,5**	40[1]	**22**	2	2	24	▶	**3RT10 24-1AB04**			--	
						110	▶	**3RT10 24-1AF04**			--	
						230	▶	**3RT10 24-1AP04**			--	
17	**7,5**	40[1]	**22**	2	2	24	▶	**3RT10 25-1AB04**			--	
						110	▶	**3RT10 25-1AF04**			--	
						230	▶	**3RT10 25-1AP04**			--	
25	**11**	40[1]	**22**	2	2	24	▶	**3RT10 26-1AB04**			--	
						110	▶	**3RT10 26-1AF04**			--	
						230	▶	**3RT10 26-1AP04**			--	
With permanently mounted auxiliary switch block for safety applications according to SUVA						At 50/60 Hz V AC						
												
12	**5,5**	40[1]	**22**	2	2	230	B	**3RT10 24-1AL24-3MA0**			--	
17	**7,5**	40[1]	**22**	2	2	230	A	**3RT10 25-1AL24-3MA0**			--	
25	**11**	40[1]	**22**	2	2	230	A	**3RT10 26-1AL24-3MA0**			--	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/50.

Multi-unit packing and reusable packaging see Catalog IC 10 · 2012, "Appendix" → "Ordering Notes", size S0 on request.

[1] Minimum conductor cross-section 10 mm².

[2] Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2 NO + 2 NC according to EN 50012; 22).

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

AC operation

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 3.-1A.04

3RT10 3.-1A.00

3RT10 3.-3A.00

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	**Screw terminals**		DT	**Spring-type terminals** for coil terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
500 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC						
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S2												
32	**15**	50	--	--	--	24	▶	**3RT10 34-1AB00**		B	**3RT10 34-3AB00**	
						110	▶	**3RT10 34-1AF00**		B	**3RT10 34-3AF00**	
						230	▶	**3RT10 34-1AP00**		▶	**3RT10 34-3AP00**	
40	**18,5**	60	--	--	--	24	▶	**3RT10 35-1AB00**		B	**3RT10 35-3AB00**	
						110	▶	**3RT10 35-1AF00**		B	**3RT10 35-3AF00**	
						230	▶	**3RT10 35-1AP00**		▶	**3RT10 35-3AP00**	
50	**22**	60	--	--	--	24	▶	**3RT10 36-1AB00**		B	**3RT10 36-3AB00**	
						110	▶	**3RT10 36-1AF00**		B	**3RT10 36-3AF00**	
						230	▶	**3RT10 36-1AP00**		▶	**3RT10 36-3AP00**	
With mounted auxiliary switch block (removable)[1)]												
32	**15**	50	**22**	2	2	24	▶	**3RT10 34-1AB04**			--	
						110	▶	**3RT10 34-1AF04**			--	
						230	▶	**3RT10 34-1AP04**			--	
40	**18,5**	60	**22**	2	2	24	▶	**3RT10 35-1AB04**			--	
						110	▶	**3RT10 35-1AF04**			--	
						230	▶	**3RT10 35-1AP04**			--	
50	**22**	60	**22**	2	2	24	▶	**3RT10 36-1AB04**			--	
						110	▶	**3RT10 36-1AF04**			--	
						230	▶	**3RT10 36-1AP04**			--	
With permanently mounted auxiliary switch block for safety applications according to SUVA												
32	**15**	50	**22**	2	2	230	B	**3RT10 34-1AP04-3MA0**			--	
40	**18,5**	60	**22**	2	2	230	B	**3RT10 35-1AP04-3MA0**			--	
50	**22**	60	**22**	2	2	230	B	**3RT10 36-1AP04-3MA0**			--	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/50.

Multi-unit packing and reusable packaging see Catalog IC 10 · 2012, "Appendix" ➞ "Ordering Notes".

1) Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2 NO + 2 NC acc. to EN 50012; Ident. No. 22).

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RT10 contactors, 3-pole, 15 ... 250 kW

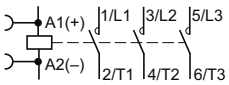
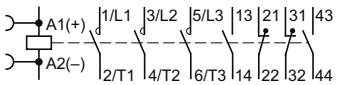
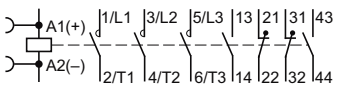
AC operation

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 4.-1A.04

3RT10 4.-1A.00

3RT10 4.-3A.00

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	**Screw terminals**		DT	**Spring-type terminals** for coil terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
500 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC						
For screw and snap-on mounting onto TH 35 and TH 75 standard mounting rail												
Size S3												
												
65	**30**	100	--	--	--	24	▶	**3RT10 44-1AB00**		B	**3RT10 44-3AB00**	
						110	▶	**3RT10 44-1AF00**		B	**3RT10 44-3AF00**	
						230	▶	**3RT10 44-1AP00**		▶	**3RT10 44-3AP00**	
80	**37**	120	--	--	--	24	▶	**3RT10 45-1AB00**		B	**3RT10 45-3AB00**	
						110	▶	**3RT10 45-1AF00**		B	**3RT10 45-3AF00**	
						230	▶	**3RT10 45-1AP00**		▶	**3RT10 45-3AP00**	
95	**45**	120	--	--	--	24	▶	**3RT10 46-1AB00**		B	**3RT10 46-3AB00**	
						110	▶	**3RT10 46-1AF00**		B	**3RT10 46-3AF00**	
						230	▶	**3RT10 46-1AP00**		▶	**3RT10 46-3AP00**	
With mounted auxiliary switch block (removable)[1)]												
												
65	**30**	100	**22**	2	2	24	▶	**3RT10 44-1AB04**			--	
						110	▶	**3RT10 44-1AF04**			--	
						230	▶	**3RT10 44-1AP04**			--	
80	**37**	120	**22**	2	2	24	B	**3RT10 45-1AB04**			--	
						110	▶	**3RT10 45-1AF04**			--	
						230	▶	**3RT10 45-1AP04**			--	
95	**45**	120	**22**	2	2	24	B	**3RT10 46-1AB04**			--	
						110	▶	**3RT10 46-1AF04**			--	
						230	▶	**3RT10 46-1AP04**			--	
With permanently mounted auxiliary switch block for safety applications according to SUVA												
												
65	**30**	100	**22**	2	2	230	▶	**3RT10 44-1AP04-3MA0**			--	
80	**37**	120	**22**	2	2	230	B	**3RT10 45-1AP04-3MA0**			--	
95	**45**	120	**22**	2	2	230	▶	**3RT10 46-1AP04-3MA0**			--	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/51.

[1)] Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2 NO + 2 NC acc. to EN 50012; Ident. No. 22).

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

DC operation · DC solenoid system

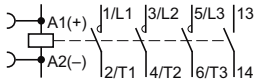
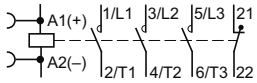
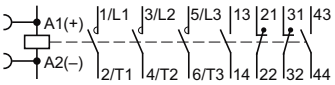
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 1.-1BB44-3MA0

3RT10 1.-2BB44-3MA0

3RT10 1.-1B...

3RT10 1.-2B...

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	Screw terminals		DT	Spring-type terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
400 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V DC						
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S00												
• With auxiliary contact 1 NO, Ident. No. **10**												
												
• With auxiliary contact 1 NC, Ident. No. **01**												
												
7	**3**	18	**10**	1	--	24	▶	**3RT10 15-1BB41**		▶	**3RT10 15-2BB41**	
						220	A	**3RT10 15-1BM41**		B	**3RT10 15-2BM41**	
			01	--	1	24	▶	**3RT10 15-1BB42**		▶	**3RT10 15-2BB42**	
						220	B	**3RT10 15-1BM42**		B	**3RT10 15-2BM42**	
9	**4**	22	**10**	1	--	24	▶	**3RT10 16-1BB41**		▶	**3RT10 16-2BB41**	
						220	B	**3RT10 16-1BM41**		B	**3RT10 16-2BM41**	
			01	--	1	24	▶	**3RT10 16-1BB42**		▶	**3RT10 16-2BB42**	
						220	B	**3RT10 16-1BM42**		B	**3RT10 16-2BM42**	
12	**5,5**	22	**10**	1	--	24	▶	**3RT10 17-1BB41**		▶	**3RT10 17-2BB41**	
						220	B	**3RT10 17-1BM41**		B	**3RT10 17-2BM41**	
			01	--	1	24	▶	**3RT10 17-1BB42**		▶	**3RT10 17-2BB42**	
						220	B	**3RT10 17-1BM42**		B	**3RT10 17-2BM42**	
With permanently mounted auxiliary switch block for safety applications according to SUVA Terminal designations according to EN 50012												
												
7	**3**	18	**22**	2	2	24	▶	**3RT10 15-1BB44-3MA0**		B	**3RT10 15-2BB44-3MA0**	
9	**4**	22	**22**	2	2	24	▶	**3RT10 16-1BB44-3MA0**		A	**3RT10 16-2BB44-3MA0**	
12	**5,5**	22	**22**	2	2	24	▶	**3RT10 17-1BB44-3MA0**		B	**3RT10 17-2BB44-3MA0**	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/51.

Multi-unit packing and reusable packaging see Catalog IC 10 · 2012, "Appendix" ➞ "Ordering Notes", size S00 on request.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

Power Contactors for Switching Motors

3RT10 contactors, 3-pole, 15 ... 250 kW

DC operation · DC solenoid system

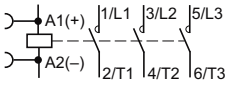
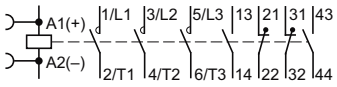
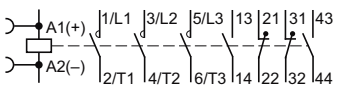
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B


3RT10 2.-3B.44


3RT10 2.-1BB44-3MA0


3RT10 2.-1B.40


3RT10 2.-3B.40

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	**Screw terminals**		DT	**Spring-type terminals** for coil terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
400 V	**400 V**	690 V		NO	NC							
A	**kW**	A				V DC						
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S0												
												
9	**4**	40[1]	--	--	--	24	▶	**3RT10 23-1BB40**		▶	**3RT10 23-3BB40**	
						220	B	**3RT10 23-1BM40**		B	**3RT10 23-3BM40**	
12	**5,5**	40[1]	--	--	--	24	▶	**3RT10 24-1BB40**		▶	**3RT10 24-3BB40**	
						220	A	**3RT10 24-1BM40**		B	**3RT10 24-3BM40**	
17	**7,5**	40[1]	--	--	--	24	▶	**3RT10 25-1BB40**		▶	**3RT10 25-3BB40**	
						220	A	**3RT10 25-1BM40**		B	**3RT10 25-3BM40**	
25	**11**	40[1]	--	--	--	24	▶	**3RT10 26-1BB40**		▶	**3RT10 26-3BB40**	
						220	A	**3RT10 26-1BM40**		B	**3RT10 26-3BM40**	
With mounted auxiliary switch block (removable)[2] Terminal designations according to DIN 50012												
												
9	**4**	40[1]	**22**	2	2	24	▶	**3RT10 23-1BB44**			--	
						220	B	**3RT10 23-1BM44**			--	
12	**5,5**	40[1]	**22**	2	2	24	▶	**3RT10 24-1BB44**			--	
						220	B	**3RT10 24-1BM44**			--	
17	**7,5**	40[1]	**22**	2	2	24	▶	**3RT10 25-1BB44**			--	
						220	B	**3RT10 25-1BM44**			--	
25	**11**	40[1]	**22**	2	2	24	▶	**3RT10 26-1BB44**			--	
						220	B	**3RT10 26-1BM44**			--	
With permanently mounted auxiliary switch block for safety applications according to SUVA Terminal designations according to DIN 50012												
												
12	**5,5**	40[1]	**22**	2	2	24	A	**3RT10 24-1BB44-3MA0**			--	
17	**7,5**	40[1]	**22**	2	2	24	A	**3RT10 25-1BB44-3MA0**			--	
25	**11**	40[1]	**22**	2	2	24	A	**3RT10 26-1BB44-3MA0**			--	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/51.

Multi-unit packing and reusable packaging see Catalog IC 10 · 2012, "Appendix" → "Ordering Notes", size S0 on request.

[1] Minimum conductor cross-section 10 mm².

[2] Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2NO + 2NC according to EN 50012; 22E).

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

DC operation · DC solenoid system

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 3.-1B.44

3RT10 3.-1B.40

3RT10 3.-3B.40

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	**Screw terminals**		DT	**Spring-type terminals** for coil terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
500 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V DC						
For screw and snap-on mounting onto TH 35 standard mounting rail												
Size S2												
32	**15**	50	--	--	--	24	▶	**3RT10 34-1BB40**		▶	**3RT10 34-3BB40**	
						220	B	**3RT10 34-1BM40**		B	**3RT10 34-3BM40**	
40	**18,5**	60	--	--	--	24	▶	**3RT10 35-1BB40**		▶	**3RT10 35-3BB40**	
						220	B	**3RT10 35-1BM40**		B	**3RT10 35-3BM40**	
50	**22**	60	--	--	--	24	▶	**3RT10 36-1BB40**		▶	**3RT10 36-3BB40**	
						220	B	**3RT10 36-1BM40**		B	**3RT10 36-3BM40**	
With mounted auxiliary switch block (removable)[1)]												
32	**15**	50	**22**	2	2	24	▶	**3RT10 34-1BB44**			--	
						220	B	**3RT10 34-1BM44**			--	
40	**18,5**	60	**22**	2	2	24	▶	**3RT10 35-1BB44**			--	
						220	B	**3RT10 35-1BM44**			--	
50	**22**	60	**22**	2	2	24	▶	**3RT10 36-1BB44**			--	
						220	B	**3RT10 36-1BM44**			--	
With permanently mounted auxiliary switch block for safety applications according to SUVA												
32	**15**	50	**22**	2	2	24	B	**3RT10 34-1BB44-3MA0**			--	
40	**18,5**	60	**22**	2	2	24	B	**3RT10 35-1BB44-3MA0**			--	
50	**22**	60	**22**	2	2	24	B	**3RT10 36-1BB44-3MA0**			--	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/51.

Multi-unit packing and reusable packaging see Catalog IC 10 · 2012, "Appendix" ➞ "Ordering Notes".

1) Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2 NO + 2 NC acc. to EN 50012; Ident. No. 22).

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RT10 contactors, 3-pole, 15 ... 250 kW

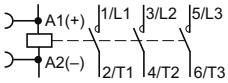
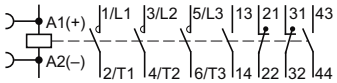
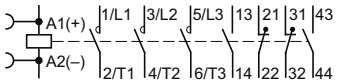
DC operation · DC solenoid system

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

3RT10 4.-1B.44

3RT10 4.-1B.40

3RT10 4.-3B.40

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	Screw terminals		DT	Spring-type terminals for coil terminals	
AC-2 and AC-3, T_u: Up to 60 °C		AC-1, T_u: 40 °C										
Operational current I_e up to	Rating of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price € per PU		Order No.	Price € per PU
500 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V DC						
For screw and snap-on mounting onto TH 35 and TH 75 standard mounting rail												
Size S3												
												
65	**30**	100	--	--	--	24	▶	**3RT10 44-1BB40**		▶	**3RT10 44-3BB40**	
						220	B	**3RT10 44-1BM40**		B	**3RT10 44-3BM40**	
80	**37**	120	--	--	--	24	▶	**3RT10 45-1BB40**		▶	**3RT10 45-3BB40**	
						220	B	**3RT10 45-1BM40**		B	**3RT10 45-3BM40**	
95	**45**	120	--	--	--	24	▶	**3RT10 46-1BB40**		▶	**3RT10 46-3BB40**	
						220	B	**3RT10 46-1BM40**		B	**3RT10 46-3BM40**	
With mounted auxiliary switch block (removable)[1)]												
												
65	**30**	100	**22**	2	2	24	▶	**3RT10 44-1BB44**			**--**	
						220	B	**3RT10 44-1BM44**			**--**	
80	**37**	120	**22**	2	2	24	▶	**3RT10 45-1BB44**			**--**	
						220	B	**3RT10 45-1BM44**			**--**	
95	**45**	120	**22**	2	2	24	▶	**3RT10 46-1BB44**			**--**	
						220	B	**3RT10 46-1BM44**			**--**	
With permanently mounted auxiliary switch block for safety applications according to SUVA												
												
65	**30**	100	**22**	2	2	24	▶	**3RT10 44-1BB44-3MA0**			**--**	
80	**37**	120	**22**	2	2	24	▶	**3RT10 45-1BB44-3MA0**			**--**	
95	**45**	120	**22**	2	2	24	▶	**3RT10 46-1BB44-3MA0**			**--**	

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/51.

1) Order No. for the auxiliary switch block (removable): 3RH19 21-1HA22 (2 NO + 2 NC acc. to EN 50012; Ident. No. 22).

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

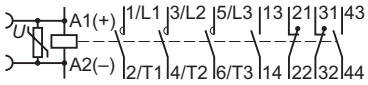
AC/DC operation (40 Hz to 60 Hz, DC)

- Withdrawable coils with integrated surge suppression (varistor)
- Auxiliary and control conductors: Screw or spring-type terminals
- Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals[1)]

3RT1. 5.

3RT1. 6.

3RT1. 7.

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C Operational current I_e up to 500 V	Ratings of induction motors at 50 Hz and 230 V	**400 V**	500 V	690 V	AC-1, T_u: 40 °C Operational current I_e up to 690 V	Auxiliary contacts, lateral Version NO	NC	Rated control supply voltage U_s	DT	Order No.	Price € per PU	PU (UNIT, SET, M)	PS*	PG
	A	kW	**kW**	kW	kW	A			V AC/DC						
Conventional operating mechanisms															
											**Screw terminals**				
S6	115	37	**55**	75	110	160	2	2	110 ... 127	▶	**3RT10 54-1AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 54-1AP36**		1	1 unit	41B
	150	45	**75**	90	132	185	2	2	110 ... 127	▶	**3RT10 55-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 55-6AP36**		1	1 unit	41B
	185	55	**90**	110	160	215	2	2	110 ... 127	▶	**3RT10 56-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 56-6AP36**		1	1 unit	41B
S10	225	55	**110**	160	200	275	2	2	110 ... 127	▶	**3RT10 64-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 64-6AP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	110 ... 127	▶	**3RT10 65-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 65-6AP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	110 ... 127	▶	**3RT10 66-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 66-6AP36**		1	1 unit	41B
S12	400	132	**200**	250	400	430	2	2	110 ... 127	▶	**3RT10 75-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 75-6AP36**		1	1 unit	41B
	500	160	**250**	355	400	610	2	2	110 ... 127	▶	**3RT10 76-6AF36**		1	1 unit	41B
									220 ... 240	▶	**3RT10 76-6AP36**		1	1 unit	41B
											Spring-type terminals for coil and auxiliary switch terminals				
S6	115	37	**55**	75	110	160	2	2	110 ... 127	B	**3RT10 54-3AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 54-3AP36**		1	1 unit	41B
	150	45	**75**	90	132	185	2	2	110 ... 127	B	**3RT10 55-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 55-2AP36**		1	1 unit	41B
	185	55	**90**	110	160	215	2	2	110 ... 127	B	**3RT10 56-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 56-2AP36**		1	1 unit	41B
S10	225	55	**110**	160	200	275	2	2	110 ... 127	B	**3RT10 64-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 64-2AP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	110 ... 127	B	**3RT10 65-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 65-2AP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	110 ... 127	B	**3RT10 66-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 66-2AP36**		1	1 unit	41B
S12	400	132	**200**	250	400	430	2	2	110 ... 127	B	**3RT10 75-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 75-2AP36**		1	1 unit	41B
	500	160	**250**	355	400	610	2	2	110 ... 127	B	**3RT10 76-2AF36**		1	1 unit	41B
									220 ... 240	B	**3RT10 76-2AP36**		1	1 unit	41B

Other voltages according to page 3/26 on request.
Accessories see page 3/35.
Spare parts see page 3/52.

[1)] Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with busbar connections instead of box terminals. Without additional price.
In the 8th position of the Order No. the **"1"** must be replaced with **"6"** for screw terminals, e. g. 3RT10 54-**6**A.36; for spring-type terminals the **"3"** must be replaced by **"2"**, e. g. 3RT10 54-**2**A.36.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RT10 contactors, 3-pole, 15 ... 250 kW

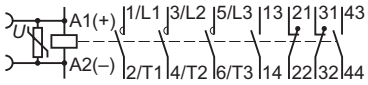
AC/DC operation (40 Hz to 60 Hz, DC)

- Withdrawable coils with integrated surge suppression (varistor)
- Auxiliary and control conductors: Screw or spring-type terminals
- Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals[1)]

3RT1. 5.

3RT1. 6.

3RT1. 7.

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C Operational current I_e up to 500 V	Ratings of induction motors at 50 Hz and 230 V	**400 V**	500 V	690 V	AC-1, T_u: 40 °C Operational current I_e up to 690 V	Auxiliary contacts, lateral Version NO	NC	Rated control supply voltage U_s	DT	Order No.	Price € per PU	PU (UNIT, SET, M)	PS*	PG
	A	kW	**kW**	kW	kW	A			V AC/DC						
Solid-state operating mechanisms · for 24 V DC PLC output															
											**Screw terminals**				
S6	115	37	**55**	75	110	160	2	2	96 ... 127	A	**3RT10 54-1NF36**		1	1 unit	41B
									200 ... 277	►	**3RT10 54-1NP36**		1	1 unit	41B
	150	45	**75**	90	132	185	2	2	96 ... 127	A	**3RT10 55-6NF36**		1	1 unit	41B
									200 ... 277	►	**3RT10 55-6NP36**		1	1 unit	41B
	185	55	**90**	110	160	215	2	2	96 ... 127	A	**3RT10 56-6NF36**		1	1 unit	41B
									200 ... 277	►	**3RT10 56-6NP36**		1	1 unit	41B
S10	225	55	**110**	160	200	275	2	2	96 ... 127	A	**3RT10 64-6NF36**		1	1 unit	41B
									200 ... 277	A	**3RT10 64-6NP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	96 ... 127	A	**3RT10 65-6NF36**		1	1 unit	41B
									200 ... 277	A	**3RT10 65-6NP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT10 66-6NF36**		1	1 unit	41B
									200 ... 277	A	**3RT10 66-6NP36**		1	1 unit	41B
S12	400	132	**200**	250	400	430	2	2	96 ... 127	A	**3RT10 75-6NF36**		1	1 unit	41B
									200 ... 277	A	**3RT10 75-6NP36**		1	1 unit	41B
	500	160	**250**	355	400	610	2	2	96 ... 127	A	**3RT10 76-6NF36**		1	1 unit	41B
									200 ... 277	A	**3RT10 76-6NP36**		1	1 unit	41B
											Spring-type terminals for coil and auxiliary switch terminals				
S6	115	37	**55**	75	110	160	2	2	96 ... 127	B	**3RT10 54-3NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 54-3NP36**		1	1 unit	41B
	150	45	**75**	90	132	185	2	2	96 ... 127	B	**3RT10 55-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 55-2NP36**		1	1 unit	41B
	185	55	**90**	110	160	215	2	2	96 ... 127	B	**3RT10 56-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 56-2NP36**		1	1 unit	41B
S10	225	55	**110**	160	200	275	2	2	96 ... 127	B	**3RT10 64-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 64-2NP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	96 ... 127	B	**3RT10 65-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 65-2NP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT10 66-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 66-2NP36**		1	1 unit	41B
S12	400	132	**200**	250	400	430	2	2	96 ... 127	B	**3RT10 75-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 75-2NP36**		1	1 unit	41B
	500	160	**250**	355	400	610	2	2	96 ... 127	B	**3RT10 76-2NF36**		1	1 unit	41B
									200 ... 277	B	**3RT10 76-2NP36**		1	1 unit	41B

Other voltages according to page 3/26 on request.
Accessories see page 3/39.
Spare parts see page 3/53.

[1)] Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with busbar connections instead of box terminals. Without additional price.
In the 8th position of the Order No. the **"1"** must be replaced with **"6"** for screw terminals, e. g. 3RT10 54-**6**A.36; for spring-type terminals the **"3"** must be replaced by **"2"**, e. g. 3RT10 54-**2**A.36.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

AC/DC operation (40 Hz to 60 Hz, DC)

- Withdrawable coils with integrated surge suppression (varistor)
- Auxiliary and control conductors: Screw terminals
- Main conductors: busbar connections, for 3RT10 54 (55 kW) box terminals[1)]
- Indication of remaining lifetime (RLT)

3RT10 56-6P..

3RT10 56-6Q..

Size	Rated data						Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, T_u: Up to 60 °C					AC-1, T_u: 40 °C	Version				Order No.	Price € per PU			
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e up to									
	500 V	230 V	**400 V**	500 V	690 V	690 V									
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC						
Solid-state operating mechanisms · with 24 V DC PLC relay output · with RLT															
S6	115	37	**55**	75	110	160	1	1	96 ... 127	B	**3RT10 54-1PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 54-1PP35**		1	1 unit	41B
	150	45	**75**	90	132	185	1	1	96 ... 127	B	**3RT10 55-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 55-6PP35**		1	1 unit	41B
	185	55	**90**	110	160	215	1	1	96 ... 127	B	**3RT10 56-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 56-6PP35**		1	1 unit	41B
S10	225	55	**110**	160	200	275	1	1	96 ... 127	B	**3RT10 64-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 64-6PP35**		1	1 unit	41B
	265	75	**132**	160	250	330	1	1	96 ... 127	B	**3RT10 65-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 65-6PP35**		1	1 unit	41B
	300	90	**160**	200	250	330	1	1	96 ... 127	B	**3RT10 66-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 66-6PP35**		1	1 unit	41B
S12	400	132	**200**	250	400	430	1	1	96 ... 127	B	**3RT10 75-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 75-6PP35**		1	1 unit	41B
	500	160	**250**	355	400	610	1	1	96 ... 127	B	**3RT10 76-6PF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 76-6PP35**		1	1 unit	41B
Solid-state operating mechanisms · with AS-Interface · with RLT															
S6	115	37	**55**	75	110	160	1	1	96 ... 127	B	**3RT10 54-1QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 54-1QP35**		1	1 unit	41B
	150	45	**75**	90	132	185	1	1	96 ... 127	B	**3RT10 55-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 55-6QP35**		1	1 unit	41B
	185	55	**90**	110	160	215	1	1	96 ... 127	B	**3RT10 56-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 56-6QP35**		1	1 unit	41B
S10	225	55	**110**	160	200	275	1	1	96 ... 127	B	**3RT10 64-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 64-6QP35**		1	1 unit	41B
	265	75	**132**	160	250	330	1	1	96 ... 127	B	**3RT10 65-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 65-6QP35**		1	1 unit	41B
	300	90	**160**	200	250	330	1	1	96 ... 127	B	**3RT10 66-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 66-6QP35**		1	1 unit	41B
S12	400	132	**200**	250	400	430	1	1	96 ... 127	B	**3RT10 75-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 75-6QP35**		1	1 unit	41B
	500	160	**250**	355	400	610	1	1	96 ... 127	B	**3RT10 76-6QF35**		1	1 unit	41B
									200 ... 277	B	**3RT10 76-6QP35**		1	1 unit	41B

Other voltages according to page 3/26 on request.
Accessories see page 3/39.
Spare parts see page 3/53.

[1)] Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with busbar connections instead of box terminals.
Without additional price. In the 8th position of the Order No. the **"1"** must be replaced with **"6"**, e. g. 3RT10 54-**6**..35.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate

3RT10 contactors, 3-pole, 15 ... 250 kW

Options

Rated control supply voltages, possible on request (the 10th and 11th position of the order number must be changed)

Rated control supply voltage U_s	Contactor type	3RT10 1	3RT10 2, 3RT10 3, 3RT10 4	3RT14 4	3RT13 1, 3RT15 1	3RT13 2 ... 3RT13 4, 3RT15 2, 3RT15 3	3RT16 17, 3RT16 27, 3RT16 47
	Size	S00	S0, S2, S3	S3	S00	S0, S2, S3	S00, S0, S3
Sizes S2 and S3							
AC operation							
Solenoid coils for 50 Hz[1]							
24 V AC		B0	B0	B0	B0	B0	B0
42 V AC		D0	D0	D0	D0	--	--
48 V AC		H0	H0	H0	H0	--	--
110 V AC		F0	F0	F0	F0	F0	F0
230 V AC		P0	P0	P0	P0	P0	P0
240 V AC		U0	U0	U0	U0	U0	U0
400 V AC		V0	V0	V0	V0	V0	V0
Solenoid coils for 50 and 60 Hz[1]							
24 V AC		B0	C2	C2	B0	C2	C2
42 V AC		D0	D2	D2	D0	D2	--
48 V AC		H0	H2	H2	H0	H2	--
110 V AC		F0	G2	G2	F0	G2	G2
220 V AC		N2	N2	N2	N2	N2	N2
230 V AC		P0	L2	L2	P0	L2	L2
240 V AC		P2	P2	P2	P2	P2	P2
Solenoid coils (for USA and Canada[2]**))**							
50 Hz	**60 Hz**						
110 V AC	120 V AC	K6	K6	K6	K6	K6	K6
220 V AC	240 V AC	P6	P6	P6	P6	P6	P6
Solenoid coils (for Japan)							
50/60 Hz[3]	**60 Hz**[4]						
100 V AC	110 V AC	G6	G6	G6	G6	G6	G6
200 V AC	220 V AC	N6	N6	N6	N6	N6	N6
400 V AC	440 V AC	R6	R6	R6	R6	R6	R6
DC operation							
12 V DC		A4	--	--	A4	--	--
24 V DC		B4	B4	B4	B4	B4	--
42 V DC		D4	D4	D4	D4	D4	--
48 V DC		W4	W4	W4	W4	--	--
60 V DC		E4	E4	E4	--	--	--
110 V DC		F4	F4	F4	F4	F4	--
125 V DC		G4	G4	G4	G4	G4	--
220 V DC		M4	M4	M4	M4	M4	--
230 V DC		P4	P4	P4	P4	--	--

Examples

AC operation	3RT10 34-1A**P0**0	Contactor with screw terminals; with solenoid coil for 50 Hz for rated control supply voltage 230 V AC.
	3RT10 34-1A**G2**0	Contactor with screw terminals; with solenoid coil for 50/60 Hz for rated control supply voltage 110 V AC.
DC operation	3RT10 34-3B**B4**0	Contactor with spring-type terminals; for rated control supply voltage 24 V DC.
	3RT10 34-3B**G4**0	Contactor with spring-type terminals; for rated control supply voltage 125 V DC.

Rated control supply voltage U_s	Contactor type	3RT1. 5.-.A 3RT1. 6.-.A 3RT1. 7.-.A	Rated control supply voltage U_s	Contactor type	3RT1. 5.-.N 3RT1. 6.-.N 3RT1. 7.-.N	3RT1. 5.-.P/Q 3RT1. 6.-.P/Q 3RT1. 7.-.P/Q
$U_{s\,min}$ ... $U_{s\,max}$[5]	Size	S6, S10, S12	$U_{s\,min}$ ... $U_{s\,max}$[5]	Size	S6, S10, S12	S6, S10, S12
Sizes S6 to S12						
UC operation (AC 40 ... 60 Hz, DC)						
Conventional operating mechanisms			**Solid-state operating mechanism**			
23 ... 26 V AC/DC		B3	21 ... 27.3 V AC/DC		B3	--
42 ... 48 V AC/DC		D3	96 ... 127 V AC/DC		F3	F3
110 ... 127 V AC/DC		F3	200 ... 277 V AC/DC		P3	P3
200 ... 220 V AC/DC		M3				
220 ... 240 V AC/DC		P3				
240 ... 277 V AC/DC		U3				
380 ... 420 V AC/DC		V3				
440 ... 480 V AC/DC		R3				
500 ... 550 V AC/DC		S3				
575 ... 600 V AC/DC		T3				

1) Coil operating range:
at 50 Hz: 0,8 to 1.1 x U_s
at 60 Hz: 0.85 to 1.1 x U_s.

2) Coil operating range (sizes S2 and S3):
at 50 Hz and 60 Hz: 0.8 to 1.1 x U_s.

3) Coil operating range (sizes S2 and S3):
at 50 Hz: 0,8 to 1.1 x U_s
at 60 Hz: 0.85 to 1.1 x U_s.

4) Coil operating range:
at 60 Hz: 0.8 to 1.1 x U_s.

5) Operating range:
0.8 x $U_{s\,min}$ to 1.1 x $U_{s\,max}$.

Overview

UC operation

The contactors can be operated with AC (40 to 60 Hz) as well as with DC.

Operating mechanism types

Two types of solenoid operation are available:
- Conventional operating mechanism, version 3RT12 . .-.A
- Solid-state operating mechanism, version 3RT12 . .-.N

Withdrawable coils

For simple coil replacement, e. g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Vacuum interrupters

In contrast with the 3RT10 contactors – the main contacts operate in air under atmospheric conditions – the contact gaps of the 3RT12 vacuum contactors are contained in hermetically enclosed vacuum contact tubes. Neither arcs nor arcing gases are produced. The particular benefit of 3RT12 vacuum contactors, however, is that their electrical endurance is at least twice as long as that of 3RT10 contactors. They are therefore particularly well suited to frequent switching in jogging/mixed operation, e. g. in crane control systems.

Note:

Vacuum contactors are basically unsuitable for switching DC voltage.

Auxiliary contact complement

The contactors can be fitted with up to 8 lateral auxiliary contacts (identical auxiliary switch blocks from S2 to S12). Of these, no more than 4 are permitted to be NC contacts.

SIRIUS 3RT12 vacuum contactors, 3-pole, 110 ... 250 kW

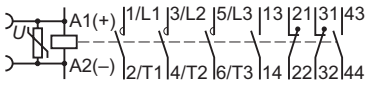
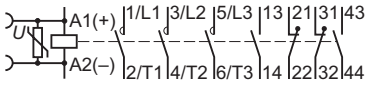
Selection and ordering data

UC operation (40 Hz up to 60 Hz, DC)

- Withdrawable coils with integrated surge suppression (varistor)
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections

3RT12 6.

3RT12 7.

Size	Rated data AC-2 and AC-3, T_u: Up to 60 °C					Rated data AC-1, T_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e up to					Order No.	Price € per PU			
	1000 V	230 V	**400 V**	500 V	690 V	1000 V									
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC						
Conventional operating mechanisms															
															
S10	225	55	**110**	160	200	330	2	2	110 ... 127	A	**3RT12 64-6AF36**		1	1 unit	41B
									220 ... 240	A	**3RT12 64-6AP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	110 ... 127	A	**3RT12 65-6AF36**		1	1 unit	41B
									220 ... 240	A	**3RT12 65-6AP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	110 ... 127	A	**3RT12 66-6AF36**		1	1 unit	41B
									220 ... 240	A	**3RT12 66-6AP36**		1	1 unit	41B
S12	400	132	**200**	250	400	610	2	2	110 ... 127	A	**3RT12 75-6AF36**		1	1 unit	41B
									220 ... 240	A	**3RT12 75-6AP36**		1	1 unit	41B
	500	160	**250**	355	500	610	2	2	110 ... 127	A	**3RT12 76-6AF36**		1	1 unit	41B
									220 ... 240	A	**3RT12 76-6AP36**		1	1 unit	41B
Solid-state operating mechanisms · for 24 V DC PLC output															
															
S10	225	55	**110**	160	200	330	2	2	96 ... 127	B	**3RT12 64-6NF36**		1	1 unit	41B
									200 ... 277	B	**3RT12 64-6NP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	96 ... 127	B	**3RT12 65-6NF36**		1	1 unit	41B
									200 ... 277	B	**3RT12 65-6NP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT12 66-6NF36**		1	1 unit	41B
									200 ... 277	B	**3RT12 66-6NP36**		1	1 unit	41B
S12	400	132	**200**	250	400	610	2	2	96 ... 127	B	**3RT12 75-6NF36**		1	1 unit	41B
									200 ... 277	B	**3RT12 75-6NP36**		1	1 unit	41B
	500	160	**250**	355	500	610	2	2	96 ... 127	B	**3RT12 76-6NF36**		1	1 unit	41B
									200 ... 277	B	**3RT12 76-6NP36**		1	1 unit	41B

Other voltages according to page 3/26 on request.
More vacuum contactors 335 kW and 450 kW (type 3TF68/69)
see Catalog IC 10 · 2012, Chapter 3.
Accessories see page 3/39.

*** You can order this quantity or a multiple thereof.**
Illustrations are approximate