Controls – Contactors and Contactor Assemblies

3



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Introduction

Overview





Size			S00			S0				S2		
Type			3RT10 1			3RT10 2				3RT10 3		
3RT10 contactors • 3RT12 and 3TF68/69 vacuum contactors												
Type AC, DC operation			**3RT10 15** (p. 3/12, 3/20)	**3RT10 16**	**3RT10 17**	**3RT10 23** (p. 3/14, 3/22)	**3RT10 24**	**3RT10 25**	**3RT10 26**	**3RT10 34** (p. 3/16, 3/24)	**3RT10 35**	**3RT10 36**
Type			--			--				--		
AC-3												
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 $I_a = 6 \times I_e$)												
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	front		**3RH19 11**		(p. 3/110)	**3RH19 21**		(p. 3/110)				
	lateral		--			**3RH19 21**		(p. 3/114)				
Terminal covers			--			--				**3RT19 36-4EA2**		(p. 3/124)
Box terminal blocks			--			--				--		
Surge suppressors			**3RT19 16**		(p. 3/119)	**3RT19 26**		(p. 3/119)		**3RT19 26/36**		(p. 3/119)
3RU1 and 3RB2 overload relays (protection equipment: overload relays)												
3RU11, thermal, CLASS 10			**3RU11 16**	0.1 ... 12 A	(Chap. 5)	**3RU11 26**	1.8 ... 25 A	(Chapter 5)		**3RU11 36**	5.5 ... 50 A	(Chapter 5)
3RB20/21, solid-state, CLASS 5, 10, 20 and 30			**3RB20 16** **3RB21 16**	0.1 ... 12 A	(Chap. 5)	**3RB20 26** **3RB21 26**	3 ... 25 A	(Chapter 5)		**3RB20 36** **3RB21 36**	6 ... 50 A	(Chapter 5)
3RB22/23, solid-state, CLASS 5, 10, 20 and 30			**3RB2. 83 + 3RB29 06**	0.3 ... 25 A	(Chapter 5)					**3RB2. 83 + 3RB29 06**	10 ... 100 A	(Chapter 5)
3RV10 motor starter protectors (protection equipment: circuit-breakers)												
Type			**3RV10 11**	0.18 ... 12 A	(Chap. 5)	**3RV10 21**	9 ... 25 A	(Chapter 5)		**3RV10 31**	22 ... 50 A	(Chapter 5)
Link modules			**3RA19 11**		(Chap. 5)	**3RA19 21**		(Chapter 5)		**3RA19 31**		(Chapter 5)
3RA13 reversing contactor assemblies												
Complete units	Type		**3RA13 15** (p. 3/39)	**3RA13 16**	**3RA13 17**		**3RA13 24** (p. 3/40)	**3RA13 25**	**3RA13 26**	**3RA13 34** (p. 3/41)	**3RA13 35**	**3RA13 36**
400 V		**kW**	**3**	**4**	**5.5**		**5.5**	**7.5**	**11**	**15**	**18.5**	**22**
Installation kits/wiring connectors			**3RA19 13-2A**		(p. 3/44)	**3RA19 23-2A**		(p. 3/44)		**3RA19 33-2A**		(p. 3/44)
Mechanical interlocks			**3RA19 12-2H**		(p. 3/45)	**3RA19 24-1A/-2B**		(p. 3/43)				
3RA14 contactor assemblies for wye-delta starting												
Complete units	Type		**3RA14 15** (p. 3/48)	**3RA14 16**		**3RA14 23** (p. 3/49)		**3RA14 25**		**3RA14 34** (p. 3/50)	**3RA14 35** (p. 3/51)	**3RA14 36**
400 V		**kW**	**5.5**	**7.5**		**11**		**15/18.5**		**22/30**	**37**	**45**
Installation kits/wiring connectors			**3RA19 13-2B**		(p. 3/53)	**3RA19 23-2B**		(p. 3/53)		**3RA19 33-2B/-2C**		(p. 3/53)







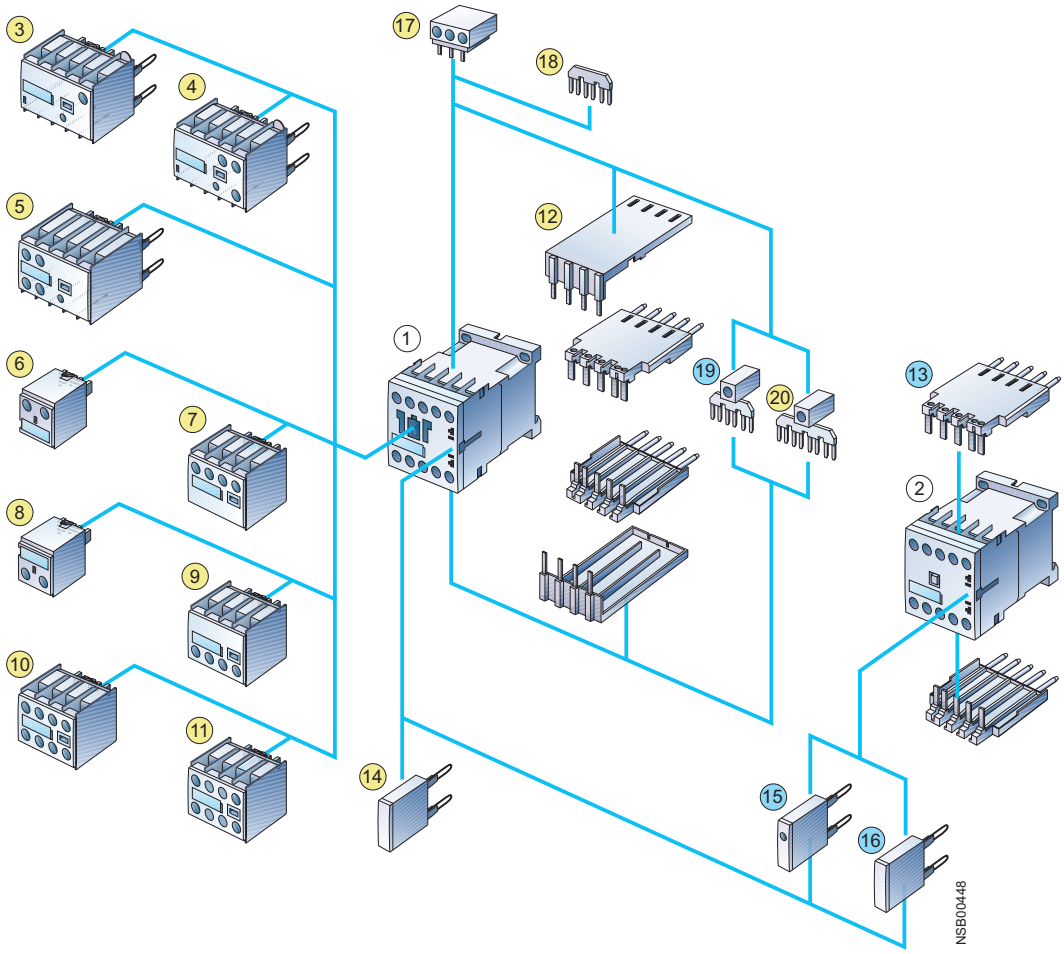
	S3 3RT1. 4			**S6** 3RT1. 5			**S10** 3RT1. 6			**S12** 3RT1. 7		**14** 3TF6	
	3RT10 44 (p. 3/18, 3/24)	**3RT10 45**	**3RT10 46**	**3RT10 54** (p. 3/26)	**3RT10 55**	**3RT10 56**	**3RT10 64** (p. 3/26)	**3RT10 65**	**3RT10 66**	**3RT10 75** (p. 3/26)	**3RT10 76**	**--**	
	--			--			**3RT12 64** (p. 3/30)	**3RT12 65**	**3RT12 66**	**3RT12 75** (p. 3/30)	**3RT12 76**	**3TF68** (p. 3/32)	**3TF69**
	65	80	95	115	150	185	225	265	300	400	500	630	820
	30	**37**	**45**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**	**335**	**450**
	18.5	22	22	37	45	55	55	75	90	132	160	200	260
	37	45	55	75	90	110	160	160	200	250	355	434	600
	45	55	55	110	132	160	200	250	250	400	400/500	600	800
	30	37	37	75	90	90	90/315	132/355	132/400	250/560	250/710	600	800
	30	**37**	**45**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**	**355**	**400**
	15.1	17.9	22	29	38	45	54/78	66/93	71/112	84/140	98/161	168	191
	100	**120**	**120**	**160**	**185**	**215**	**275/330**	**330**	**330**	**430/610**	**610**	**700**	**910**
	3RT14 46		(p. 3/56)	**3RT14 56**		(p. 3/57)	**3RT14 66**		(p. 3/57)	**3RT14 76** (p. 3/57)		**--**	
	140			**275**			**400**			**690**		**--**	
												-- **3TY7 561**	(p. 3/135)
	3RT19 46-4EA1/2		(p. 3/124)	**3RT19 56-4EA1/2/3**		(p. 3/124)	**3RT19 66-4EA1/2/3**		(p. 3/124)			**3TX7 686/696**	(p. 3/135)
	--			**3RT19 55/56-4G**		(p. 3/124)	**3RT19 66-4G**		(p. 3/124)			**--**	
				3RT19 56-1C (RC element) (p. 3/120)								**3TX7 572**	(p. 3/134)
	3RU11 46	18 ... 100 A (Chapter 5)		**--**			**--**			**--**		**--**	
	3RB20 46 **3RB21 46**	12.5 ... 100 A (Chap. 5)		**3RB20 56** **3RB21 56**	50 ... 200 A (Chapter 5)		**3RB20 66** **3RB21 66**	55 ... 630 A (Chapter 5)		**3RB20 66** **3RB21 66**	160 ... 630 A (Chapter 5)	**3RB20 66** **3RB21 66**	160 ... 630 A (Chapter 5)
				3RB2. 83 + 3RB29 56	20 ... 200 A (Chapter 5)		**3RB2. 83 + 3RB29 66**	63 ... 630 A (Chapter 5)					
	3RV10 41	45 ... 100 A (Chapter 5)		**--**			**--**			**--**		**--**	
	3RA19 41	(Chapter 5)		**--**			**--**			**--**		**--**	
	3RA13 44 (p. 3/42)	**3RA13 45**	**3RA13 46**	**--**			**--**			**--**		**3TD68 04** (p. 3/54)	
	30	**37**	**45**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**	**335**	
	3RA19 43-2A		(p. 3/44)	**3RA19 53-2A**		(p. 3/44)	**3RA19 63-2A**		(p. 3/44)	**3RA19 73-2A** (p. 3/44)		**3TX7 680-1A**	
				3RA19 54-2A		(p. 3/43)						**3TX7 686-1A**	
	3RA14 44 (p. 3/52)	**3RA14 45**		**--**			**--**			**--**		**3TE68 04** (p. 3/55)	
	55	**75**		**--**			**--**			**--**		**630**	
	3RA19 43-2B/-2C		(p. 3/53)	**3RA19 53-2B**		(p. 3/53)	**3RA19 63-2B**		(p. 3/53)	**3RA19 73-2B** (p. 3/53)		**3TX7 680-1B**	

General data

Overview

3RT1 contactors and coupling relays
Size S00 with mountable accessories

The SIRIUS generation of controls is a complete, modular system family, logically designed right down to the last detail, from the basic units to the accessories.

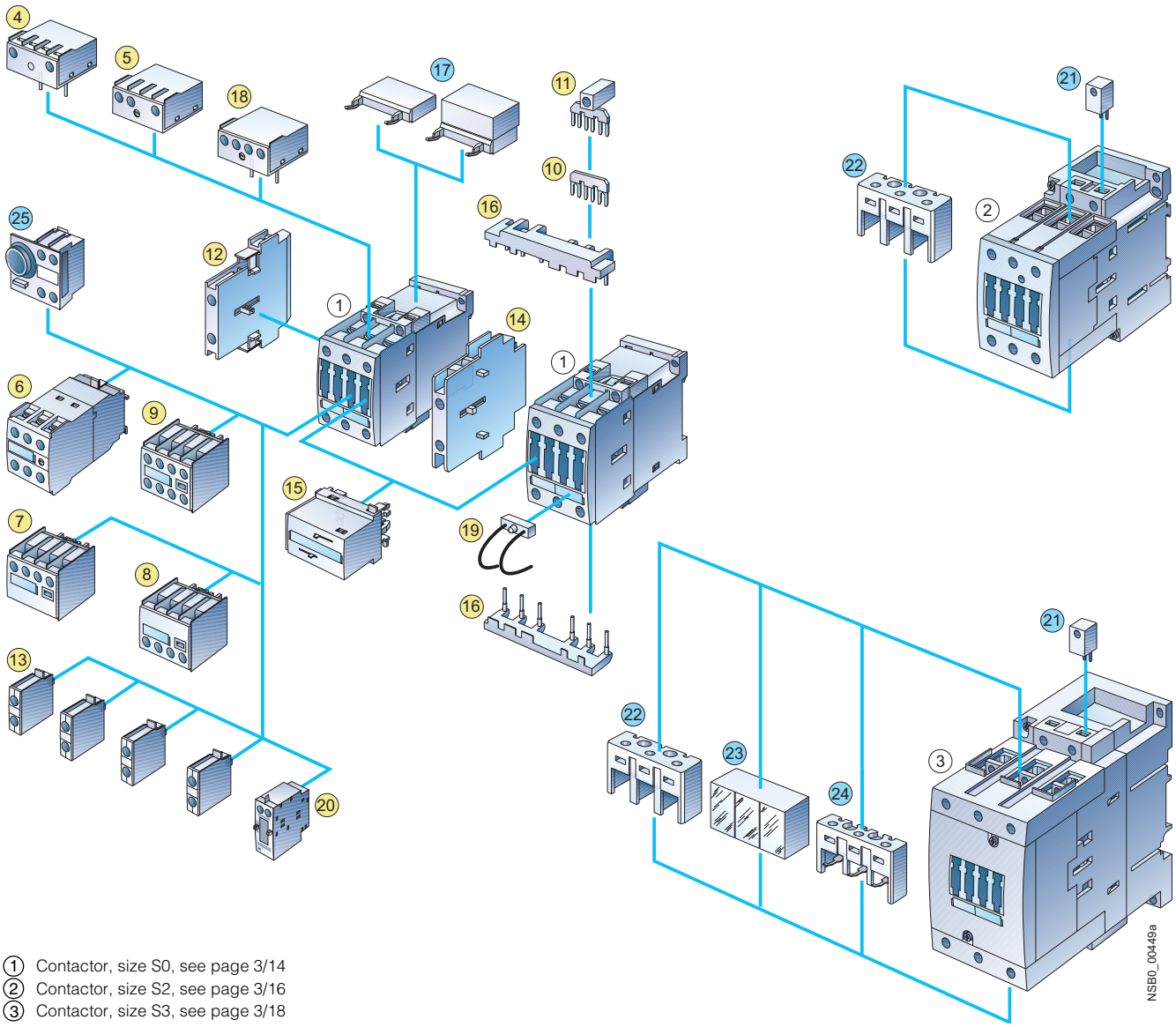


1. Contactor (page 3/12)
2. Coupling relay (page 3/90)
3. Solid-state time-delay block, ON-delay (page 3/118)
4. Solid-state time-delay block, OFF-delay (page 3/118)
5. Auxiliary switch block, solid-state time-delay (page 3/117) (ON or OFF-delay or wye-delta function)
6. Single-pole auxiliary switch block, cable entry from above (page 3/110)
7. 2-pole auxiliary switch block, cable entry from above (page 3/110)
8. Single-pole auxiliary switch block, cable entry from below (page 3/110)
9. 2-pole auxiliary switch block, cable entry from below (page 3/110)
10. 4-pole auxiliary switch block (page 3/110) (terminal designations according to EN 50012 or EN 50005)
11. 2-pole auxiliary switch block, standard design or solid-state compatible design (pages 3/110, 3/117) (terminal designations according to EN 50005)
12. Solder pin adapter for contactors with 4-pole auxiliary switch block (page 3/123)
13. Solder pin adapter for contactors and coupling relays (page 3/122)
14. Additional load module for increasing the permissible residual current (page 3/121)
15. Surge suppressor with LED (page 3/120)
16. Surge suppressor without LED (page 3/120)
17. 3-phase feeder terminal (page 3/53)
18. Link for paralleling (star jumper), 3-pole, without terminal (page 3/53)
19. Link for paralleling, 3-pole, with terminal (page 3/123)
20. Link for paralleling, 4-pole, with terminal (page 3/123)

For contactors
For contactors and coupling relays (interface)

For contactor assemblies see pages 3/38 to 3/45
Assembly kit for reversing contactor assemblies (mech. interlocking, wiring modules) see page 3/44
For mountable overload relays see Protection Equipment: Overload Relays
For fuseless load feeders, see Load Feeders, Motor Starters and Soft Starters -> 3RA Fuseless Load Feeders

3RT1 contactors
Sizes S0 to S3 with mountable accessories



(1) Contactor, size S0, see page 3/14
(2) Contactor, size S2, see page 3/16
(3) Contactor, size S3, see page 3/18

For sizes S0 to S3:

(4) Solid-state time-delay block, ON-delay (page 3/118)
(5) Solid-state time-delay block, OFF-delay (page 3/118)
(6) Auxiliary switch block, solid-state time-delay (page 3/117) (ON or OFF-delay or wye-delta function)
(7) 2-pole auxiliary switch block, cable entry from above (page 3/112)
(8) 2-pole auxiliary switch block, cable entry from below (page 3/112)
(9) 4-pole auxiliary switch block (page 3/112) (terminal designations according to EN 50012 or EN 50005)
(10) Link for paralleling (star jumper), 3-pole, without terminal (page 3/53)
(11) Link for paralleling, 3-pole, with terminal (page 3/123)
(12) 2-pole auxiliary switch block, laterally mountable (left or right) (page 3/114) (terminal designations according to EN 50012 or EN 50005)
(13) Single-pole auxiliary switch block (up to 4 can be snapped on) (page 3/112)
(14) Mechanical interlock, laterally mountable (page 3/43)
(15) Mechanical interlock, mountable on the front (page 3/43)
(16) Wiring connectors on the top and bottom (reversing duty) (page 3/45)
(17) Surge suppressors (page 3/119) (varistor, RC element, diode assembly), can be mounted on the top or bottom (different for S0 and S2/S3)
(18) Interface for mounting directly onto contactor coil (page 3/122)
(19) LED module for indicating contactor operation (page 3/122)

Only for size S0:

(25) Pneumatic delay block (page 3/118)

Only for sizes S0 and S2:

(20) Mechanical latching

Only for sizes S2 and S3:

(21) Repeat coil terminal for making contactor assemblies (page 3/43)
(22) Terminal cover for box terminals (page 3/124)

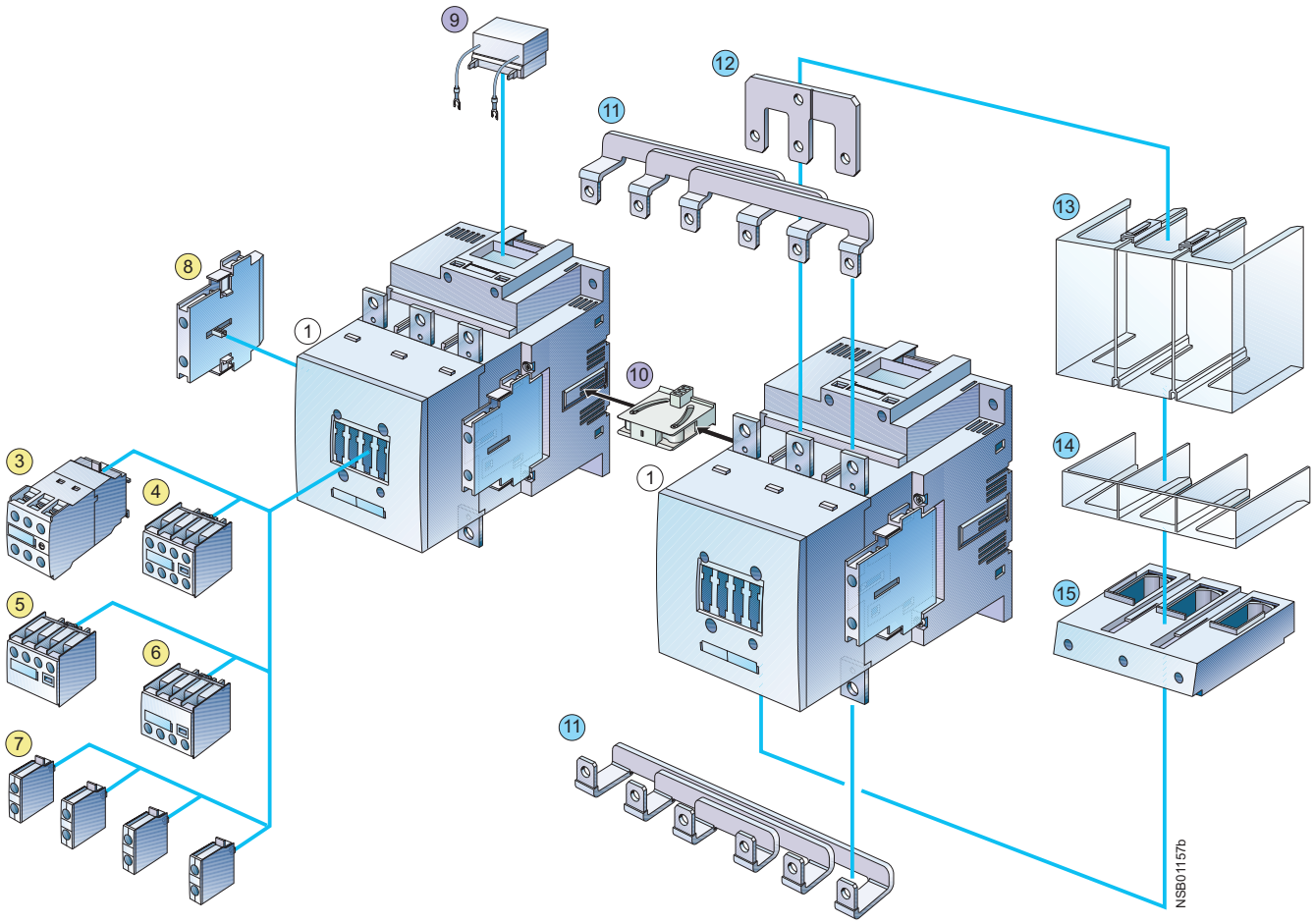
Only for size S3:

(23) Terminal cover for cable lug and bar connection (page 3/124)
(24) Auxiliary conductor terminal, 3-pole (page 3/122)

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

General data

3RT1 contactors
Sizes S6 to S12 with accessories



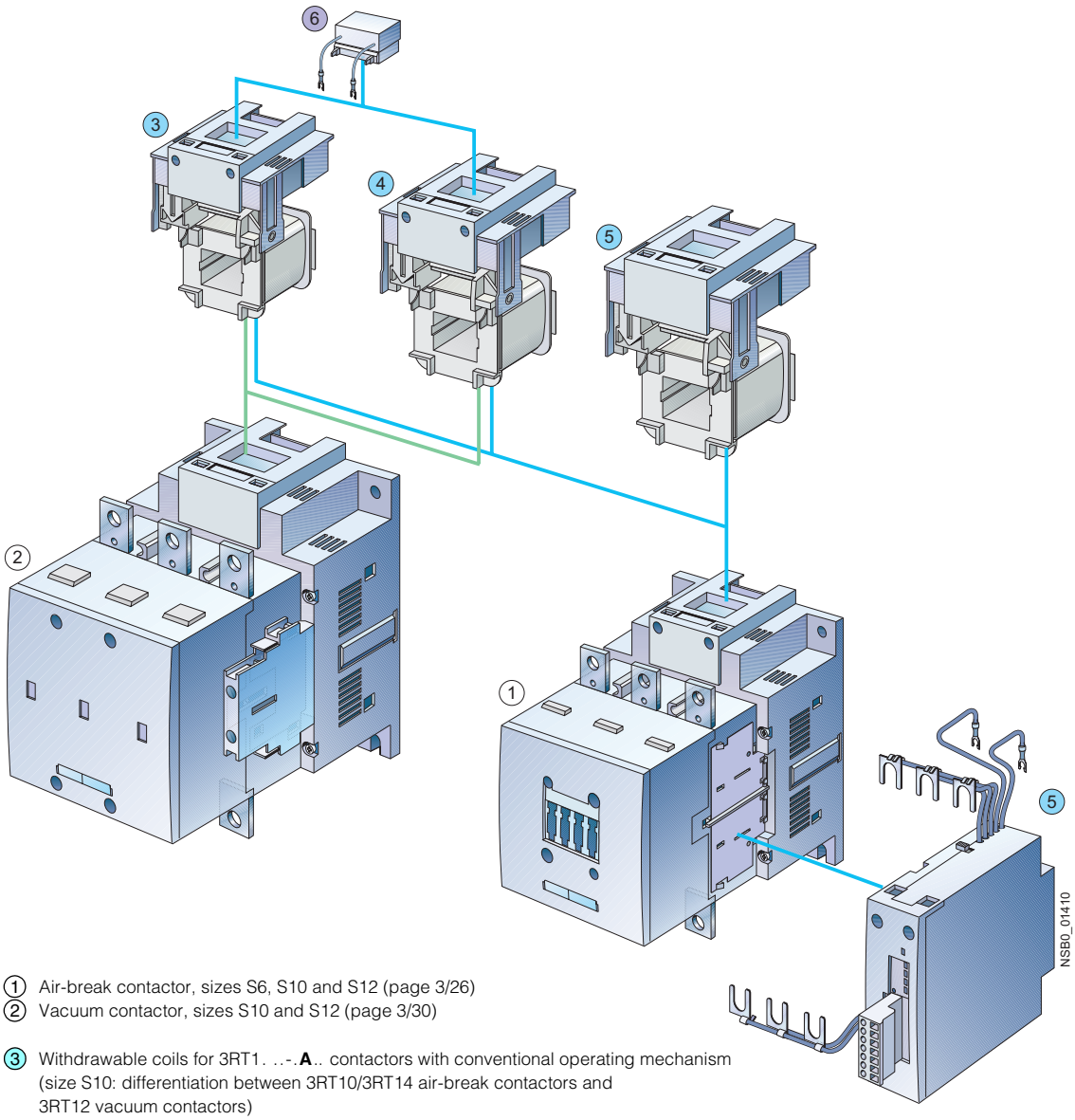
(1) 3RT10 and 3RT14 air-break contactors, sizes S6, S10 and S12 (page 3/26 and 3/57)

(3) Auxiliary switch block, solid-state time-delay (page 3/117) (ON or OFF-delay or wye-delta function)
(4) 4-pole auxiliary switch block (page 3/110) (terminal designations according to EN 50012 or EN 50005)
(5) 2-pole auxiliary switch block, cable entry from above (page 3/112)
(6) 2-pole auxiliary switch block, cable entry from below (page 3/112)
(7) 1-pole auxiliary switch block (up to 4 can be snapped on) (page 3/112)
(8) 2-pole auxiliary switch block, laterally mountable (left or right) (page 3/112) (terminal designations according to EN 50012 or EN 50005) (identical for S0 to S12)
(9) Surge suppressor (RC element) (page 3/120), for plugging into top of withdrawable coil
(10) Mechanical interlock, laterally mountable (page 3/43)

(11) Wiring connectors on the top and bottom (reversing duty) (page 3/45)
(12) Link for paralleling (star jumper), 3-pole, with through hole (page 3/123), different for sizes S6 and S10/S12
(13) Terminal cover for cable lug and bar connection (page 3/124), different for sizes S6 and S10/S12
(14) Terminal cover for box terminal (page 3/124), different for sizes S6 and S10/S12
(15) Box terminal block (page 3/124), 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

For mountable overload relays see Protection Equipment: Overload Relays -> SIRIUS Overload Relays.



(1) Air-break contactor, sizes S6, S10 and S12 (page 3/26)
(2) Vacuum contactor, sizes S10 and S12 (page 3/30)

(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) (page 3/119), plug-mountable on withdrawable coils
- 3RT1. ..-.**A**.. with conventional operating mechanism.
- 3RT1. ..-.**N**.. with solid-state operating mechanism.

(6) Identical for sizes S6 to S12
(6) Different according to size

For mountable overload relays see Protection Equipment:
Overload Relays

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

Overview

3RT10 contactors, 3-pole, sizes S00 to S3, up to 45 kW

AC and DC operation

IEC 60947, EN 60947 (VDE 0660)

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

The 3RT1 contactors are available with screw terminals or with Cage Clamp terminals.

Size S00 contactors have an auxiliary contact integrated in the basic unit. The basic units of sizes S0 to S3 contain only the main circuits.

All basic units can be extended with auxiliary switch blocks. For size S0 and higher, complete units with 2 NO + 2 NC are available (connection designation according to EN 50012). The auxiliary switch block can be removed *(for more information see LV 1 T).*

In addition, complete units with permanently mounted auxiliary switch block (2 NO + 2 NC according to EN 50012) are offered for sizes S00 and S0. These versions are built according to special Swiss regulations "SUVA" and are distinguished externally by a red identification plate.

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 suitable for electronic circuits with currents ≥ 1 mA at a voltage of 17 V.

Short circuit protection of the contactors

For more information about short circuit protection of contactors without overload relay, see Technical Specifications. For more informaiton about short circuit protection of the contactors with overload relay, see "Overload Relays". When installing fuseless motor feeders, the combinations of circuit-breakers and contactors described under "Fuseless Load Feeders" must be used.

Motor protection

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

Overvoltage damping

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

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 connections. 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 circuit-breaker) 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; the plug-in direction is indicated here with "+" and "-".

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

Note:
The OFF-delay times of the NO contacts and the ON-delay times of the NC contacts increase if the contactor coils are damped against voltage peaks (noise suppression diode 6 to 10 times; diode assemblies 2 to 6 times, varistor +2 to 5 ms).

3RT10 contactors, 3-pole, 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.

Operating mechanism types

Two types of solenoid operation are available:

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

UC operation

The contactors 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 magnetic 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

The contactors can be fitted with up to 8 auxiliary contacts (identical auxiliary switch blocks from S0 to S12). Of these, no more than 4 are permitted to be NC contacts.

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 magnetic 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:
A single coil covers several control supply voltages of similar ranges which are used worldwide, e.g. UC 110-115-120-127 V or UC 220-230-240 V.

In addition, allowance is also made for a coil 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 overloading occurs.

Contactors with solid-state operating mechanism

The magnetic coil is supplied selectively with the power required for reliable switching and holding by series-connected 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 UC 200 to 277 V ($U_{S\,min}$ 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 of ≥ 0.8 x $U_{S\,min}$ and higher the electronics will reliably switch the contactor ON, and as of ≤ 0.5 x $U_{S\,min}$ it is reliably switched off. The differential travel 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 comply with the requirements for operation in industrial installations.

- 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

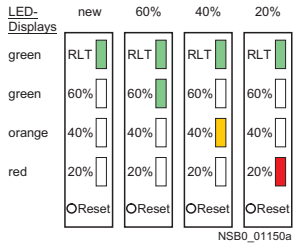
Note:
When used with converters, the control cables must be routed separately from the load cables of the converter.

Indication of remaining lifetime (RLT)

Main contactor contacts are working parts which 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, duty type, etc. Routine checks/visual inspections by the service personnel are needed in order to monitor the state of the main contacts. The "remaining lifetime indication" function 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)



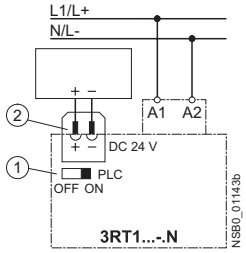
- Early warning to replace contacts
- Optimum utilization of contact material
- Visual inspection of the condition of contacts no longer necessary
- Reduction of ongoing operating costs
- Optimum planning of maintenance measures
- Avoidance of unforeseen plant downtimes

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

2 control options:

- Control without an interface directly through a 24 V DC/≥ 30 mA PLC output (EN 61131-2). Connection by means of 2-pole plug-in connection. The screwless spring-operated connector is part of the scope of supply. The control supply voltage which supplies the solenoid operating mechanism must be connected to A1/A2.

Note:
Set the slide switch for PLC operation to "PLC ON" before commissioning (factory setting: "PLC OFF").

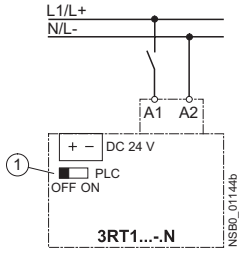


① Slide switch must be in "PLC ON" position

② Plug-in connection, 2-pole

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

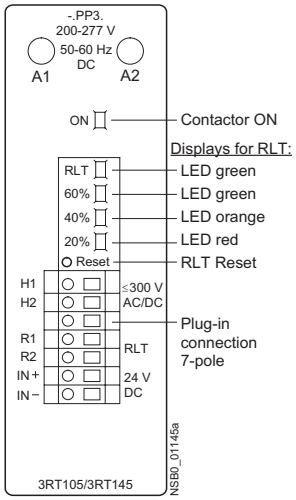
Note:
Slide switch must be in "PLC OFF" position (= factory setting).



① Slide switch must be in "PLC OFF" position

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

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

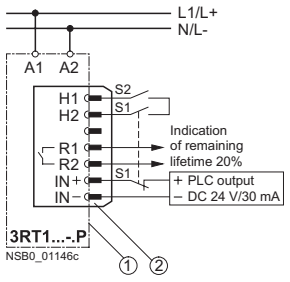


To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_S must be connected to terminals A1/A2 of the laterally mounted solid-state module. The control inputs of the contactor are connected to a 7-pole plug-in connection; the screwless spring-operated connector 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 current-carrying 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 indicators
  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 an interface directly through a 24 V DC/≥ 30 mA PLC output (EN 61131-2) by way of terminals IN+/IN-.



① Solid-state module of 3RT1. ..-.P contactor

② Plug-in connection, 7-pole

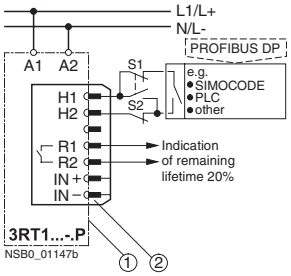
S1 Selector switch for switching from automatic control through PLC semiconductor output to local control

S2 Local control option

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 startup or in the event of a fault and the contactor can be controlled manually.

- Contactor control through relay outputs, e.g. by
  - PLC
  - SIMOCODE

by way of terminals H1/H2. Contact loading: U_S/approx. 5 mA. When operated through SIMOCODE, a communication link to PROFIBUS DP is also provided.



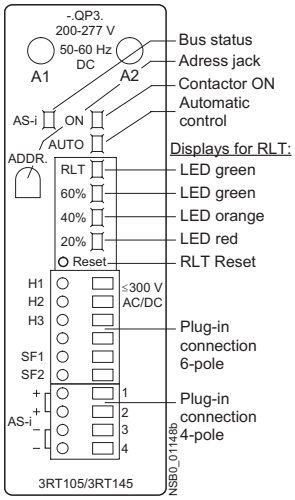
① Solid-state module of 3RT1. ..-.P contactor

② Plug-in connection, 7-pole

S1 Selector switch for switching from automatic control, e.g. by means of SIMOCODE-DP or PLC relay output, to local control

S2 Local control option

3RT1. ..-.Q version: communication-capable with integrated AS-Interface and indication of remaining lifetime (RLT)



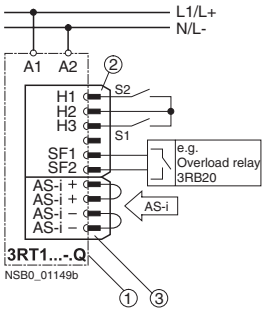
To supply the solenoid and the remaining lifetime indicator with power, the control supply voltage U_S must be connected to terminals A1/A2 of the laterally mounted solid-state module. The contactor itself is controlled by way of the integrated AS-Interface interface. The inputs and outputs are connected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

- LED indicators:
  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")
  - Remaining lifetime (RLT)
- AS-Interface addressing socket "ADDR":
  The contactor address can be assigned after installation.

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:
  - Remaining lifetime (RLT)
  - Signal through free input, e.g. overload relay tripped.



① Solid-state module of 3RT1 ...-.Q contactor

② Plug-in connection, 6-pole

③ Plug-in connection, 4-pole

S1 Selector switch for switching from automatic control, e.g. by means of AS-Interface, to local control
S1 open: Automatic mode

S2 Local control option

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 startup or in the event of a fault and the contactor can be controlled manually.

I/O configuration (hex) **ID code (hex)**		7 F
Power supply	V	26.5 ... 31.6 (according to AS-Interface specification)
AS-Interface current input	mA	max. 20
Contact loading at SF1/2	mA	3 ... 6
Watchdog function (disconnects outputs in the event of AS-Interface fault)		Built-in

Indication behavior

During operation, the LEDs on the contactor indicate the states shown on the right.

	LED	States				Description of state
	AS-Interface	On	On	Flashing	Flashing	
						Station address 0
						No AS-Interface communication
						AS-Interface communication OK

Contactor diagnostics using the application program

• Inputs

Input signals			Device status
DI0	"Ready"	0	Device not ready/manual operation
		1	Device ready/automatic operation
DI1	"Running"	0	Contactor off
		1	Contactor on
DI2	"Remaining lifetime"	0	Remaining lifetime RLT > 20 %
		1	Remaining lifetime RLT ≤ 20 %
DI3	"Free input"	0	No input signal at SF1/2
		1	Input signal at SF1/2

• Outputs

Output signals			Device status
DO0	"Running"	0	Contactor off
		1	Contactor on
DO1		0	--
		1	--
DO2		0	--
		1	--
DO3		0	--
		1	--

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

Selection and ordering data

AC operation
Screw terminals



3RT10 1.-1A...



3RT10 1.-1AP04-3MA0

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50/60 Hz	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
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				
400 V	**400 V**	690 V											
A	**kW**	A		NO	NC	V AC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S00[1]													
Terminal designations according to EN 50012													
7	**3**	18	**10 E**	1	--	24	▶	**3RT10 15-1AB01**		1	1 unit	101	0.205
						110	▶	**3RT10 15-1AF01**		1	1 unit	101	0.203
						230	▶	**3RT10 15-1AP01**		1	1 unit	101	0.203
			01	--	1	24	▶	**3RT10 15-1AB02**		1	1 unit	101	0.205
						110	▶	**3RT10 15-1AF02**		1	1 unit	101	0.203
						230	▶	**3RT10 15-1AP02**		1	1 unit	101	0.204
9	**4**	22	**10 E**	1	--	24	▶	**3RT10 16-1AB01**		1	1 unit	101	0.204
						110	▶	**3RT10 16-1AF01**		1	1 unit	101	0.205
						230	▶	**3RT10 16-1AP01**		1	1 unit	101	0.200
			01	--	1	24	▶	**3RT10 16-1AB02**		1	1 unit	101	0.206
						110	▶	**3RT10 16-1AF02**		1	1 unit	101	0.203
						230	▶	**3RT10 16-1AP02**		1	1 unit	101	0.205
12	**5.5**	22	**10 E**	1	--	24	▶	**3RT10 17-1AB01**		1	1 unit	101	0.204
						110	▶	**3RT10 17-1AF01**		1	1 unit	101	0.203
						230	▶	**3RT10 17-1AP01**		1	1 unit	101	0.204
			01	--	1	24	▶	**3RT10 17-1AB02**		1	1 unit	101	0.204
						110	▶	**3RT10 17-1AF02**		1	1 unit	101	0.203
						230	▶	**3RT10 17-1AP02**		1	1 unit	101	0.204
Size S00[1]													
With permanently mounted auxiliary switch block													
Terminal designations according to EN 50012													
7	**3**	18	**22 E**	2	2	230	▶	**3RT10 15-1AP04-3MA0**		1	1 unit	101	0.245
9	**4**	22	**22 E**	2	2	230	▶	**3RT10 16-1AP04-3MA0**		1	1 unit	101	0.245
12	**5.5**	22	**22 E**	2	2	230	▶	**3RT10 17-1AP04-3MA0**		1	1 unit	101	0.245

For other voltages, see page 3/29.
For accessories, see page 3/110.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

1) For size S00: Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s,
at 60 Hz: 0.85 ... 1.1 x U_s.

*** You can order this quantity or a multiple thereof.**

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

AC operation
Cage Clamp terminals



3RT10 1.-2A...



3RT10 1.-2AP04-3MA0

Rated data AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50/60 Hz	DT	Cage Clamp terminal		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
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				
400 V	**400 V**	690 V											
A	**kW**	A		NO	NC	V AC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S00[1]													
Terminal designations according to EN 50012													
7	**3**	18	**10 E**	1	--	24	▶	**3RT10 15-2AB01**		1	1 unit	101	0.203
						110	▶	**3RT10 15-2AF01**		1	1 unit	101	0.200
						230	▶	**3RT10 15-2AP01**		1	1 unit	101	0.201
			01	--	1	24	▶	**3RT10 15-2AB02**		1	1 unit	101	0.201
						110	▶	**3RT10 15-2AF02**		1	1 unit	101	0.201
						230	▶	**3RT10 15-2AP02**		1	1 unit	101	0.201
9	**4**	22	**10 E**	1	--	24	▶	**3RT10 16-2AB01**		1	1 unit	101	0.203
						110	▶	**3RT10 16-2AF01**		1	1 unit	101	0.201
						230	▶	**3RT10 16-2AP01**		1	1 unit	101	0.201
			01	--	1	24	▶	**3RT10 16-2AB02**		1	1 unit	101	0.201
						110	▶	**3RT10 16-2AF02**		1	1 unit	101	0.200
						230	▶	**3RT10 16-2AP02**		1	1 unit	101	0.201
12	**5.5**	22	**10 E**	1	--	24	▶	**3RT10 17-2AB01**		1	1 unit	101	0.201
						110	▶	**3RT10 17-2AF01**		1	1 unit	101	0.199
						230	▶	**3RT10 17-2AP01**		1	1 unit	101	0.199
			01	--	1	24	▶	**3RT10 17-2AB02**		1	1 unit	101	0.202
						110	▶	**3RT10 17-2AF02**		1	1 unit	101	0.200
						230	▶	**3RT10 17-2AP02**		1	1 unit	101	0.201
Size S00[1]													
With permanently mounted auxiliary switch block													
Terminal designations according to EN 50012													
7	**3**	18	**22 E**	2	2	230	B	**3RT10 15-2AP04-3MA0**		1	1 unit	101	0.248
9	**4**	22	**22 E**	2	2	230	B	**3RT10 16-2AP04-3MA0**		1	1 unit	101	0.240
12	**5.5**	22	**22 E**	2	2	230	B	**3RT10 17-2AP04-3MA0**		1	1 unit	101	0.247

For other voltages, see page 3/29.
For accessories, see page 3/110.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

1) For size S00: Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s,
at 60 Hz: 0.85 ... 1.1 x U_s.

*** You can order this quantity or a multiple thereof.**

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

AC operation
Screw terminals



3RT10 2.-1A.00



3RT10 2.-1A.04



3RT10 2.-1AL24-3MA0

Rated data AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
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				
400 V	**400 V**	690 V											
A	**kW**	A		NO	NC	V AC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S0													
9	**4**	40[1]	--	--	--	24	▶	**3RT10 23-1AB00**		1	1 unit	101	0.339
						110	▶	**3RT10 23-1AF00**		1	1 unit	101	0.338
						230	▶	**3RT10 23-1AP00**		1	1 unit	101	0.337
12	**5.5**	40[1]	--	--	--	24	▶	**3RT10 24-1AB00**		1	1 unit	101	0.338
						110	▶	**3RT10 24-1AF00**		1	1 unit	101	0.337
						230	▶	**3RT10 24-1AP00**		1	1 unit	101	0.339
17	**7.5**	40[1]	--	--	--	24	▶	**3RT10 25-1AB00**		1	1 unit	101	0.341
						110	▶	**3RT10 25-1AF00**		1	1 unit	101	0.336
						230	▶	**3RT10 25-1AP00**		1	1 unit	101	0.339
25	**11**	40[1]	--	--	--	24	▶	**3RT10 26-1AB00**		1	1 unit	101	0.340
						110	▶	**3RT10 26-1AF00**		1	1 unit	101	0.336
						230	▶	**3RT10 26-1AP00**		1	1 unit	101	0.339
Size S0													
With mounted auxiliary switch block (removable) Terminal designations according to EN 50012													
9	**4**	40[1]	**22 E**	2	2	24	▶	**3RT10 23-1AB04**		1	1 unit	101	0.407
						110	▶	**3RT10 23-1AF04**		1	1 unit	101	0.406
						230	▶	**3RT10 23-1AP04**		1	1 unit	101	0.409
12	**5.5**	40[1]	**22 E**	2	2	24	▶	**3RT10 24-1AB04**		1	1 unit	101	0.409
						110	▶	**3RT10 24-1AF04**		1	1 unit	101	0.405
						230	▶	**3RT10 24-1AP04**		1	1 unit	101	0.408
17	**7.5**	40[1]	**22 E**	2	2	24	▶	**3RT10 25-1AB04**		1	1 unit	101	0.411
						110	▶	**3RT10 25-1AF04**		1	1 unit	101	0.410
						230	▶	**3RT10 25-1AP04**		1	1 unit	101	0.407
25	**11**	40[1]	**22 E**	2	2	24	▶	**3RT10 26-1AB04**		1	1 unit	101	0.410
						110	▶	**3RT10 26-1AF04**		1	1 unit	101	0.406
						230	▶	**3RT10 26-1AP04**		1	1 unit	101	0.408
Size S0													
With permanently mounted auxiliary switch block Terminal designations according to EN 50012						at 50/60 Hz V AC							
12	**5.5**	40[1]	**22 E**	2	2	230	B	**3RT10 24-1AL24-3MA0**		1	1 unit	101	0.415
17	**7.5**	40[1]	**22 E**	2	2	230	A	**3RT10 25-1AL24-3MA0**		1	1 unit	101	0.415
25	**11**	40[1]	**22 E**	2	2	230	A	**3RT10 26-1AL24-3MA0**		1	1 unit	101	0.415

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/126.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

1) Minimum conductor cross-section 10 mm².

* You can order this quantity or a multiple thereof.

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

AC operation
Cage Clamp terminals



3RT10 2.-3A.00

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	**Cage Clamp terminals** for coil connections		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
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				
400 V	**400 V**	690 V		NO	NC								
A	**kW**	A				V AC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S0													
9	**4**	40[1]	--	--	--	24	B	**3RT10 23-3AB00**		1	1 unit	101	0.335
						110	B	**3RT10 23-3AF00**		1	1 unit	101	0.335
						230	►	**3RT10 23-3AP00**		1	1 unit	101	0.334
12	**5.5**	40[1]	--	--	--	24	B	**3RT10 24-3AB00**		1	1 unit	101	0.335
						110	B	**3RT10 24-3AF00**		1	1 unit	101	0.333
						230	►	**3RT10 24-3AP00**		1	1 unit	101	0.335
17	**7.5**	40[1]	--	--	--	24	B	**3RT10 25-3AB00**		1	1 unit	101	0.335
						110	B	**3RT10 25-3AF00**		1	1 unit	101	0.335
						230	►	**3RT10 25-3AP00**		1	1 unit	101	0.336
25	**11**	40[1]	--	--	--	24	B	**3RT10 26-3AB00**		1	1 unit	101	0.337
						110	B	**3RT10 26-3AF00**		1	1 unit	101	0.338
						230	►	**3RT10 26-3AP00**		1	1 unit	101	0.337

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/126.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

1) Minimum conductor cross-section 10 mm².

*** You can order this quantity or a multiple thereof.**

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

AC operation
Screw terminals



3RT10 3.-1A.00



3RT10 3.-1A.04

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to 500 V	Rating of induction motors at 50 Hz and 400 V	Operational current I_e up to 690 V	Ident. No.	Version				Order No.	Price per PU				
A	kW	A		NO	NC	V AC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S2													
32	**15**	50	--	--	--	24	▶	**3RT10 34-1AB00**		1	1 unit	101	0.810
						110	▶	**3RT10 34-1AF00**		1	1 unit	101	0.815
						230	▶	**3RT10 34-1AP00**		1	1 unit	101	0.813
40	**18.5**	60	--	--	--	24	▶	**3RT10 35-1AB00**		1	1 unit	101	0.838
						110	▶	**3RT10 35-1AF00**		1	1 unit	101	0.835
						230	▶	**3RT10 35-1AP00**		1	1 unit	101	0.839
50	**22**	60	--	--	--	24	▶	**3RT10 36-1AB00**		1	1 unit	101	0.841
						110	▶	**3RT10 36-1AF00**		1	1 unit	101	0.836
						230	▶	**3RT10 36-1AP00**		1	1 unit	101	0.838
Size S2													
With mounted auxiliary switch block (removable) Terminal designations according to EN 50012													
32	**15**	50	**22 E**	2	2	24	▶	**3RT10 34-1AB04**		1	1 unit	101	0.908
						110	▶	**3RT10 34-1AF04**		1	1 unit	101	0.912
						230	▶	**3RT10 34-1AP04**		1	1 unit	101	0.908
40	**18.5**	60	**22 E**	2	2	24	▶	**3RT10 35-1AB04**		1	1 unit	101	0.931
						110	▶	**3RT10 35-1AF04**		1	1 unit	101	0.931
						230	▶	**3RT10 35-1AP04**		1	1 unit	101	0.930
50	**22**	60	**22 E**	2	2	24	▶	**3RT10 36-1AB04**		1	1 unit	101	0.929
						110	▶	**3RT10 36-1AF04**		1	1 unit	101	0.940
						230	▶	**3RT10 36-1AP04**		1	1 unit	101	0.929

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/126.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

*** You can order this quantity or a multiple thereof.**

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

AC operation
Cage Clamp terminals



3RT10 3.-3A.00

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	**Cage Clamp terminals** for coil connections		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Rating of induction motors at 50 Hz and **400 V**	Operational current I_e up to	Ident. No.	Version				Order No.	Price per PU				
A	**kW**	A				V AC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S2													
32	**15**	50	--	--	--	24	B	**3RT10 34-3AB00**		1	1 unit	101	0.808
			--	--	--	110	B	**3RT10 34-3AF00**		1	1 unit	101	0.815
			--	--	--	230	▶	**3RT10 34-3AP00**		1	1 unit	101	0.811
40	**18.5**	60	--	--	--	24	B	**3RT10 35-3AB00**		1	1 unit	101	0.836
			--	--	--	110	B	**3RT10 35-3AF00**		1	1 unit	101	0.837
			--	--	--	230	▶	**3RT10 35-3AP00**		1	1 unit	101	0.834
50	**22**	60	--	--	--	24	B	**3RT10 36-3AB00**		1	1 unit	101	0.839
			--	--	--	110	B	**3RT10 36-3AF00**		1	1 unit	101	0.831
			--	--	--	230	▶	**3RT10 36-3AP00**		1	1 unit	101	0.837

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/127.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

*** You can order this quantity or a multiple thereof.**

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

AC operation
Screw terminals



3RT10 4.-1A.00

Rated data AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s	DT	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Rating of induction motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version				Order No.	Price per PU				
A	**kW**	A		NO	NC	V AC							kg
For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail													
Size S3													
65	**30**	100	--	--	--	24	▶	**3RT10 44-1AB00**		1	1 unit	101	1.701
						110	▶	**3RT10 44-1AF00**		1	1 unit	101	1.709
						230	▶	**3RT10 44-1AP00**		1	1 unit	101	1.704
80	**37**	120	--	--	--	24	▶	**3RT10 45-1AB00**		1	1 unit	101	1.831
						110	▶	**3RT10 45-1AF00**		1	1 unit	101	1.830
						230	▶	**3RT10 45-1AP00**		1	1 unit	101	1.825
95	**45**	120	--	--	--	24	▶	**3RT10 46-1AB00**		1	1 unit	101	1.838
						110	▶	**3RT10 46-1AF00**		1	1 unit	101	1.829
						230	▶	**3RT10 46-1AP00**		1	1 unit	101	1.838
Size S3													
With mounted auxiliary switch block (removable) Terminal designations according to EN 50012													
65	**30**	100	**22 E**	2	2	24	▶	**3RT10 44-1AB04**		1	1 unit	101	1.809
						110	▶	**3RT10 44-1AF04**		1	1 unit	101	1.805
						230	▶	**3RT10 44-1AP04**		1	1 unit	101	1.807
80	**37**	120	**22 E**	2	2	24	B	**3RT10 45-1AB04**		1	1 unit	101	1.930
						110	▶	**3RT10 45-1AF04**		1	1 unit	101	1.951
						230	▶	**3RT10 45-1AP04**		1	1 unit	101	1.935
95	**45**	120	**22 E**	2	2	24	B	**3RT10 46-1AB04**		1	1 unit	101	1.942
						110	▶	**3RT10 46-1AF04**		1	1 unit	101	1.960
						230	▶	**3RT10 46-1AP04**		1	1 unit	101	1.944

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/128.

* You can order this quantity or a multiple thereof.

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

AC operation
Cage Clamp terminals



3RT10 4.-3A.00

Rated data AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	DT	**Cage Clamp terminals** for coil connections		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to 500 V	Rating of induction motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC			Order No.	Price per PU				
A	**kW**	A		NO	NC	V AC							kg
For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail													
Size S3													
65	**30**	100	--	--	--	24	B	**3RT10 44-3AB00**		1	1 unit	101	1.720
						110	B	**3RT10 44-3AF00**		1	1 unit	101	1.715
						230	►	**3RT10 44-3AP00**		1	1 unit	101	1.695
80	**37**	120	--	--	--	24	B	**3RT10 45-3AB00**		1	1 unit	101	1.845
						110	B	**3RT10 45-3AF00**		1	1 unit	101	1.848
						230	►	**3RT10 45-3AP00**		1	1 unit	101	1.815
95	**45**	120	--	--	--	24	B	**3RT10 46-3AB00**		1	1 unit	101	1.854
						110	B	**3RT10 46-3AF00**		1	1 unit	101	1.843
						230	►	**3RT10 46-3AP00**		1	1 unit	101	1.840

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/129.

*** You can order this quantity or a multiple thereof.**

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

DC operation · DC solenoid system
Screw terminals



3RT10 1.-1B...

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C											
Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC	AC V		Order No.	Price per PU				
A	**kW**	A		NO	NC	AC V							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S00													
Terminal designations according to EN 50012													
7	**3**	18	**10 E**	1	--	24	▶	**3RT10 15-1BB41**		1	1 unit	101	0.263
						220	A	**3RT10 15-1BM41**		1	1 unit	101	0.260
			01	--	1	24	▶	**3RT10 15-1BB42**		1	1 unit	101	0.262
						220	B	**3RT10 15-1BM42**		1	1 unit	101	0.261
9	**4**	22	**10 E**	1	--	24	▶	**3RT10 16-1BB41**		1	1 unit	101	0.264
						220	B	**3RT10 16-1BM41**		1	1 unit	101	0.260
			01	--	1	24	▶	**3RT10 16-1BB42**		1	1 unit	101	0.263
						220	B	**3RT10 16-1BM42**		1	1 unit	101	0.261
12	**5.5**	22	**10 E**	1	--	24	▶	**3RT10 17-1BB41**		1	1 unit	101	0.263
						220	B	**3RT10 17-1BM41**		1	1 unit	101	0.259
			01	--	1	24	▶	**3RT10 17-1BB42**		1	1 unit	101	0.262
						220	B	**3RT10 17-1BM42**		1	1 unit	101	0.260
Size S00													
With permanently mounted auxiliary switch block													
Terminal designations according to EN 50012													
7	**3**	18	**22 E**	2	2	24	▶	**3RT10 15-1BB44-3MA0**		1	1 unit	101	0.308
9	**4**	22	**22 E**	2	2	24	▶	**3RT10 16-1BB44-3MA0**		1	1 unit	101	0.309
12	**5.5**	22	**22 E**	2	2	24	▶	**3RT10 17-1BB44-3MA0**		1	1 unit	101	0.304

For other voltages, see page 3/29.
For accessories, see page 3/110.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

*** You can order this quantity or a multiple thereof.**

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

DC operation · DC solenoid system
Cage Clamp terminals



3RT10 1.-2B...



3RT10 1.-2BB44-3MA0

Rated data AC-2 and AC-3, T_u up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
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				
400 V	**400 V**	690 V											
A	kW	A		NO	NC	V DC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S00													
Terminal designations according to EN 50012													
7	**3**	18	**10 E**	1	--	24	▶	**3RT10 15-2BB41**		1	1 unit	101	0.260
						220	B	**3RT10 15-2BM41**		1	1 unit	101	0.252
			01	--	1	24	▶	**3RT10 15-2BB42**		1	1 unit	101	0.261
						220	B	**3RT10 15-2BM42**		1	1 unit	101	0.256
9	**4**	22	**10 E**	1	--	24	▶	**3RT10 16-2BB41**		1	1 unit	101	0.259
						220	B	**3RT10 16-2BM41**		1	1 unit	101	0.253
			01	--	1	24	▶	**3RT10 16-2BB42**		1	1 unit	101	0.261
						220	B	**3RT10 16-2BM42**		1	1 unit	101	0.253
12	**5.5**	22	**10 E**	1	--	24	▶	**3RT10 17-2BB41**		1	1 unit	101	0.261
						220	B	**3RT10 17-2BM41**		1	1 unit	101	0.254
			01	--	1	24	▶	**3RT10 17-2BB42**		1	1 unit	101	0.261
						220	B	**3RT10 17-2BM42**		1	1 unit	101	0.255
Size S00													
With permanently mounted auxiliary switch block													
Terminal designations according to EN 50012													
7	**3**	18	**22 E**	2	2	24	B	**3RT10 15-2BB44-3MA0**		1	1 unit	101	0.308
9	**4**	22	**22 E**	2	2	24	A	**3RT10 16-2BB44-3MA0**		1	1 unit	101	0.308
12	**5.5**	22	**22 E**	2	2	24	B	**3RT10 17-2BB44-3MA0**		1	1 unit	101	0.308

For other voltages, see page 3/29.
For accessories, see page 3/110.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

*** You can order this quantity or a multiple thereof.**

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

DC operation · DC solenoid system
Screw terminals



3RT10 2.-1B0.40



3RT10 2.-1BB44-3MA0

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and 400 V	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC			Order No.	Price per PU				
A	kW	A		NO	NC	V DC							kg
For screw and snap-on mounting onto 35 mm standard mounting rails													
Size S0													
9	**4**	40 [1]	--	--	--	24	▶	**3RT10 23-1BB40**		1	1 unit	101	0.570
						220	B	**3RT10 23-1BM40**		1	1 unit	101	0.576
12	**5.5**	40 [1]	--	--	--	24	▶	**3RT10 24-1BB40**		1	1 unit	101	0.566
						220	A	**3RT10 24-1BM40**		1	1 unit	101	0.579
17	**7.5**	40 [1]	--	--	--	24	▶	**3RT10 25-1BB40**		1	1 unit	101	0.570
						220	A	**3RT10 25-1BM40**		1	1 unit	101	0.575
25	**11**	40 [1]	--	--	--	24	▶	**3RT10 26-1BB40**		1	1 unit	101	0.569
						220	A	**3RT10 26-1BM40**		1	1 unit	101	0.580
Size S0													
With mounted auxiliary switch block (removable) Terminal designations according to EN 50012													
9	**4**	40 [1]	**22 E**	2	2	24	▶	**3RT10 23-1BB44**		1	1 unit	101	0.639
						220	B	**3RT10 23-1BM44**		1	1 unit	101	0.644
12	**5.5**	40 [1]	**22 E**	2	2	24	▶	**3RT10 24-1BB44**		1	1 unit	101	0.641
						220	B	**3RT10 24-1BM44**		1	1 unit	101	0.645
17	**7.5**	40 [1]	**22 E**	2	2	24	▶	**3RT10 25-1BB44**		1	1 unit	101	0.640
						220	B	**3RT10 25-1BM44**		1	1 unit	101	0.645
25	**11**	40 [1]	**22 E**	2	2	24	▶	**3RT10 26-1BB44**		1	1 unit	101	0.643
						220	B	**3RT10 26-1BM44**		1	1 unit	101	0.645
Size S0													
With permanently mounted auxiliary switch block Terminal designations according to EN 50012													
12	**5.5**	40 [1]	**22 E**	2	2	24	A	**3RT10 24-1BB44-3MA0**		1	1 unit	101	0.641
17	**7.5**	40 [1]	**22 E**	2	2	24	A	**3RT10 25-1BB44-3MA0**		1	1 unit	101	0.640
25	**11**	40 [1]	**22 E**	2	2	24	A	**3RT10 26-1BB44-3MA0**		1	1 unit	101	0.642

For other voltages, see page 3/29.
For accessories, see page 3/112.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

1) Minimum conductor cross-section 10 mm².

*** You can order this quantity or a multiple thereof.**

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

DC operation · DC solenoid system
Cage Clamp terminals



3RT10 2.-3B.40

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to 400 V	Rating of induction motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC			Order No.	Price per PU				
A	**kW**	A		NO	NC	V DC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S0													
9	**4**	40[1]	--	--	--	24	▶	**3RT10 23-3BB40**		1	1 unit	101	0.566
			--	--	--	220	B	**3RT10 23-3BM40**		1	1 unit	101	0.572
12	**5.5**	40[1]	--	--	--	24	▶	**3RT10 24-3BB40**		1	1 unit	101	0.568
			--	--	--	220	B	**3RT10 24-3BM40**		1	1 unit	101	0.570
17	**7.5**	40[1]	--	--	--	24	▶	**3RT10 25-3BB40**		1	1 unit	101	0.570
			--	--	--	220	B	**3RT10 25-3BM40**		1	1 unit	101	0.572
25	**11**	40[1]	--	--	--	24	▶	**3RT10 26-3BB40**		1	1 unit	101	0.569
			--	--	--	220	B	**3RT10 26-3BM40**		1	1 unit	101	0.575

For other voltages, see page 3/29.
For accessories, see page 3/112.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

1) Minimum conductor cross-section 10 mm².

*** You can order this quantity or a multiple thereof.**

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

DC operation · DC solenoid system
Screw terminals



3RT10 3.-1B.40



3RT10 4.-1B.40



3RT10 4.-1B.44

Rated data			Auxiliary contacts			Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C											
Operational current I_e up to	Ratings of induction motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Order No.	Price per PU				
500 V	**400 V**	690 V											
A	**kW**	A		NO	NC	V DC							kg
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S2													
32	**15**	50	--	--	--	24	▶	**3RT10 34-1BB40**		1	1 unit	101	1.433
						220	A	**3RT10 34-1BM40**		1	1 unit	101	1.446
40	**18.5**	60	--	--	--	24	▶	**3RT10 35-1BB40**		1	1 unit	101	1.443
						220	B	**3RT10 35-1BM40**		1	1 unit	101	1.439
50	**22**	60	--	--	--	24	▶	**3RT10 36-1BB40**		1	1 unit	101	1.435
						220	B	**3RT10 36-1BM40**		1	1 unit	101	1.444
Size S2													
With mounted auxiliary switch block (removable) Terminal designations according to EN 50012													
32	**15**	50	22 E	2	2	24	▶	**3RT10 34-1BB44**		1	1 unit	101	1.530
						220	A	**3RT10 34-1BM44**		1	1 unit	101	1.530
40	**18.5**	60	22 E	2	2	24	▶	**3RT10 35-1BB44**		1	1 unit	101	1.522
						220	B	**3RT10 35-1BM44**		1	1 unit	101	1.523
50	**22**	60	22 E	2	2	24	▶	**3RT10 36-1BB44**		1	1 unit	101	1.533
						220	B	**3RT10 36-1BM44**		1	1 unit	101	1.508
For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail													
Size S3													
65	**30**	100	--	--	--	24	▶	**3RT10 44-1BB40**		1	1 unit	101	2.808
						220	B	**3RT10 44-1BM40**		1	1 unit	101	2.793
80	**37**	120	--	--	--	24	▶	**3RT10 45-1BB40**		1	1 unit	101	2.828
						220	B	**3RT10 45-1BM40**		1	1 unit	101	2.781
95	**45**	120	--	--	--	24	▶	**3RT10 46-1BB40**		1	1 unit	101	2.817
						220	B	**3RT10 46-1BM40**		1	1 unit	101	2.767
Size S3													
With mounted auxiliary switch block (removable) Terminal designations according to EN 50012													
65	**30**	100	22 E	2	2	24	▶	**3RT10 44-1BB44**		1	1 unit	101	2.921
						220	B	**3RT10 44-1BM44**		1	1 unit	101	2.880
80	**37**	120	22 E	2	2	24	▶	**3RT10 45-1BB44**		1	1 unit	101	2.919
						220	B	**3RT10 45-1BM44**		1	1 unit	101	2.870
95	**45**	120	22 E	2	2	24	▶	**3RT10 46-1BB44**		1	1 unit	101	2.913
						220	B	**3RT10 46-1BM44**		1	1 unit	101	2.887

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/128.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

*** You can order this quantity or a multiple thereof.**

DC operation · DC solenoid system
Cage Clamp terminals



3RT10 3.-3B.40



3RT10 4.-3B.40

Rated data AC-2 and AC-3, T_u: up to 60 °C		AC-1, T_u: 40 °C	Auxiliary contacts			Rated control supply voltage U_s	DT	**Cage Clamp terminals**		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to 500 V	Rating of induction motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	NC			Order No.	Price per PU				
A	**kW**	A				V DC							
For screw and snap-on mounting onto 35 mm standard mounting rail													
Size S2													
32	**15**	50	--	--	--	24	▶	**3RT10 34-3BB40**		1	1 unit	101	1.435
						220	B	**3RT10 34-3BM40**		1	1 unit	101	1.452
40	**18.5**	60	--	--	--	24	▶	**3RT10 35-3BB40**		1	1 unit	101	1.426
						220	B	**3RT10 35-3BM40**		1	1 unit	101	1.454
50	**22**	60	--	--	--	24	▶	**3RT10 36-3BB40**		1	1 unit	101	1.443
						220	A	**3RT10 36-3BM40**		1	1 unit	101	1.455
For screw and snap-on mounting onto 35 mm and 75 mm standard mounting rail													
Size S3													
65	**30**	100	--	--	--	24	▶	**3RT10 44-3BB40**		1	1 unit	101	2.807
						220	B	**3RT10 44-3BM40**		1	1 unit	101	2.749
80	**37**	120	--	--	--	24	▶	**3RT10 45-3BB40**		1	1 unit	101	2.807
						220	B	**3RT10 45-3BM40**		1	1 unit	101	2.770
95	**45**	120	--	--	--	24	▶	**3RT10 46-3BB40**		1	1 unit	101	2.821
						220	B	**3RT10 46-3BM40**		1	1 unit	101	2.760

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/129.
For multi-unit packing and reusable packaging, see Appendix -> Ordering Notes.

*** You can order this quantity or a multiple thereof.**

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

AC/DC operation *(40 Hz to 60 Hz, DC)*
Auxiliary and control conductors: screw terminals
Withdrawable coils
Integrated coil circuit *(varistor)*
Main conductors: bar 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					AC-1, T_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	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				
	500 V	230 V	**400 V**	500 V	690 V	690 V										
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC							kg
Conventional operating mechanism																
S6	115	37	**55**	75	110	160	2	2	110 ... 127	▶	**3RT10 54-1AF36**		1	1 unit	101	3.641
									220 ... 240	▶	**3RT10 54-1AP36**		1	1 unit	101	3.619
	150	45	**75**	90	132	185	2	2	110 ... 127	▶	**3RT10 55-6AF36**		1	1 unit	101	3.344
									220 ... 240	▶	**3RT10 55-6AP36**		1	1 unit	101	3.331
	185	55	**90**	110	160	215	2	2	110 ... 127	▶	**3RT10 56-6AF36**		1	1 unit	101	3.369
									220 ... 240	▶	**3RT10 56-6AP36**		1	1 unit	101	3.350
S10	225	55	**110**	160	200	275	2	2	110 ... 127	▶	**3RT10 64-6AF36**		1	1 unit	101	6.508
									220 ... 240	▶	**3RT10 64-6AP36**		1	1 unit	101	6.428
	265	75	**132**	160	250	330	2	2	110 ... 127	▶	**3RT10 65-6AF36**		1	1 unit	101	6.554
									220 ... 240	▶	**3RT10 65-6AP36**		1	1 unit	101	6.500
	300	90	**160**	200	250	330	2	2	110 ... 127	▶	**3RT10 66-6AF36**		1	1 unit	101	6.599
									220 ... 240	▶	**3RT10 66-6AP36**		1	1 unit	101	6.520
S12	400	132	**200**	250	400	430	2	2	110 ... 127	▶	**3RT10 75-6AF36**		1	1 unit	101	10.340
									220 ... 240	▶	**3RT10 75-6AP36**		1	1 unit	101	10.070
	500	160	**250**	355	400	610	2	2	110 ... 127	▶	**3RT10 76-6AF36**		1	1 unit	101	10.490
									220 ... 240	▶	**3RT10 76-6AP36**		1	1 unit	101	10.355
Solid-state operating mechanism · for 24 V DC PLC output																
S6	115	37	**55**	75	110	160	2	2	96 ... 127	A	**3RT10 54-1NF36**		1	1 unit	101	3.630
									200 ... 277	▶	**3RT10 54-1NP36**		1	1 unit	101	3.950
	150	45	**75**	90	132	185	2	2	96 ... 127	A	**3RT10 55-6NF36**		1	1 unit	101	3.325
									200 ... 277	▶	**3RT10 55-6NP36**		1	1 unit	101	3.325
	185	55	**90**	110	160	215	2	2	96 ... 127	A	**3RT10 56-6NF36**		1	1 unit	101	3.335
									200 ... 277	▶	**3RT10 56-6NP36**		1	1 unit	101	3.334
S10	225	55	**110**	160	200	275	2	2	96 ... 127	A	**3RT10 64-6NF36**		1	1 unit	101	6.664
									200 ... 277	A	**3RT10 64-6NP36**		1	1 unit	101	6.526
	265	75	**132**	160	250	330	2	2	96 ... 127	A	**3RT10 65-6NF36**		1	1 unit	101	6.711
									200 ... 277	A	**3RT10 65-6NP36**		1	1 unit	101	6.600
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT10 66-6NF36**		1	1 unit	101	6.720
									200 ... 277	A	**3RT10 66-6NP36**		1	1 unit	101	6.600
S12	400	132	**200**	250	400	430	2	2	96 ... 127	A	**3RT10 75-6NF36**		1	1 unit	101	10.352
									200 ... 277	A	**3RT10 75-6NP36**		1	1 unit	101	10.079
	500	160	**250**	355	400	610	2	2	96 ... 127	A	**3RT10 76-6NF36**		1	1 unit	101	10.501
									200 ... 277	A	**3RT10 76-6NP36**		1	1 unit	101	10.235

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/130.

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

*** You can order this quantity or a multiple thereof.**

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

AC/DC operation *(40 Hz to 60 Hz, DC)*
Auxiliary and control conductors: Cage Clamp terminals
Withdrawable coils
Integrated coil circuit *(varistor)*
Main conductors: bar connections, for 3RT10 54 (55 kW) box terminals[1)]

Size	Rated data AC-2 and AC-3, T_u: up to 60 °C					AC-1, T_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	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				
	500 V	230 V	**400 V**	500 V	690 V	690 V										
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC							kg
Conventional operating mechanism																
S6	115	37	**55**	75	110	160	2	2	110 ... 127	B	**3RT10 54-3AF36**		1	1 unit	101	3.641
									220 ... 240	B	**3RT10 54-3AP36**		1	1 unit	101	3.628
	150	45	**75**	90	132	185	2	2	110 ... 127	B	**3RT10 55-2AF36**		1	1 unit	101	3.344
									220 ... 240	B	**3RT10 55-2AP36**		1	1 unit	101	3.332
	185	55	**90**	110	160	215	2	2	110 ... 127	B	**3RT10 56-2AF36**		1	1 unit	101	3.374
									220 ... 240	B	**3RT10 56-2AP36**		1	1 unit	101	3.350
S10	225	55	**110**	160	200	275	2	2	110 ... 127	B	**3RT10 64-2AF36**		1	1 unit	101	6.508
									220 ... 240	B	**3RT10 64-2AP36**		1	1 unit	101	6.428
	265	75	**132**	160	250	330	2	2	110 ... 127	B	**3RT10 65-2AF36**		1	1 unit	101	6.554
									220 ... 240	B	**3RT10 65-2AP36**		1	1 unit	101	6.500
	300	90	**160**	200	250	330	2	2	110 ... 127	B	**3RT10 66-2AF36**		1	1 unit	101	6.599
									220 ... 240	B	**3RT10 66-2AP36**		1	1 unit	101	6.520
S12	400	132	**200**	250	400	430	2	2	110 ... 127	B	**3RT10 75-2AF36**		1	1 unit	101	10.340
									220 ... 240	B	**3RT10 75-2AP36**		1	1 unit	101	10.070
	500	160	**250**	355	400	610	2	2	110 ... 127	B	**3RT10 76-2AF36**		1	1 unit	101	10.490
									220 ... 240	B	**3RT10 76-2AP36**		1	1 unit	101	10.366
Solid-state operating mechanism · for 24 V DC PLC output																
S6	115	37	**55**	75	110	160	2	2	96 ... 127	B	**3RT10 54-3NF36**		1	1 unit	101	3.630
									200 ... 277	B	**3RT10 54-3NP36**		1	1 unit	101	3.950
	150	45	**75**	90	132	185	2	2	96 ... 127	B	**3RT10 55-2NF36**		1	1 unit	101	3.325
									200 ... 277	B	**3RT10 55-2NP36**		1	1 unit	101	3.325
	185	55	**90**	110	160	215	2	2	96 ... 127	B	**3RT10 56-2NF36**		1	1 unit	101	3.335
									200 ... 277	B	**3RT10 56-2NP36**		1	1 unit	101	3.335
S10	225	55	**110**	160	200	275	2	2	96 ... 127	B	**3RT10 64-2NF36**		1	1 unit	101	6.664
									200 ... 277	B	**3RT10 64-2NP36**		1	1 unit	101	6.526
	265	75	**132**	160	250	330	2	2	96 ... 127	B	**3RT10 65-2NF36**		1	1 unit	101	6.711
									200 ... 277	B	**3RT10 65-2NP36**		1	1 unit	101	6.600
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT10 66-2NF36**		1	1 unit	101	6.720
									200 ... 277	B	**3RT10 66-2NP36**		1	1 unit	101	6.600
S12	400	132	**200**	250	400	430	2	2	96 ... 127	B	**3RT10 75-2NF36**		1	1 unit	101	10.352
									200 ... 277	B	**3RT10 75-2NP36**		1	1 unit	101	10.079
	500	160	**250**	355	400	610	2	2	96 ... 127	B	**3RT10 76-2NF36**		1	1 unit	101	10.501
									200 ... 277	B	**3RT10 76-2NP36**		1	1 unit	101	10.235

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/131.

1) Alternatively the 3RT10 54-1 contactor (55 kW) can be supplied with bar connections instead of box terminals.
Without additional charge. In the 8th position of the Order No. the **"3"** must be replaced with **"2"**, e.g. 3RT10 54-2...

*** You can order this quantity or a multiple thereof.**

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

AC/DC operation *(40 Hz to 60 Hz, DC)*
Auxiliary and control conductors: screw terminals
Withdrawable coils
Integrated coil circuit *(varistor)*
Main conductors: bar connections, for 3RT10 54 (55 kW) box terminals[1)]
Remaining lifetime indication (RLT)



3RT10 56-6P



3RT10 56-6Q

Size	Rated data AC-2 and AC-3, T_u: up to 60 °C					AC-1, T_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	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				
	500 V	230 V	**400 V**	500 V	690 V	690 V										
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC							kg
Solid-state operating mechanism · for 24 V DC PLC output/ PLC relay output, with indication of remaining lifetime (RLT)																
S6	115	37	**55**	75	110	160	1	1	96 ... 127	B	**3RT10 54-1PF35**		1	1 unit	101	4.200
									200 ... 277	B	**3RT10 54-1PP35**		1	1 unit	101	4.440
	150	45	**75**	90	132	185	1	1	96 ... 127	B	**3RT10 55-6PF35**		1	1 unit	101	3.875
									200 ... 277	B	**3RT10 55-6PP35**		1	1 unit	101	3.884
	185	55	**90**	110	160	215	1	1	96 ... 127	B	**3RT10 56-6PF35**		1	1 unit	101	3.913
									200 ... 277	B	**3RT10 56-6PP35**		1	1 unit	101	4.093
S10	225	55	**110**	160	200	275	1	1	96 ... 127	B	**3RT10 64-6PF35**		1	1 unit	101	5.700
									200 ... 277	B	**3RT10 64-6PP35**		1	1 unit	101	6.960
	265	75	**132**	160	250	330	1	1	96 ... 127	B	**3RT10 65-6PF35**		1	1 unit	101	7.203
									200 ... 277	B	**3RT10 65-6PP35**		1	1 unit	101	7.004
	300	90	**160**	200	250	330	1	1	96 ... 127	B	**3RT10 66-6PF35**		1	1 unit	101	4.852
									200 ... 277	B	**3RT10 66-6PP35**		1	1 unit	101	7.050
S12	400	132	**200**	250	400	430	1	1	96 ... 127	B	**3RT10 75-6PF35**		1	1 unit	101	10.781
									200 ... 277	B	**3RT10 75-6PP35**		1	1 unit	101	10.505
	500	160	**250**	355	400	610	1	1	96 ... 127	B	**3RT10 76-6PF35**		1	1 unit	101	9.100
									200 ... 277	B	**3RT10 76-6PP35**		1	1 unit	101	10.665
Solid-state operating mechanism · with AS-Interface and indication of remaining lifetime (RLT)																
S6	115	37	**55**	75	110	160	1	1	96 ... 127	B	**3RT10 54-1QF35**		1	1 unit	101	4.190
									200 ... 277	B	**3RT10 54-1QP35**		1	1 unit	101	4.167
	150	45	**75**	90	132	185	1	1	96 ... 127	B	**3RT10 55-6QF35**		1	1 unit	101	3.892
									200 ... 277	B	**3RT10 55-6QP35**		1	1 unit	101	3.886
	185	55	**90**	110	160	215	1	1	96 ... 127	B	**3RT10 56-6QF35**		1	1 unit	101	3.100
									200 ... 277	B	**3RT10 56-6QP35**		1	1 unit	101	3.888
S10	225	55	**110**	160	200	275	1	1	96 ... 127	B	**3RT10 64-6QF35**		1	1 unit	101	7.018
									200 ... 277	B	**3RT10 64-6QP35**		1	1 unit	101	6.930
	265	75	**132**	160	250	330	1	1	96 ... 127	B	**3RT10 65-6QF35**		1	1 unit	101	5.700
									00 ... 277	B	**3RT10 65-6QP35**		1	1 unit	101	7.000
	300	90	**160**	200	250	330	1	1	96 ... 127	B	**3RT10 66-6QF35**		1	1 unit	101	5.700
									200 ... 277	B	**3RT10 66-6QP35**		1	1 unit	101	7.018
S12	400	132	**200**	250	400	430	1	1	96 ... 127	B	**3RT10 75-6QF35**		1	1 unit	101	9.100
									200 ... 277	B	**3RT10 75-6QP35**		1	1 unit	101	10.513
	500	160	**250**	355	400	610	1	1	96 ... 127	B	**3RT10 76-6QF35**		1	1 unit	101	11.730
									200 ... 277	B	**3RT10 76-6QP35**		1	1 unit	101	9.100

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/130.

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

*** You can order this quantity or a multiple thereof.**

Rated control supply voltages

Contactor type Rated control supply voltage U_s	3RT10 1	3RT10 2, 3RT10 3, 3RT10 4	3RT14 4	3RT13 1, 3RT15 1	3RT13 2 to 3RT13 4, 3RT15 2 and 3RT15 3	3RT16
Rated control supply voltages (the 10th and 11th position of the order number must be changed)						
Sizes S00 ... S3						
• AC operation[1]						
Coils for 50 Hz (exception: size S00: 50 and 60 Hz[2])						
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**
400 V AC	**V0**	**V0**	**V0**	**V0**	**V0**	**V0**
Coils for 50 and 60 Hz[2]						
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**
For USA and Canada[3]						
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**
For Japan						
50/60 Hz[4] / 60 Hz[5]						
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[1]						
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**	**--**	**--**

Sizes S6 ... S12

• AC/DC operation (40 ... 60 Hz, DC)

Conventional operating mechanism

$U_{s\,min}$ ... $U_{s\,max}$[6]	Contactor type: 3RT1. 5.-.A, 3RT1. 6.-.A, 3RT1. 7.-.A	$U_{s\,min}$ ... $U_{s\,max}$[6]	Contactor type: 3RT1. 5.-.A, 3RT1. 6.-.A, 3RT1. 7.-.A
23 ... 26 V AC/DC	**B3**	**240 ... 277 V AC/DC**	**U3**
42 ... 48 V AC/DC	**D3**	**380 ... 420 V AC/DC**	**V3**
110 ... 127 V AC/DC	**F3**	**440 ... 480 V AC/DC**	**R3**
200 ... 220 V AC/DC	**M3**	**500 ... 550 V AC/DC**	**S3**
220 ... 240 V AC/DC	**P3**	**575 ... 600 V AC/DC**	**T3**

Solid-state operating mechanism

$U_{s\,min}$ ... $U_{s\,max}$[6]	Contactor type: 3RT1. 5.-.N, 3RT1. 6.-.N, 3RT1. 7.-.N	3RT1. 5.-.P/Q, 3RT1. 6.-.P/Q, 3RT1. 7.-.P/Q
21 ... 27.3 V AC/DC	**B3**	**--**
96 ... 127 V AC/DC	**F3**	**F3**
200 ... 277 V AC/DC	**P3**	**P3**

1) For deviating coil voltages and coil operating ranges of sizes S00 and S0, the 24 V DC SITOP Power power supply with wide range input (93 to 264 V AC; 30 to 264 V DC) can be used for coil excitation (see Power Supplies -> SITOP Power Power Supplies).

2) 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

3) Coil operating range
Size S00: at 50 Hz: 0.85 to 1.1 x U_s
at 60 Hz: 0.8 to 1.1 x U_s
Sizes S0 to S3: at 50 Hz and 60 Hz: 0.8 to 1.1 x U_s

4) Coil operating range
Size S00: at 50/60 Hz: 0.85 to 1.1 x U_s
Sizes S0 to S3: at 50 Hz: 0.8 to 1.1 x U_s
at 60 Hz: 0.85 to 1.1 x U_s

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

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

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

Overview

- 3RT12 vacuum contactors for switching motors

Operating mechanism types

Two types of solenoid operation are available:

- Conventional operating mechanism, version 3RT12 ..-.A
- Solid-state operating mechanism, version 3RT12 ..-.N

UC operation

The contactors 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 magnetic 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

The contactors can be fitted with up to 8 laterally mounted auxiliary contacts (identical auxiliary switch blocks from S0 to S12). Of these, no more than 4 are permitted to be NC contacts.

Selection and ordering data

AC/DC operation *(40 Hz to 60 Hz, DC)*
Auxiliary and control conductors: screw terminals
Withdrawable coils
Integrated coil circuit *(varistor)*
Main conductors: bar connections



3RT12 7.



3RT12 7.

Size	Rated data AC-2 and AC-3, T_u: up to 60 °C					AC-1, T_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e up to										
	1000 V	230 V	**400 V**	500 V	690 V	1000 V										
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC							kg
Conventional operating mechanism																
S10	225	55	**110**	160	200	330	2	2	110 ... 127	A	**3RT12 64-6AF36**		1	1 unit	101	7.355
									220 ... 240	A	**3RT12 64-6AP36**		1	1 unit	101	7.225
	265	75	**132**	160	250	330	2	2	110 ... 127	A	**3RT12 65-6AF36**		1	1 unit	101	7.386
									220 ... 240	A	**3RT12 65-6AP36**		1	1 unit	101	7.300
	300	90	**160**	200	250	330	2	2	110 ... 127	A	**3RT12 66-6AF36**		1	1 unit	101	7.331
									220 ... 240	A	**3RT12 66-6AP36**		1	1 unit	101	7.318
S12	400	132	**200**	250	400	610	2	2	110 ... 127	A	**3RT12 75-6AF36**		1	1 unit	101	10.500
									220 ... 240	A	**3RT12 75-6AP36**		1	1 unit	101	10.397
	500	160	**250**	355	500	610	2	2	110 ... 127	A	**3RT12 76-6AF36**		1	1 unit	101	10.534
									220 ... 240	A	**3RT12 76-6AP36**		1	1 unit	101	10.400
Solid-state operating mechanism · for 24 V DC PLC output																
S10	225	55	**110**	160	200	330	2	2	96 ... 127	B	**3RT12 64-6NF36**		1	1 unit	101	7.400
									200 ... 277	B	**3RT12 64-6NP36**		1	1 unit	101	7.394
	265	75	**132**	160	250	330	2	2	96 ... 127	B	**3RT12 65-6NF36**		1	1 unit	101	7.400
									200 ... 277	B	**3RT12 65-6NP36**		1	1 unit	101	7.399
	300	90	**160**	200	250	330	2	2	96 ... 127	B	**3RT12 66-6NF36**		1	1 unit	101	7.402
									200 ... 277	B	**3RT12 66-6NP36**		1	1 unit	101	7.407
S12	400	132	**200**	250	400	610	2	2	96 ... 127	B	**3RT12 75-6NF36**		1	1 unit	101	7.250
									200 ... 277	B	**3RT12 75-6NP36**		1	1 unit	101	10.250
	500	160	**250**	355	500	610	2	2	96 ... 127	B	**3RT12 76-6NF36**		1	1 unit	101	10.580
									200 ... 277	B	**3RT12 76-6NP36**		1	1 unit	101	10.246

For other voltages, see page 3/29.
For more 3TF68/69 vacuum contactors (335 kW and 450 kW), see page 3/32.
For accessories, see page 3/114.

*** You can order this quantity or a multiple thereof.**

3TF6 vacuum contactors, 3-pole, 335 ... 450 kW

Overview

IEC 60947-4-1, EN 60947-4-1 (VDE 0660 Part 102)

The 3TF68/69 contactors are climate-proof. They are finger-safe according to EN 50274. Terminal covers (see Accessories and Spare Parts, page 3/135) may have to be fitted onto the connecting bars, depending on the configuration with other devices.

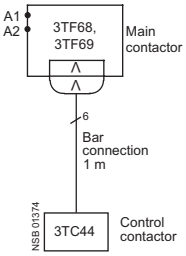
3TF6 vacuum contactors, 3-pole, 335 ... 450 kW

Selection and ordering data

Auxiliary and control conduct.: screw terminals
Main conductors: bar connections
Size 14



3TF68



3TF6. 33-.Q..

Rated data AC-2 and AC-3 (up to 55 °C)						AC -1	Auxiliary contacts		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to 690 V	Ratings of induction motors at 50 Hz and					Operational current I_e (at 40 °C)	Version									
	230 V	**400 V**	500 V	690 V	1000 V											
A	kW	**kW**	kW	kW	kW	A	NO	NC	V							kg
AC operation[1) 2)]																
630	200	**335**	434	600	--	700	4	4	110 ... 132 AC, 50/60 Hz	▶	**3TF68 44-0CF7**		1	1 unit	101	19.364
									200 ... 240 AC, 50/60 Hz	▶	**3TF68 44-0CM7**		1	1 unit	101	19.820
630	200	**335**	434	600	600	700	4	4	110 ... 132 AC, 50/60 Hz	C	**3TF68 44-8CF7**		1	1 unit	101	19.670
									200 ... 240 AC, 50/60 Hz	B	**3TF68 44-8CM7**		1	1 unit	101	20.270
820	260	**450**	600	800	--	910	4	4	110 ... 132 AC, 50/60 Hz	A	**3TF69 44-0CF7**		1	1 unit	101	21.833
									200 ... 240, 50/60 Hz	▶	**3TF69 44-0CM7**		1	1 unit	101	22.105
820	260	**450**	600	800	800	910	4	4	110 ... 132 AC, 50/60 Hz	C	**3TF69 44-8CF7**		1	1 unit	101	22.307
									200 ... 240 AC, 50/60 Hz	C	**3TF69 44-8CM7**		1	1 unit	101	22.454
DC operation · DC economy circuit																
630	200	**335**	434	600	--	700	3	3	24 DC	C	**3TF68 33-1DB4**		1	1 unit	101	19.532
					600					C	**3TF68 33-8DB4**		1	1 unit	101	17.900
820	260	**450**	600	800	--	910	3	3	24 DC	C	**3TF69 33-1DB4**		1	1 unit	101	22.666
					800					C	**3TF69 33-8DB4**		1	1 unit	101	12.258
AC operation · Version for AC controls which are subj. to strong interference																
630	200	**335**	434	600	--	700	3	3	110 ... 120 AC, 50/60 Hz	C	**3TF68 33-1QG7**		1	1 unit	101	18.592
									220 ... 240 AC, 50/60 Hz	C	**3TF68 33-1QL7**		1	1 unit	101	21.100
									380 ... 420 AC, 50/60 Hz	C	**3TF68 33-1QV7**		1	1 unit	101	20.739
					600	700	3	3	110 ...120 AC, 50/60 Hz	C	**3TF68 33-8QG7**		1	1 unit	101	21.000
									220 ... 240 AC, 50/60 Hz	C	**3TF68 33-8QL7**		1	1 unit	101	21.034
820	260	**450**	600	800	--	910	3	3	110 ... 120 AC, 50/60 Hz	C	**3TF69 33-1QG7**		1	1 unit	101	22.512
									220 ... 240 AC, 50/60 Hz	C	**3TF69 33-1QL7**		1	1 unit	101	22.400
									380 ... 420 AC, 50/60 Hz	C	**3TF69 33-1QV7**		1	1 unit	101	22.625
					800	910	3	3	110 ... 120 AC, 50/60 Hz	C	**3TF69 33-8QG7**		1	1 unit	101	21.900
									220 ... 240 AC, 50/60 Hz	C	**3TF69 33-8QL7**		1	1 unit	101	22.897

Reversing contactors supplied: 3TC44 17-4A..

For accessories, see page 3/134, for spare parts, see page 3/144.

1) Built-in overvoltage damping: varistor circuit.

2) For more information on EMC, see LV 1 T .
3TF68/69 vacuum contactors are supplied with integrated overvoltage damping for the main conducting paths (for description, see LV 1 T). The overvoltage damping circuit is not required if 3TF68/69 contactors are used in circuits with DC choppers, frequency converters or speed-variable drives, for example. It could be damaged by the voltage peaks and harmonics and cause phase-to-phase short-circuits.
For this reason, the contactors can also be supplied without integrated voltage damping. Without additional charge.
The order number must include **"-Z"** and the order code **"A02"**.

*** You can order this quantity or a multiple thereof.**

3TF6 vacuum contactors, 3-pole, 335 ... 450 kW

Rated control supply voltages

Contactor	Type	**3TF** 3TF68..-.C/D 3TF69..-.C/D
Rated control supply voltages (the 10th and 11th position of the order number must be changed)		
AC operation · Magnetic coils for 50/60 Hz		
110 ... 132 V AC		**F7**
200 ... 240 V AC		**M7**
230 ... 277 V AC		**P7**
380 ... 460 V AC		**Q7**
500 ... 600 V AC		**S7**
DC operation		
24 V DC		**B4**
110 V DC		**F4**
125 V DC		**G4**
220 V DC		**M4**
230 V DC		**P4**

3TB5 contactors with DC solenoid system, 3-pole, 55 ... 200 kW

Selection and ordering data

Auxiliary and control conductors: screw terminals
Main conductors: bar connections



3TB50

Size	Rated data AC-2 and AC-3 (up to 55 °C)					AC -1	Auxiliary contacts		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Operational current I_e (at 40 °C)	Version									
	690 V	230 V	**400 V**	500 V	690 V											
	A	kW	**kW**	kW	kW	A	NO	NC	V DC							kg
DC operation · DC solenoid system																
6	110	37	**55**	75	90	170	2	2	24	A	**3TB50 17-0BB4**		1	1 unit	101	6.436
8	170	55	**90**	110	132	230	2	2	24	B	**3TB52 17-0BB4**		1	1 unit	101	8.468
10	250	75	**132**	160	200	325	2	2	24	C	**3TB54 17-0BB4**		1	1 unit	101	16.510
12	400	115	**200**	255	355	425	2	2	24	C	**3TB56 17-0BB4**		1	1 unit	101	19.318

For accessories, see page 3/134.
For spare parts, see page 3/142.

Contactor	Type	**3TB** 3TB50/3TB52/3TB54	3TB56
Rated control supply voltages (the 10th and 11th position of the order number must be changed)			
DC operation			
24 V DC		**B4**	**B4**
110 V DC		**F4**	**--**
220 V DC		**M4**	**M4**

*** You can order this quantity or a multiple thereof.**

3TF2 contactors, 3-pole, 2.2 ... 4 kW

Overview

AC and DC operation

IEC 60947 (VDE 0660).

The contactors are suitable for use in any climate.

The contactors with screw terminals are finger-safe according to EN 50274.

The contactors are available in versions with screw terminals, 6.3 mm plug connectors and solder pin connectors for soldering in printed circuit boards.

Selection and ordering data

Size 00
AC-1: operational current I_e = 16 A (at 55 °C)
Screw terminals

Rated data Utilization categories AC-2 and AC-3					Auxiliary contacts			DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e at 400/380 V	Ratings of induction motors at 50 Hz and 230/220 V	**400/380 V**	500 V	690/660 V	Ident. No.	Version NO	NC							
A	kW	**kW**	kW	kW										kg
Contactors with screw terminals · for screw and snap-on mounting onto 35 mm standard mounting rail														
					AC operation									
5	1.3	**2.2**	2.9	3.8	**10 E**	1	--	A	**3TF28 10-0AP0**		1	1 unit	101	0.194
					01 E	--	1	A	**3TF28 01-0AP0**		1	1 unit	101	0.193
9	2.4	**4**	4	4	**10 E**	1	--	A	**3TF20 10-0AP0**		1	1 unit	101	0.192
					01 E	--	1	A	**3TF20 01-0AP0**		1	1 unit	101	0.193
					DC operation · DC solenoid system									
5	1.3	**2.2**	2.9	3.8	**10 E**	1	--	A	**3TF28 10-0BB4**		1	1 unit	101	0.214
					01 E	--	1	A	**3TF28 01-0BB4**		1	1 unit	101	0.214
9	2.4	**4**	4	4	**10 E**	1	--	A	**3TF20 10-0BB4**		1	1 unit	101	0.214
					01 E	--	1	A	**3TF20 01-0BB4**		1	1 unit	101	0.214
Contactors with 6.3 mm x 0.8 mm flat connectors · for screw and snap-on mounting onto 35 mm standard mounting rail														
					AC operation									
9	2.4	**4**	4	--	**10 E**	1	--	B	**3TF20 10-3AP0**		1	1 unit	101	0.166
					01 E	--	1	B	**3TF20 01-3AP0**		1	1 unit	101	0.163
					DC operation · DC solenoid system									
9	2.4	**4**	4	--	**10 E**	1	--	B	**3TF20 10-3BB4**		1	1 unit	101	0.187
					01 E	--	1	C	**3TF20 01-3BB4**		1	1 unit	101	0.187
Contactors with 6.3 mm x 0.8 mm flat connectors · for screw mounting (diagonal)														
					AC operation									
9	2.4	**4**	4	--	**10 E**	1	--	C	**3TF20 10-7AP0**		1	1 unit	101	0.161
					01 E	--	1	B	**3TF20 01-7AP0**		1	1 unit	101	0.160
					DC operation · DC solenoid system									
9	2.4	**4**	4	--	**10 E**	1	--	B	**3TF20 10-7BB4**		1	1 unit	101	0.184
					01 E	--	1	B	**3TF20 01-7BB4**		1	1 unit	101	0.185
Contactors with solder pin connectors for printed circuit boards · for screw mounting (diagonal)														
					AC operation									
9	2.4	**4**	4	--	**10 E**	1	--	C	**3TF20 10-6AP0**		1	1 unit	101	0.164
					01 E	--	1	B	**3TF20 01-6AP0**		1	1 unit	101	0.164
					DC operation · DC solenoid system									
9	2.4	**4**	4	--	**10 E**	1	--	B	**3TF20 10-6BB4**		1	1 unit	101	0.186
					01 E	--	1	B	**3TF20 01-6BB4**		1	1 unit	101	0.184


3TF20 ..-0...,
3TF28 ..-0...


3TF20 ..-3...


3TF20 ..-7...


3TF20 ..-6...

For accessories, see page 3/136.

*** You can order this quantity or a multiple thereof.**

3TF2 contactors, 3-pole, 2.2 ... 4 kW

Rated data Utilization categories AC-2 and AC-3					Auxiliary contacts			DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of induction motors at 50 Hz and				Ident. No.	Version								
at 400/ 380 V	230/ 220 V	**400/ 380 V**	500 V	690/ 660 V										
A	kW	**kW**	kW	kW		NO	NC							kg
Contactors with permanently mounted auxiliary switch blocks with screw terminals, width 45 mm · for screw and snap-on mounting onto 35 mm standard mounting rail														
					AC operation									
5	1.3	**2.2**	2.9	3.8	**11 E**	1	1	C	**3TF29 11-0AP0**		1	1 unit	101	0.220
					22 E	2	2	C	**3TF29 22-0AP0**		1	1 unit	101	0.228
9	2.4	**4**	4	4	**11 E**	1	1	C	**3TF22 11-0AP0**		1	1 unit	101	0.220
					22 E	2	2	C	**3TF22 22-0AP0**		1	1 unit	101	0.228
					DC operation · DC solenoid system									
5	1.3	**2.2**	2.9	3.8	**11 E**	1	1	C	**3TF29 11-0BB4**		1	1 unit	101	0.241
					22 E	2	2	C	**3TF29 22-0BB4**		1	1 unit	101	0.251
9	2.4	**4**	4	4	**11 E**	1	1	C	**3TF22 11-0BB4**		1	1 unit	101	0.238
					22 E	2	2	C	**3TF22 22-0BB4**		1	1 unit	101	0.250



3TF22 ..-0...,
3TF29 ..-0...

For accessories, see page 3/136.

Rated control supply voltages

Contactor	Type	**3TF20 3TF28**
Rated control supply voltages (the 10th and 11th position of the order number must be changed)		
AC operation		
Coils for AC 50 and 60 Hz Rated control supply voltage U_s		
Coils for AC 50 Hz **50 Hz** **V AC**	**60 Hz** **V AC**	
24	**29**	**B0**
110	**132**	**F0**
230/220	**276**	**P0**[1]
Coils for AC 50 and 60 Hz **V AC**		
230		**L2**
DC operation		
Rated control supply voltage U_s **V DC**		
24		**B4**

Contactor	Type	**3TF22 3TF29**
Rated control supply voltages (the 10th and 11th position of the order number must be changed)		
AC operation		
Coils for AC 50 and 60 Hz Rated control supply voltage U_s		
Coils for AC 50 Hz **50 Hz** **V AC**	**60 Hz** **V AC**	
230/220	**276**	**P0**[1]
DC operation		
Rated control supply voltage U_s **V DC**		
24		**B4**

1) Operating range at 220 V:
0.85 to 1.15 x U_s; lower operating range limit according to IEC 60947.

Please inquire about other voltages.

*** You can order this quantity or a multiple thereof.**

Notes

3RA13 Reversing Contactor Assemblies

3RA13 complete units, 3 ... 45 kW

Overview

The 3RA13 reversing contactor assemblies can be ordered as follows:

Sizes S00 to S3

- Fully wired and tested, with mechanical and electrical interlock (for voltages > 500 V, a dead interval of 50 ms on reversing must be taken into account)

Sizes S00 to S12

- As components for customer assembly.

There is also a range of accessories (auxiliary switch blocks, surge suppressors, etc.) that must be ordered separately.

For overload relays for motor protection, see "SIRIUS Overload Relays".

The 3RA13 contactor assemblies have screw connections and are suitable for screwing or snapping onto 35 mm standard mounting rails.

Complete units

The fully wired reversing contactor assemblies are suitable for use in any climate. They are finger-safe according to EN 50274.

The contactor assemblies consist of 2 contactors with the same power, with one NC contact in the basic unit. The contactors are mechanically and electrically interlocked (NC contact interlock).

For motor protection, either 3RU11 overload relays for direct mounting or individual mounting or thermistor motor protection tripping units must be ordered separately.

Components for customer assembly

Installation kits for all sizes are available for customer assembly of reversing contactor assemblies.

Contactors, overload relays, the mechanical interlock (as of size S0) and – for momentary-contact operation – auxiliary switch blocks for latching must be ordered separately.

Rated data AC-2 and AC-3 for AC 50 Hz 400 V		Size	Order No.					
Rating	Operational current I_e		Contactor	Mechanical interlock[1]	Mechanical interlock[2]	Mechanical interlock[3]	Installation kit	**Fully wired and tested contactor assemblies**
kW	A							
3	7	**S00**	3RT10 15	--[4]	--	--	3RA19 13-2A[5]	**3RA13 15-8XB30-1 . .**
4	9		3RT10 16					**3RA13 16-8XB30-1 . .**
5.5	12		3RT10 17					**3RA13 17-8XB30-1 . .**
5.5	12	**S0**	3RT10 24	3RA19 24-1A	3RA19 24-2B	--	3RA19 23-2A[6]	**3RA13 24-8XB30-1 . .**
7.5	17		3RT10 25					**3RA13 25-8XB30-1 . .**
11	25		3RT10 26					**3RA13 26-8XB30-1 . .**
15	32	**S2**	3RT10 34	3RA19 24-1A	3RA19 24-2B	--	3RA19 33-2A[7]	**3RA13 34-8XB30-1 . .**
18.5	40		3RT10 35					**3RA13 35-8XB30-1 . .**
22	50		3RT10 36					**3RA13 36-8XB30-1 . .**
30	65	**S3**	3RT10 44	3RA19 24-1A	3RA19 24-2B	--	3RA19 43-2A[7]	**3RA13 44-8XB30-1 . .**
37	80		3RT10 45					**3RA13 45-8XB30-1 . .**
45	95		3RT10 46					**3RA13 46-8XB30-1 . .**
55	115	**S6**	3RT10 54	--	--	3RA19 54-2A	3RA19 53-2A[8]	**--**
75	150		3RT10 55					
90	185		3RT10 56					
110	225	**S10**	3RT10 64	--	--	3RA19 54-2A	3RA19 63-2A[8]	**--**
132	265		3RT10 65					
160	300		3RT10 66					
200	400	**S12**	3RT10 75	--	--	3RA19 54-2A	3RA19 73-2A[8]	**--**
250	500		3RT10 76	--	--			

1) Can be mounted onto the front.

2) Laterally mountable with one auxiliary contact.

3) Laterally mountable without auxiliary contact.

4) Interlock can only be ordered with installation kit.

5) Installation kit contains: mechanical interlock; connecting clips for 2 contactors; wiring connectors on the top and bottom.

6) Installation kit contains: wiring connectors on the top and bottom.

7) Installation kit contains: 2 connecting clips for contactors; wiring connectors on the top and bottom.

8) Installation kit contains: wiring module on the top and bottom.

Selection and ordering data

Size S00 · up to 5.5 kW

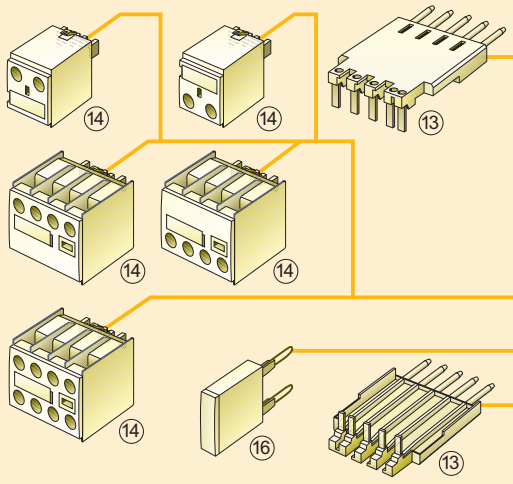
Rated data AC-2 and AC-3					Rated control supply voltage U_s [1]	DT	Fully wired and tested contactor assemblies [2] Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and											
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
7	2.2	**3**	3.5	4	24 AC	A	**3RA13 15-8XB30-1AB0**		1	1 unit	101	0.429
					110 AC	A	**3RA13 15-8XB30-1AF0**		1	1 unit	101	0.430
					230 AC	▶	**3RA13 15-8XB30-1AP0**		1	1 unit	101	0.427
9	3	**4**	4.5	5.5	24 AC	A	**3RA13 16-8XB30-1AB0**		1	1 unit	101	0.429
					110 AC	A	**3RA13 16-8XB30-1AF0**		1	1 unit	101	0.428
					230 AC	▶	**3RA13 16-8XB30-1AP0**		1	1 unit	101	0.425
12	3	**5.5**	5.5	5.5	24 AC	A	**3RA13 17-8XB30-1AB0**		1	1 unit	101	0.430
					110 AC	A	**3RA13 17-8XB30-1AF0**		1	1 unit	101	0.425
					230 AC	▶	**3RA13 17-8XB30-1AP0**		1	1 unit	101	0.430
DC operation												
7	2.2	**3**	3.5	4	24 DC	▶	**3RA13 15-8XB30-1BB4**		1	1 unit	101	0.548
9	3	**4**	4.5	5.5	24 DC	▶	**3RA13 16-8XB30-1BB4**		1	1 unit	101	0.547



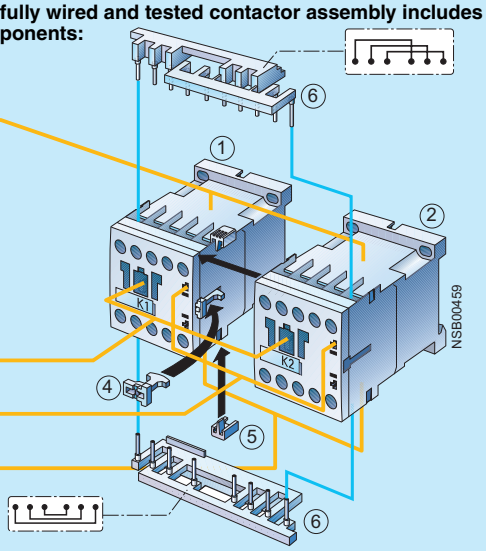
1) Coil operating range at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

2) The contactors integrated in the contactor assemblies have no unassigned auxiliary contacts.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



Accessories		Order No.	Page
13	Solder pin adapters	3RT19 16-4KA1	3/122
14	Auxiliary switch block, front (auxiliary switch block according to EN 50005 must be used)	3RH19 11-1....	3/110
16	Surge suppressors	3RT19 16-1....	3/119, 3/120

Individual parts		Order No. K1	K2	Page
1 2	Contactors, 3 kW	3RT10 15	3RT10 15	3/12
1 2	Contactors, 4 kW	3RT10 16	3RT10 16	3/12
1 2	Contactors, 5.5 kW	3RT10 17	3RT10 17	3/12
4 5 6	Installation kit	3RA19 13-2A		3/44

The installation kit contains:

- 4 Mechanical interlock
- 5 2 connecting clips for 2 contactors
- 6 Wiring connectors on the top and bottom for connecting the main conducting paths, electrical interlock included [1], interruptible (NC contact interlock)

1) 3RT10 1 contactors with one NC contact in the basic unit are required for the electrical interlock.

*** You can order this quantity or a multiple thereof.**

3RA13 Reversing Contactor Assemblies

3RA13 complete units, 3 ... 45 kW

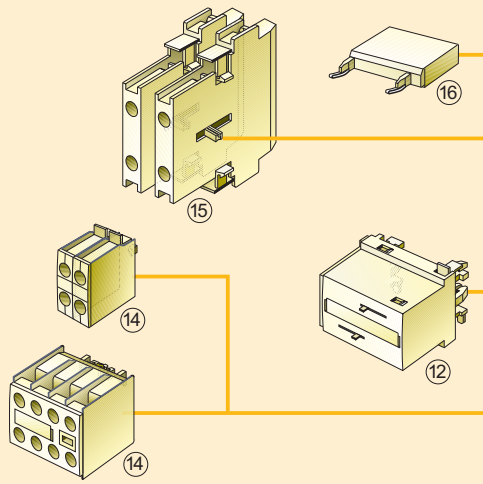
Size S0 · up to 11 kW



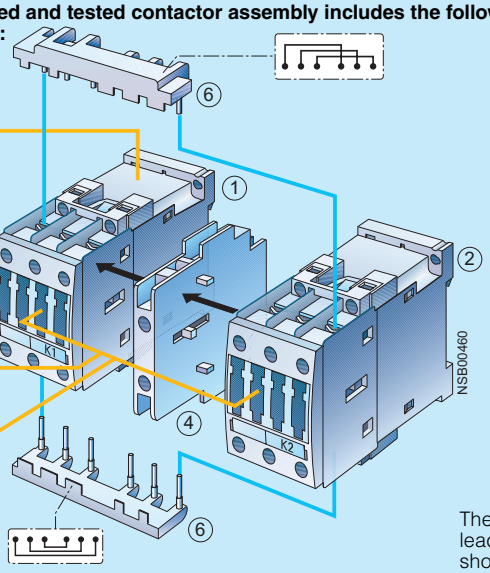
Rated data AC-2 and AC-3					Rated control supply voltage U_s 1)	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
12	3	**5.5**	7.5	7.5	24 AC	A	**3RA13 24-8XB30-1AC2**		1	1 unit	101	0.766
					110 AC	A	**3RA13 24-8XB30-1AG2**		1	1 unit	101	0.763
					230 AC	▶	**3RA13 24-8XB30-1AL2**		1	1 unit	101	0.777
17	4	**7.5**	10	11	24 AC	A	**3RA13 25-8XB30-1AC2**		1	1 unit	101	0.760
					110 AC	A	**3RA13 25-8XB30-1AG2**		1	1 unit	101	0.763
					230 AC	▶	**3RA13 25-8XB30-1AL2**		1	1 unit	101	0.773
25	5.5	**11**	11	11	24 AC	A	**3RA13 26-8XB30-1AC2**		1	1 unit	101	0.755
					110 AC	A	**3RA13 26-8XB30-1AG2**		1	1 unit	101	0.760
					230 AC	A	**3RA13 26-8XB30-1AL2**		1	1 unit	101	0.774
DC operation												
12	3	**5.5**	7.5	7.5	24 DC	▶	**3RA13 24-8XB30-1BB4**		1	1 unit	101	1.224
17	4	**7.5**	10	11	24 DC	A	**3RA13 25-8XB30-1BB4**		1	1 unit	101	1.222
25	5.5	**11**	11	11	24 DC	A	**3RA13 26-8XB30-1BB4**		1	1 unit	101	1.229

1) Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories		Order No.	Page
12	Mechanical interlock, front	3RA19 24-1A	3/43
14	Auxiliary switch block, front	3RH19 21-1CA..	3/112
15	Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
16	Surge suppressors	3RT19 26-1....	3/119

Individual parts		Order No. K1	Order No. K2	Page
1 2	Contactors, 5.5 kW	3RT10 24	3RT10 24	3/14
1 2	Contactors, 7.5 kW	3RT10 25	3RT10 25	3/14
1 2	Contactors, 11 kW	3RT10 26	3RT10 26	3/14
4	Mechanical interlock, lateral	3RA19 24-2B		3/43
6	Installation kit	3RA19 23-2A		3/44

The installation kit contains wiring connectors on the top and bottom (they also form the mechanical connection between the contactors).

*** You can order this quantity or a multiple thereof.**

3

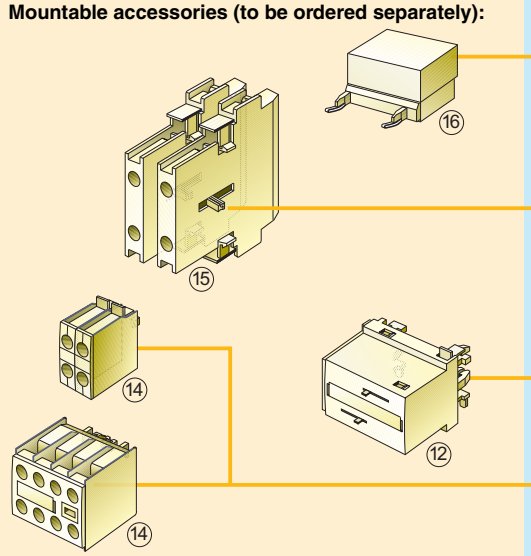
Size S2 · up to 22 kW



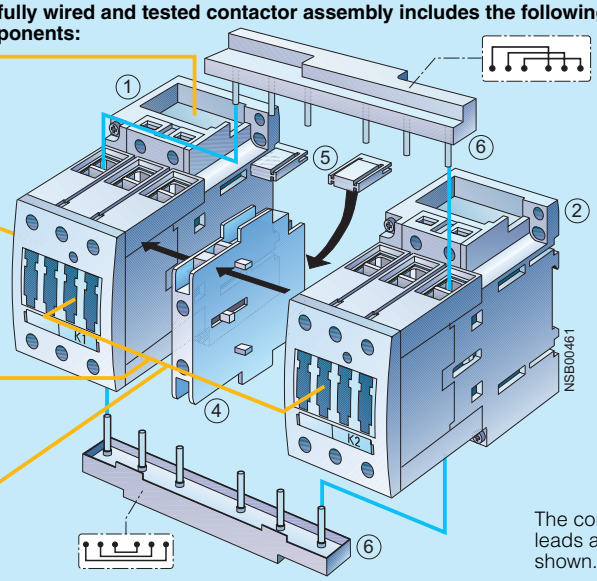
Rated data AC-2 and AC-3					Rated control supply voltage U_s 1)	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
500 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
32	7.5	**15**	18.5	18.5	24 AC	A	**3RA13 34-8XB30-1AC2**		1	1 unit	101	2.255
					110 AC	A	**3RA13 34-8XB30-1AG2**		1	1 unit	101	2.265
					230 AC	A	**3RA13 34-8XB30-1AL2**		1	1 unit	101	2.220
40	11	**18.5**	22	22	24 AC	A	**3RA13 35-8XB30-1AC2**		1	1 unit	101	2.315
					110 AC	A	**3RA13 35-8XB30-1AG2**		1	1 unit	101	2.320
					230 AC	A	**3RA13 35-8XB30-1AL2**		1	1 unit	101	2.300
50	15	**22**	30	22	24 AC	B	**3RA13 36-8XB30-1AC2**		1	1 unit	101	2.340
					110 AC	B	**3RA13 36-8XB30-1AG2**		1	1 unit	101	2.315
					230 AC	A	**3RA13 36-8XB30-1AL2**		1	1 unit	101	2.290
DC operation												
32	7.5	**15**	18.5	18.5	24 DC	A	**3RA13 34-8XB30-1BB4**		1	1 unit	101	3.440
40	11	**18.5**	22	22	24 DC	A	**3RA13 35-8XB30-1BB4**		1	1 unit	101	3.445
50	15	**22**	30	22	24 DC	A	**3RA13 36-8XB30-1BB4**		1	1 unit	101	3.454

1) Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories		Order No.	Page
12	Mechanical interlock, front	3RA19 24-1A	3/43
14	Auxiliary switch block, front	3RH19 21-1CA..	3/112
15	Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
16	Surge suppressors	3RT19 26-1.... 3RT19 36-1....	3/119

Individual parts		Order No. K1	Order No. K2	Page
1 2	Contactors, 15 kW	3RT10 34	3RT10 34	3/16
1 2	Contactors, 18.5 kW	3RT10 35	3RT10 35	3/16
1 2	Contactors, 22 kW	3RT10 36	3RT10 36	3/16
4	Mechanical interlock, lateral	3RA19 24-2B		3/43
5 6	Installation kit	3RA19 33-2A		3/44

The installation kit contains:

5 2 connecting clips for 2 contactors with a clearance of 10 mm

6 Wiring connectors on the top and bottom for connecting the main conducting paths

*** You can order this quantity or a multiple thereof.**

3RA13 Reversing Contactor Assemblies

3RA13 complete units, 3 ... 45 kW

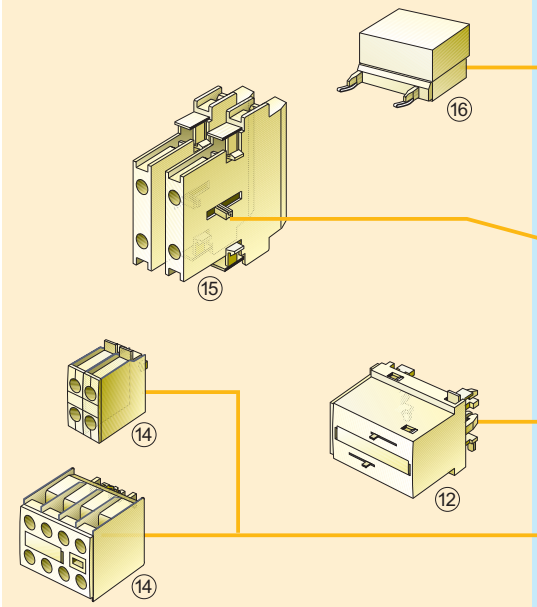
Size S3 · up to 45 kW



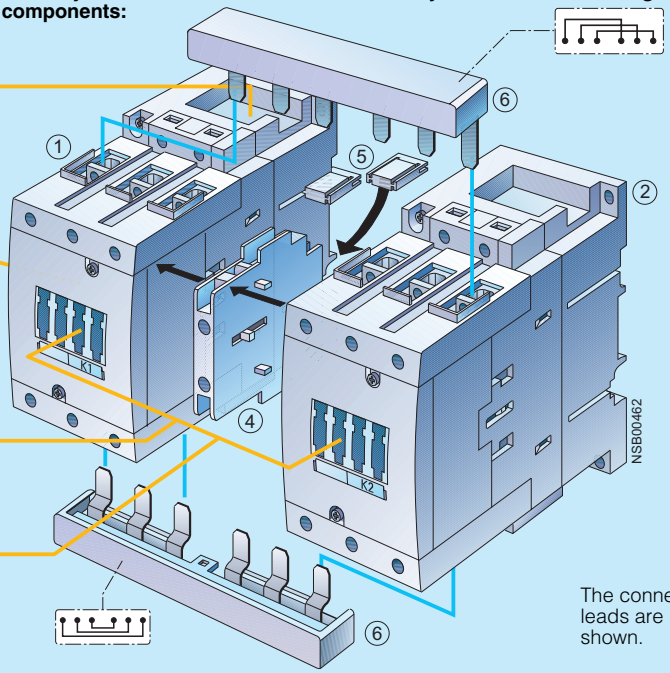
Rated data AC-2 and AC-3					Rated control supply voltage U_s 1)	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
500 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation at 50/60 Hz												
65	18.5	**30**	37	45	24 AC	B	**3RA13 44-8XB30-1AC2**		1	1 unit	101	4.242
					110 AC	B	**3RA13 44-8XB30-1AG2**		1	1 unit	101	4.250
					230 AC	B	**3RA13 44-8XB30-1AL2**		1	1 unit	101	4.221
80	22	**37**	45	55	24 AC	B	**3RA13 45-8XB30-1AC2**		1	1 unit	101	4.432
					110 AC	B	**3RA13 45-8XB30-1AG2**		1	1 unit	101	4.500
					230 AC	B	**3RA13 45-8XB30-1AL2**		1	1 unit	101	4.500
95	22	**45**	55	55	24 AC	B	**3RA13 46-8XB30-1AC2**		1	1 unit	101	4.464
					110 AC	B	**3RA13 46-8XB30-1AG2**		1	1 unit	101	4.500
					230 AC	B	**3RA13 46-8XB30-1AL2**		1	1 unit	101	4.470
DC operation												
65	18.5	**30**	37	45	24 DC	B	**3RA13 44-8XB30-1BB4**		1	1 unit	101	6.380
80	22	**37**	45	55	24 DC	B	**3RA13 45-8XB30-1BB4**		1	1 unit	101	6.430
95	22	**45**	55	55	24 DC	B	**3RA13 46-8XB30-1BB4**		1	1 unit	101	6.471

1) Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories		Order No.	Page
12	Mechanical interlock, front	3RA19 24-1A	3/43
14	Auxiliary switch block, front	3RH19 21-1CA..	3/112
15	Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
16	Surge suppressors	3RT19 26-1.... 3RT19 36-1....	3/119

Individual parts		Order No. K1	Order No. K2	Page
1 2	Contactors, 30 kW	3RT10 44	3RT10 44	3/18
1 2	Contactors, 37 kW	3RT10 45	3RT10 45	3/18
1 2	Contactors, 45 kW	3RT10 46	3RT10 46	3/18
4	Mechanical interlock, lateral	3RA19 24-2B		3/43
5 6	Installation kit	3RA19 43-2A		3/44

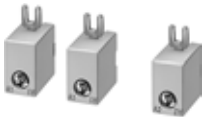
The installation kit contains:

5 2 connecting clips for 2 contactors with a clearance of 10 mm

6 Wiring connectors on the top and bottom for connecting the main conducting paths

* You can order this quantity or a multiple thereof.

Selection and ordering data

	For contactors Type	Size	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Mechanical interlocks										
 3RA19 24-1A mounted onto 2 contactors	3RT10 2 3RT10 3 3RT10 4 3RT13 2 3RT13 3 3RT13 4	**S0** **S2** **S3**	**For lateral mounting**[1] Each with one auxiliary contact (1 NC contact) per contactor (can only be used to connect contactors which are not more than 1 size larger or smaller. The mounting depth of the smaller contactor has to be adapted.)	►	**3RA19 24-2B**		1	1 unit	101	0.060
	3RT10 2 3RT10 3 3RT10 4 3RT13 2	**S0** **S2** **S3** **S0**	**For mounting to the front**[2] To contactors with sizes S0 to S3 (for contactors of the same size) Note: Size S0: Wiring connectors must be mounted first Sizes S2 and S3: Use 3RA19 32-2C mechanical connectors	►	**3RA19 24-1A**		1	1 unit	101	0.052
 3RA19 54-2A	3RT1. 5 up to 3RT1. 7	**S6** **S10** **S12**	**For lateral mounting** Without auxiliary contacts; size S6, S10 and S12 contactors can be interlocked with each other as required; no adaptation of mounting depth is necessary. Contactor clearance 10 mm.	►	**3RA19 54-2A**		1	1 unit	101	0.045
 3RA19 54-2C	3RT10 4.-A with 3RT10 5	**S3** with **S6**	**Adapter, laterally mountable**, for mechanical interlocking of contactor S3 (only for AC operation) with contactor S6 using 3RA1954-2A locking device (must be ordered separately) incl. connecting clips	A	**3RA19 54-2C**		1	1 unit	101	0.050
Coil repeat terminals										
 3RA19 23-3B	3RT10 3 3RT10 4	**S2, S3**	For the coil connectors A1 and A2 for reversing starters (contactor sizes S2 and S3). 2 x A1 and 1 x A2 required per assembly. (1 set contains 10 x A1 and 5 x A2)	B	**3RA19 23-3B**		1	1 set	101	0.082
Base plates										
	3RT10 5 3RT1. 6 3RT1. 7	**S6** **S10** **S12**	For customer assembly of reversing contactor assemblies	B B B	**3RA19 52-2A** **3RA19 62-2A** **3RA19 72-2A**		1 1 1	1 unit 1 unit 1 unit	101 101 101	1.249 2.091 2.322

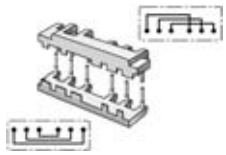
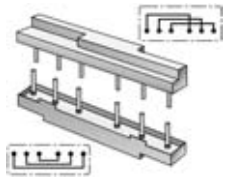
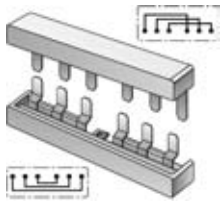
1) Can also be used for 4-pole contactors with sizes S2 and S3.

2) Can also be used for size S0 4-pole contactors.

*** You can order this quantity or a multiple thereof.**

3RA13 Reversing Contactor Assemblies

Components for customer assembly

	For contactors Type	Size	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Installation kits for making 3-pole contactor assemblies										
 3RA19 13-2A 	3RT10 1	**S00**	The installation kit contains: ► mechanical interlock 2 connecting clips for 2 contactors wiring connectors on the top and bottom		**3RA19 13-2A**		1	1 set	101	0.041
 3RA19 23-2A	3RT10 2	**S0**	The installation kit contains: ► wiring connectors on the top and bottom		**3RA19 23-2A**		1	1 set	101	0.052
 3RA19 33-2A 	3RT10 3	**S2**	The installation kit contains: ► 2 connecting clips for 2 contactors wiring connectors on the top and bottom		**3RA19 33-2A**		1	1 set	101	0.122
 3RA19 43-2A 	3RT10 4	**S3**	The installation kit contains: ► 2 connecting clips for 2 contactors wiring connectors on the top and bottom		**3RA19 43-2A**		1	1 set	101	0.294
	3RT10 5 3RT1. 6 3RT1. 7	**S6** **S10** **S12**	The installation kit contains: wiring connectors on the top and bottom	A A A	**3RA19 53-2A** **3RA19 63-2A** **3RA19 73-2A**		1 1 1	1 set 1 set 1 set	101 101 101	1.294 2.419 3.040

*** You can order this quantity or a multiple thereof.**

Components for customer assembly

Wiring connectors

For contactors Type	Size	Contactor clearance mm	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
3RT10 1	**S00-S00**	0	Top (in-phase)	▶	**3RA19 13-3D**		1	5 unit	101	0.011
			Bottom (phase reversal)	▶	**3RA19 13-3E**		1	5 unit	101	0.014
3RT10 2	**S0-S0** and **S0-S0**	0 and 10	Top (in-phase)	▶	**3RA19 23-3D**		1	5 unit	101	0.021
			Bottom (phase reversal)	▶	**3RA19 23-3E**		1	5 unit	101	0.019
3RT10 3	**S2-S2**	10	Top (in-phase)	▶	**3RA19 33-3D**		1	1 unit	101	0.066
			Bottom (phase reversal)	▶	**3RA19 33-3E**		1	1 unit	101	0.054
3RT10 4	**S3-S3**	10	Top (in-phase)	▶	**3RA19 43-3D**		1	1 unit	101	0.157
			Bottom (phase reversal)	▶	**3RA19 43-3E**		1	1 unit	101	0.137
3RT10 5	**S6-S6**	10	Top (in-phase)	A	**3RA19 53-3D**		1	1 set	101	0.615
3RT10 6	**S10-S10**	10	Top (phase reversal)	B	**3RA19 63-3D**		1	1 set	101	1.235

Mechanical connectors

1 pack = 10 sets for 10 assemblies

For contactors Type	Size	Contactor clearance mm	Interlocking	Version	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
3RT1. 1[1]	**S00-S00**	0	Laterally mountable	For 3 and 4-pole contactors	▶	**3RA19 12-2H**		1	10 sets	101	0.001
3RT1. 2	**S0-S0**	0	Mountable on front	For 3 and 4-pole contactors	▶	**3RA19 22-2C**		1	10 sets	101	0.025
		10[2]	Laterally mountable		▶	**3RT19 22-2D**		1	10 sets	101	0.110
3RT1. 3 3RT1. 4	**S2-S2** **S3-S3**	0	Mountable on front	For 3-pole contactors	▶	**3RA19 32-2C**		1	10 sets	101	0.001
3RT1. 3 3RT1. 4 3RT1. 5	**S2-S2** **S3-S3** **S6-S6**	10	Laterally mountable	For 3-pole contactors	▶	**3RA19 32-2D**		1	10 sets	101	0.003
3RT1. 3	**S2-S2**	10	Laterally mountable	For 4-pole contactors	▶	**3RA19 32-2G**		1	10 sets	101	0.007
3RT1. 4	**S3-S3**	10	Laterally mountable	For 4-pole contactors	▶	**3RA19 42-2G**		1	10 sets	101	0.008


3RA19 12-2H


3RA19 22-2C


3RA19 32-2C


3RA19 32-2D


3RA19 32-2G


3RA19 42-2G

1) This pack contains 10 additional interlocks.

2) The connector function can be fulfilled with the wiring connectors for size S0, a contactor clearance of 10 mm and a lateral interlock.

*** You can order this quantity or a multiple thereof.**

3RA14 Contactor Assemblies for Wye-Delta Starting

3RA14 complete units, 3 ... 75 kW

Overview

The 3RA14 contactor assemblies for wye-delta starting can be ordered as follows:

Sizes S00 to S3:

- Fully wired and tested, with electrical interlock, dead interval of up to 10 s on reversing (size S00 with electrical and mechanical interlocks)

Sizes S00 to S12:

- As components for customer assembly.

A dead interval of 50 ms on reversing is already integrated in the timing relay function.

There is also a range of accessories (auxiliary switch blocks, surge suppressors, etc.) that must be ordered separately.

For overload relays for motor protection, see "Protection Equipment: Overload Relays -> 3RB2 Solid-State Overload Relays".

The 3RA14 contactor assemblies have screw terminals and are suitable for screwing or snapping onto 35 mm standard mounting rails.

Fully wired and tested 3RA14 contactor assemblies have one unassigned NO contact which is mounted onto the front of the K3 delta contactor.

A solid-state time-delay auxiliary switch block is snapped onto the front of the complete contactor assemblies, size S00 up to 7.5 kW, while a timing relay is mounted onto the side of sizes S0 to S3, 11 kW to 75 kW.

Rated data at AC 50 Hz 400 V			Size				Accessories for customer assembly	
Rating kW	Operational current I_e A	motor current A		Line/delta contactor	Wye contactor	**Order No. complete**	Timing relay	Installation kit A, for double infeed
5.5	12	1.9 ... 2.8	**S00-S00-S00**	3RT10 15	3RT10 15	**3RA14 15-8XB31-1...**	3RT19 16-2G.51	--
		2.4 ... 3.4						
		3.1 ... 4.3						
		3.8 ... 5.5						
		4.8 ... 6.9						
		6 ... 8.6						
7.5	17	7.8 ... 10.9		3RT10 17				
		9.5 ... 13.8						
		12.1 ... 17				**3RA141 6-8XB31-1...**	3RP15 74-1N.30	
11	25	3.1 ... 4.3	**S0-S0-S0**	3RT10 24	3RT10 24	**3RA14 23-8XC21-1...**	3RP15 74-1N.30	--
		3.8 ... 5.5						
		4.8 ... 6.9						
		6 ... 8.6						
		7.8 ... 10.9						
		9.5 ... 13.8						
		12.1 ... 17.2						
		15.5 ... 21.5						
		19 ... 25						
15	32	24.1 ... 34		3RT10 26		**3RA14 25-8XC21-1...**		
		29.3 ... 37.9						
18.5	40	34.5 ... 40						
22	50	9.5 ... 13.8	**S2-S2-S0**	3RT10 34	3RT10 26	**3RA14 34-8XC21-1...**	3RP15 74-1N.30	3RA19 33-2C[3]
		12.1 ... 17.2						
		15.5 ... 21.5						
		19 ... 27.6						
		24.1 ... 34						
		31 ... 43						
		37.9 ... 55.2						
		48.3 ... 65		3RT10 35		--		
37	80	62.1 ... 77.8	**S2-S2-S2**		3RT10 34	**3RA14 35-8XC21-1...**		3RA19 33-2B[3]
45	86	69 ... 86		3RT10 36		**3RA14 36-8XC21-1...**		
55	115	31 ... 43.1	**S3-S3-S2**	3RT10 44	3RT10 35	**3RA14 44-8XC21-1...**	3RP15 74-1N.30	3RA19 43-2C[3]
		37.9 ... 55.2						
		48.3 ... 69						
		62.1 ... 77.6						
		77.6 ... 108.6						
75	150	98.3 ... 129.3		3RT10 45	3RT10 36	**3RA14 45-8XC21-1...**		
		120.7 ... 150						
90	160	86 ... 160	**S6-S6-S3**	3RT10 54	3RT10 44	--	3RP15 74-1N.30	--
110	195	86 ... 195						
132	230	86 ... 230		3RT10 55	3RT10 45			
160	280	86 ... 280		3RT10 56	3RT10 46			
200	350	95 ... 350	**S10-S10-S6**	3RT10 64	3RT10 54	--	3RP15 74-1N.30	--
250	430	95 ... 430		3RT10 65	3RT10 55			
315	540	277 ... 540	**S12-S12-S10**	3RT10 75	3RT10 64	--	3RP15 74-1N.30	--
355	610	277 ... 610						
400	690	277 ... 690			3RT10 65			
500	850	277 ... 850		3RT10 76	3RT10 66			

1) Installation kit contains mechanical interlock, 3 connecting clips; wiring connectors on the top (connection between mains and delta contactor) and on the bottom (connection between delta and wye contactor); neutral point.

2) The installation kit contains 5 connecting clips; wiring connectors on the top (connection between mains and delta contactor) and on the bottom (connection between delta and wye contactor); star jumper.

3) Installation kit contains wiring connector on the bottom (connection between delta contactor and wye contactor) and star jumper.

4) Wiring connector on top from reversing contactor assembly (note conductor cross-sections).

5) Only use wiring connector on top of reversing contactor assembly (note conductor cross-sections); star jumpers must be ordered separately.

3RA14 complete units, 3 ... 75 kW

Components for customer assembly

Installation kits with wiring connectors and, if necessary, mechanical connectors are available for contactor assemblies for wye-delta starting. Contactors, overload relays, wye-delta timing relays, auxiliary switches for electrical interlock – if required also supply terminals, mechanical interlocks (exception: in the case of the kit for size S00 contactor assemblies the mechanical interlock between the delta contactor and the wye contactor is included in the kit) and base plates – must be ordered separately.

The wiring installation kits for sizes S00 and S0 contain the top and bottom main conducting path connections between the line and delta contactors (top) and between the delta and wye contactors (bottom).

In the case of sizes S2 to S12 only the bottom main conducting path connection between the delta and wye contactors is included in the wiring connector, owing to the larger conductor cross-section at the infeed.

Motor protection

Overload relays or thermistor motor protection trip units can be used for overload protection.

The overload relay can be either mounted onto the line contactor or separately fitted. It must be set to 0.58 times the rated motor current.

Note:

The selection of contactor types refers to fused configurations (see LV 1 T).

Installation kit B, for single infeed	Star jumper	Base plates	Overload relays, thermal (trip class CLASS 10) Setting range A	Order No.	Overload relays, solid-state (trip class CLASS 10) Setting range A	Order No.
3RA19 13-2B[1])	3RT19 16-4BA31	--	1.1 ... 1.6	3RU11 16-1AB0	0.32 ... 1.25	3RB20 16-1NB0
			1.4 ... 2	3RU11 16-1BB0	1 ... 4	3RB20 16-1PB0
			1.8 ... 2.5	3RU11 16-1CB0		
			2.2 ... 3.2	3RU11 16-1DB0		
			2.8 ... 4	3RU11 16-1EB0		
			3.5 ... 5	3RU11 16-1FB0	3 ... 12	3RB20 16-1SB0
			4.5 ... 6.3	3RU11 16-1GB0		
			5.5 ... 8	3RU11 16-1HB0		
			7 ... 10	3RU11 16-1JB0		
3RA19 23-2B[2])	3RT19 26-4BA31	--	1.8 ... 2.5	3RU11 26-1CB0	1 ... 4	3RB20 16-1PB0[6)]
			2.2 ... 3.2	3RU11 26-1DB0		
			2.8 ... 4	3RU11 26-1EB0		
			3.5 ... 5	3RU11 26-1FB0		
			4.5 ... 6.3	3RU11 26-1GB0	3 ... 12	3RB20 26-1SB0
			5.5 ... 8	3RU11 26-1HB0		
			7 ... 10	3RU11 26-1JB0		
			9 ... 12.5	3RU11 26-1KB0	6 ... 25	3RB20 26-1QB0
			11 ... 16	3RU11 26-4AB0		
			14 ... 20	3RU11 26-4BB0		
			17 ... 22	3RU11 26-4CB0		
			20 ... 25	3RU11 26-4DB0		
3RA19 33-3D[4])	3RT19 26-4BA31	3RA19 32-2E	5.5 ... 8	3RU11 36-1HB0	3 ... 12	3RB20 26-1SB0[7)]
			7 ... 10	3RU11 36-1JB0	6 ... 25	3RB20 36-1QB0
			9 ... 12.5	3RU11 36-1KB0		
			11 ... 16	3RU11 36-4AB0		
			14 ... 20	3RU11 36-4BB0		
			18 ... 25	3RU11 36-4DB0		
			22 ... 32	3RU11 36-4EB0	12.5 ... 50	3RB20 36-1UB0
			28 ... 40	3RU11 36-4FB0		
	3RT19 36-4BA31	3RA19 32-2F	36 ... 45	3RU11 36-4GB0		
			40 ... 50	3RU11 36-4HB0		
3RA19 43-3D[4])	3RT19 36-4BA31	3RA19 42-2E	18 ... 25	3RU11 46-4DB0	12.5 ... 50	3RB20 46-1UB0
			22 ... 32	3RU11 46-4EB0		
			28 ... 40	3RU11 46-4FB0		
			36 ... 45	3RU11 46-4HB0		
			45 ... 63	3RU11 46-4JB0	25 ... 100	3RB20 46-1EB0
			57 ... 75	3RU11 46-4KB0		
			70 ... 90	3RU11 46-4LB0		
3RA19 53-3D[4])	3RT19 46-4BA31	3RA19 52-2E	--	--	50 ... 200	3RB20 56-1FC2
3RA19 63-3D[4])	3RT19 56-4BA31	3RA19 62-2E	--	--	55 ... 250	3RB20 66-1GC2
3RA19 73-2A[5])	3RT19 66-4BA31	3RA19 72-2E	--	--	160 ... 630	3RB20 66-1MC2

6) Only stand-alone installations possible in combination with the 3RB29 13-0AA1 terminal bracket for stand-alone installation.

7) Only stand-alone installation possible in combination with the 3RB29 23-0AA1 terminal bracket for stand-alone installation.

3RA14 Contactor Assemblies for Wye-Delta Starting

3RA14 complete units, 3 ... 75 kW

Selection and ordering data

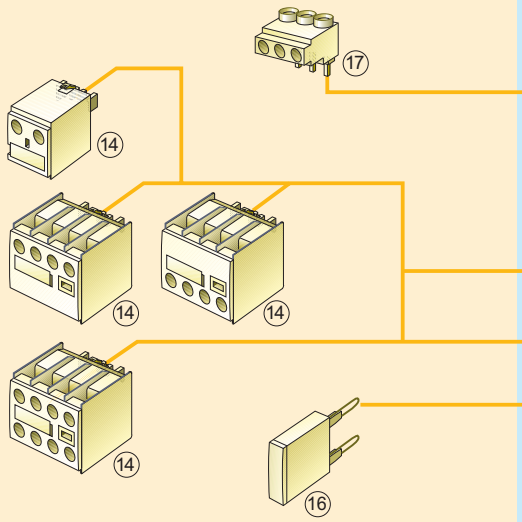
Size S00-S00-S00 · up to 7.5 kW



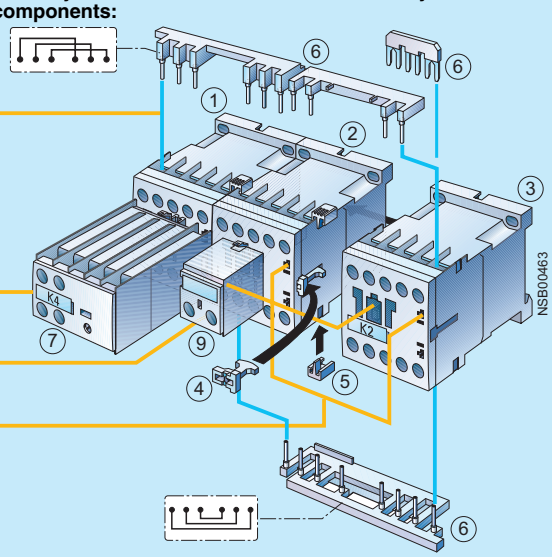
Rated data AC-3					Rated control supply voltage U_s [1]	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e at	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
12	3.3	**5.5**	7.2	9.2	24 AC	C	**3RA14 15-8XB31-1AB0**		1	1 unit	101	0.940
					110 AC	C	**3RA14 15-8XB31-1AF0**		1	1 unit	101	0.934
					230 … 230 AC	▶	**3RA14 15-8XB31-1AP0**		1	1 unit	101	0.948
17	4.7	**7.5**	10.3	9.2	24 AC	B	**3RA14 16-8XB31-1AB0**		1	1 unit	101	0.995
					110 AC	B	**3RA14 16-8XB31-1AF0**		1	1 unit	101	0.935
					230 AC	▶	**3RA14 16-8XB31-1AP0**		1	1 unit	101	0.928
DC operation												
12	3.3	**5.5**	7.2	9.2	24 DC	B	**3RA14 15-8XB31-1BB4**		1	1 unit	101	1.120
17	4.7	**7.5**	10.3	9.2	24 DC	▶	**3RA14 16-8XB31-1BB4**		1	1 unit	101	1.117

1) Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories		Order No.	Page
14	Auxiliary switch block, front	3RH19 11-1....	3/110
16	Surge suppressors	3RT19 16-1....	3/119, 3/120
17	3-phase line-side terminal	3RA19 13-3K	3/53

Individual parts		Order No. K1 [1]	K3 [2]	K2 [2]	Page
1 2 3	Contactors, 5.5 kW	3RT10 15	3RT10 15	3RT10 15	3/12
1 2 3	Contactors, 7.5 kW	3RT10 17	3RT10 17	3RT10 15	3/12
7	Solid-state time-delay auxiliary switch block, front	3RT19 16-2G.51			3/117
9	Auxiliary switch block with 1 unassigned NO contact	3RH19 11-1BA10			3/110
4 5 6	Installation kit	3RA19 13-2B			3/53

The installation kit contains:

- 4 Mechanical interlock
- 5 3 connecting clips
- 6 Wiring connectors on the top and bottom for connecting the main and control conducting paths

1) Use version with 1 NO.
2) Use version with 1 NC.

*** You can order this quantity or a multiple thereof.**

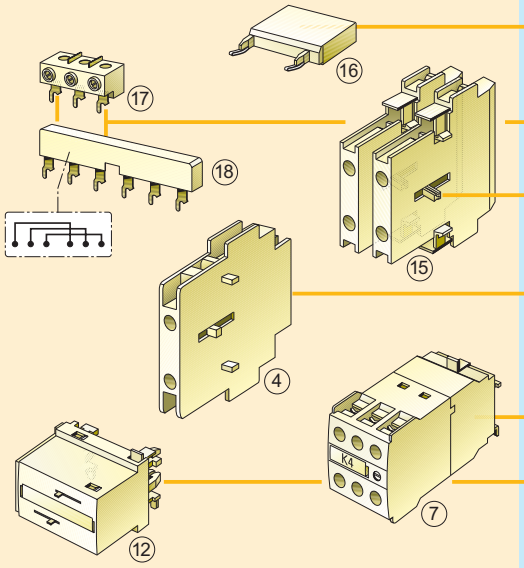
Size S0-S0-S0 · up to 18.5 kW



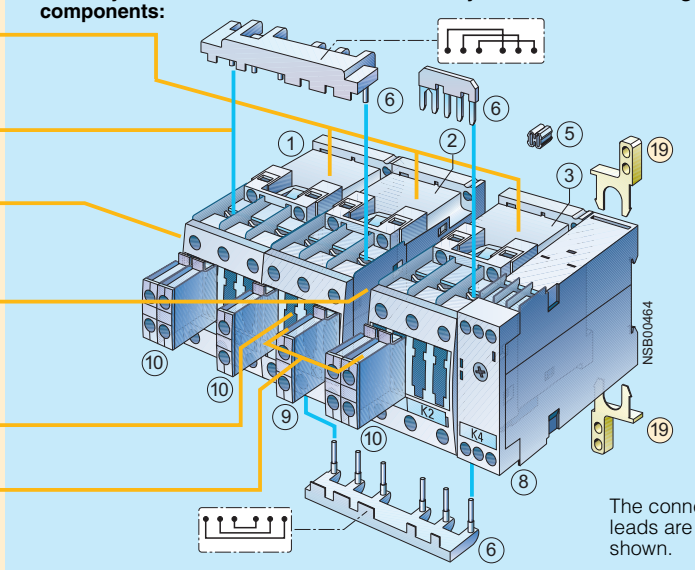
Rated data AC-3					Rated control supply voltage U_s [1]	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
25	7.1	**11**	15.6	19	24 AC	C	**3RA14 23-8XC21-1AC2**		1	1 unit	101	1.760
					110 AC	C	**3RA14 23-8XC21-1AG2**		1	1 unit	101	1.760
					230 AC	▶	**3RA14 23-8XC21-1AL2**		1	1 unit	101	1.779
32 / 40	11.4	**15 / 18.5**	19	19	24 AC	C	**3RA14 25-8XC21-1AC2**		1	1 unit	101	1.740
					110 AC	C	**3RA14 25-8XC21-1AG2**		1	1 unit	101	1.735
					230 AC	▶	**3RA14 25-8XC21-1AL2**		1	1 unit	101	1.771
DC operation												
25	7.1	**11**	15.6	19	24 DC	▶	**3RA14 23-8XC21-1BB4**		1	1 unit	101	2.385
32 / 40	11.4	**15 / 18.5**	19	19	24 DC	▶	**3RA14 25-8XC21-1BB4**		1	1 unit	101	2.448

1) Coil operating range at 50 Hz:
0.8 ... 1.1 x U_s ; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories		Order No.	Page
4	Mechanical interlock, lateral	3RA19 24-2B	3/43
7	Solid-state time-delay auxiliary switch block, front [1]	3RT19 26-2G...	3/117
12	Mechanical interlock, front	3RA19 24-1A	3/43
15	Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
16	Surge suppressors	3RT19 26-1....	3/119
17	3-phase line-side terminal [2]	3RV19 15-5A	3/53
18	3-phase busbar [2]	3RT19 26-4CC20	3/53
19	Push-in lug [3] for timing relay screw mounting	3RP19 03	4)

Individual parts		Order No. K1	K3	K2	Page
1 2 3	Contactors, 11 kW	3RT10 24	3RT10 24	3RT10 24	3/14
1 2 3	Contactors, 15/18.5 kW	3RT10 26	3RT10 26	3RT10 24	3/14
8	Timing relay, lateral	3RP15 74-1N.30			4)
9	Auxiliary switch block with 1 unassigned NO contact	3RH19 21-1CA10			3/112
10	Auxiliary switch block for local control				
	2 units	3RH19 21-1CA01			
	3 units	3RH19 21-1CA10			3/112
5 6	Installation kit	3RA19 23-2B			3/53

The installation kit contains:

5 Connecting clips

6 Wiring connectors on the top and bottom for connecting the main and control conducting paths

1) Generally possible. If a solid-state time-delay auxiliary switch block is mounted onto the front of K3, a standard auxiliary switch block can only be mounted onto the side.

2) 17 and 18 can only be mounted with contactors with screw terminal (coil).

3) Not part of the scope of supply of the preassembled contactor assemblies; can be ordered as an accessory.

4) See Monitoring and Control Devices: 3RP, 7PV timing relays -> 3RP15 timing relays in 22.5 mm industrial enclosure.

*** You can order this quantity or a multiple thereof.**

3RA14 Contactor Assemblies for Wye-Delta Starting

3RA14 complete units, 3 ... 75 kW

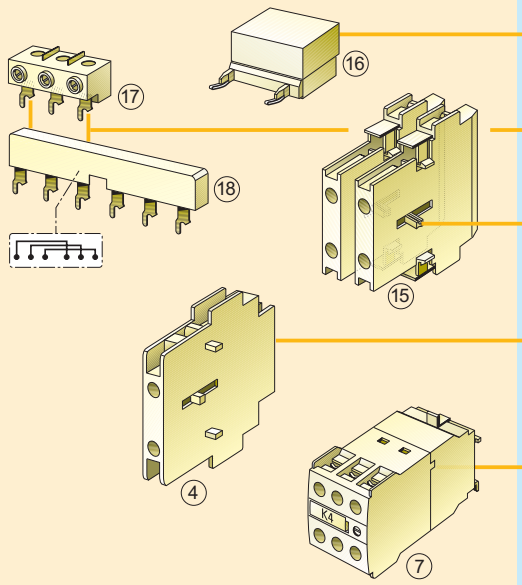
Size S2-S2-S0 · up to 30 kW



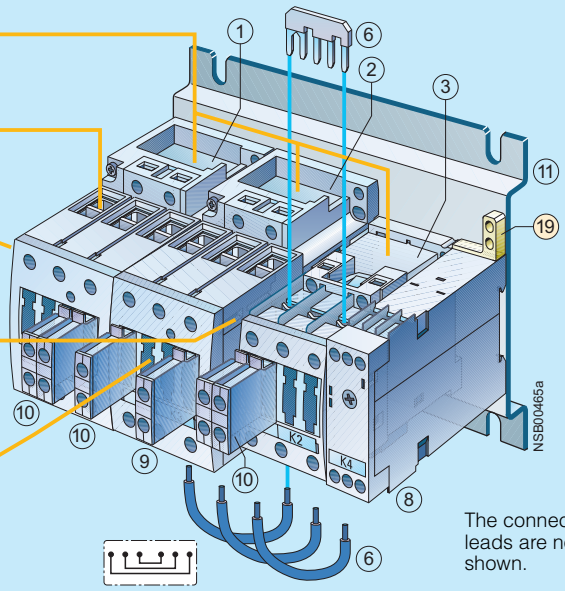
Rated data AC-3					Rated control supply voltage U_s [1]	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
50 / 65	19.6	**22 / 30**	35	34	230 AC	▶	**3RA14 34-8XC21-1AL2**		1	1 unit	101	3.070
					24 AC	C	**3RA14 34-8XC21-1AC2**		1	1 unit	101	3.140
					110 AC	C	**3RA14 34-8XC21-1AG2**		1	1 unit	101	3.120
DC operation												
50 / 65	19.6	**22 / 30**	35	34	24 DC	▶	**3RA14 34-8XC21-1BB4**		1	1 unit	101	4.520

1) Coil operating range at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories		Order No.	Page
4	Mechanical interlock, lateral Depth compensation required K3: 1.5 mm; K2: 0 mm [1]	3RA19 24-2B	3/43
7	Solid-state time-delay auxiliary switch block, front [2]	3RT19 26-2G...	3/117
15	Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
16	Surge suppressors	3RT19 26-1.... 3RT19 36-1....	3/119, 3/120
17	3-phase line-side terminal	3RV19 35-5A	3/53
18	Three-phase busbar	3RV19 35-1A	3/53
19	Push-in lug [3] for timing relay screw mounting	3RP19 03	4)

Individual parts		Order No. K1	K3	K2	Page
1 2 3	Contactors, 22/30 kW	3RT10 34	3RT10 34	3RT10 26	3/14
8	Timing relay, lateral	3RP15 74-1N.30			4)
9	Auxiliary switch block with 1 unassigned NO contact	3RH19 21-1CA10			3/112
10	Auxiliary switch block for local control				
	2 units	3RH19 21-1CA01			
	3 units	3RH19 21-1CA10			3/112
11	Base plate	3RA19 32-2E			3/53
6	Installation kit	3RA19 33-2C			3/53

The installation kit contains the star jumper on the top and the wiring jumper on the bottom for connecting the main conducting paths.

1) Use the 3RA19 32-2B base plate for this configuration.

2) Generally possible. If a solid-state time-delay auxiliary switch block is mounted onto the front of K3, a standard auxiliary switch block can only be mounted onto the side.

3) Not part of the scope of supply of the preassembled contactor assemblies; can be ordered as an accessory.

4) See Monitoring and Control Devices: 3RP, 7PV timing relays -> 3RP15 timing relays in 22.5 mm industrial enclosure.

*** You can order this quantity or a multiple thereof.**

3RA14 complete units, 3 ... 75 kW

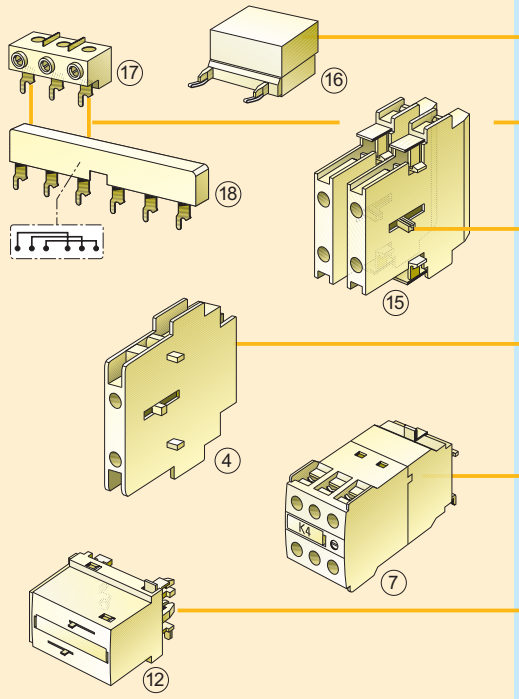
Size S2-S2-S2 · up to 45 kW



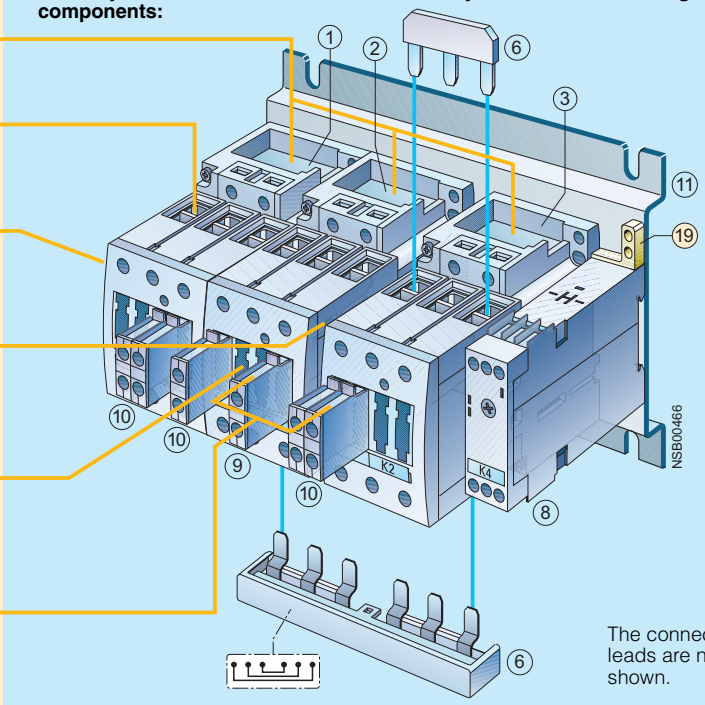
Rated data AC-3					Rated control supply voltage U_s [1]	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e up to	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
80	25	**37**	51	63	24 AC	C	**3RA14 35-8XC21-1AC2**		1	1 unit	101	3.725
					110 AC	C	**3RA14 35-8XC21-1AG2**		1	1 unit	101	3.665
					230 AC	►	**3RA14 35-8XC21-1AL2**		1	1 unit	101	3.650
86	27	**45**	55	63	24 AC	C	**3RA14 36-8XC21-1AC2**		1	1 unit	101	3.750
					110 AC	C	**3RA14 36-8XC21-1AG2**		1	1 unit	101	3.710
					230 AC	►	**3RA14 36-8XC21-1AL2**		1	1 unit	101	3.685
DC operation												
80	25	**37**	51	63	24 DC	B	**3RA14 35-8XC21-1BB4**		1	1 unit	101	5.515
86	27	**45**	55	63	24 DC	B	**3RA14 36-8XC21-1BB4**		1	1 unit	101	5.482

1) Coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories	Order No.	Page
(4) Mechanical interlock, lateral	3RA19 24-2B	3/43
(7) Solid-state time-delay auxiliary switch block, front [1]	3RT19 26-2G...	3/117
(12) Mechanical interlock, front	3RA19 24-1A	3/43
(15) Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
(16) Surge suppressors	3RT19 26-1.... 3RT19 36-1....	3/119, 3/120
(17) 3-phase line-side terminal	3RV19 35-5A	3/53
(18) Three-phase busbar	3RV19 35-1A	3/53
(19) Push-in lug [2] for timing relay screw mounting	3RP19 03	3)

Individual parts	Order No. K1	K3	K2	Page
(1)(2)(3) Contactors, 37 kW	3RT10 35	3RT10 35	3RT10 34	3/16
(1)(2)(3) Contactors, 45 kW	3RT10 36	3RT10 36	3RT10 34	3/16
(8) Timing relay, lateral	3RP15 74-1N.30			3)
(9) Auxiliary switch block with 1 unassigned NO contact	3RH19 21-1CA10			3/112
(10) Auxiliary switch block for local control				
2 units	3RH19 21-1CA01			
3 units	3RH19 21-1CA10			3/112
(11) Base plate	3RA19 32-2F			3/53
(6) Installation kit	3RA19 33-2B			3/53

The installation kit contains the star jumper on the top and the wiring jumper on the bottom for connecting the main conducting paths.

1) Generally possible. If a solid-state time-delay auxiliary switch block is mounted onto the front of K3, a standard auxiliary switch block can only be mounted onto the side.

2) Not part of the scope of supply of the preassembled contactor assemblies; can be ordered as an accessory.

3) See Monitoring and Control Devices: 3RP, 7PV timing relays -> 3RP15 timing relays in 22.5 mm industrial enclosure.

*** You can order this quantity or a multiple thereof.**

3RA14 Contactor Assemblies for Wye-Delta Starting

3RA14 complete units, 3 ... 75 kW

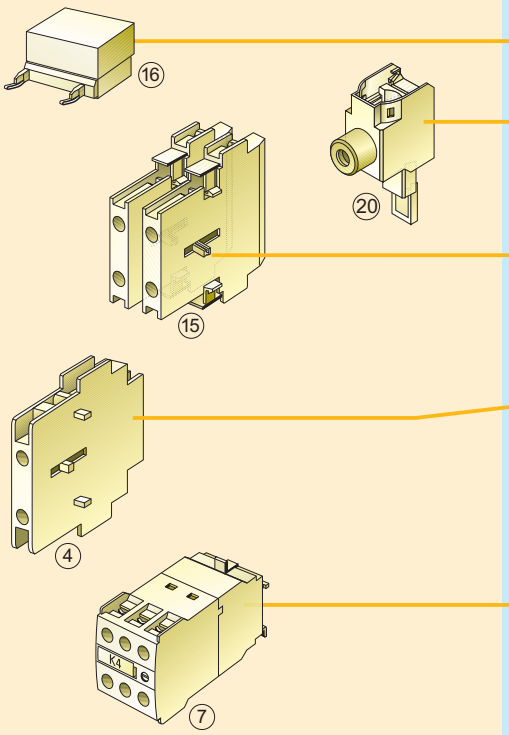
Size S3-S3-S2 · up to 75 kW



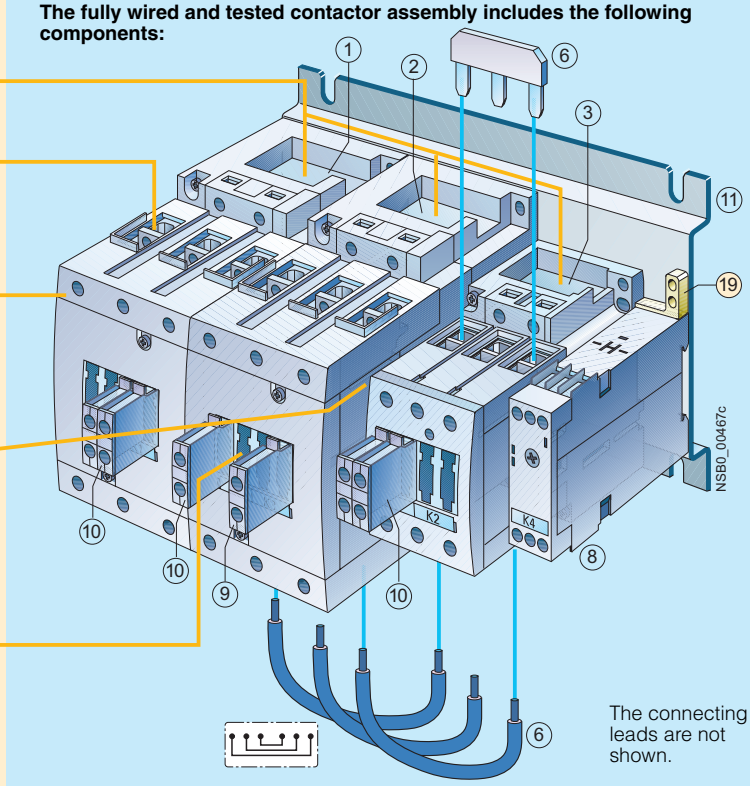
Rated data AC-3					Rated control supply voltage U_s [1]	DT	Fully wired and tested contactor assemblies		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e at	Ratings of induction motors at 50 Hz and						Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V								
A	kW	**kW**	kW	kW	V							kg
AC operation, 50/60 Hz												
115	37	**55**	81	93	24 AC	B	**3RA14 44-8XC21-1AC2**		1	1 unit	101	5.700
115	37	**55**	81	93	110 AC	B	**3RA14 44-8XC21-1AG2**		1	1 unit	101	5.680
					230 AC	▶	**3RA14 44-8XC21-1AL2**		1	1 unit	101	5.826
150	47	**75**	103	110	24 AC	B	**3RA14 45-8XC21-1AC2**		1	1 unit	101	5.365
					110 AC	B	**3RA14 45-8XC21-1AG2**		1	1 unit	101	1.770
					230 AC	▶	**3RA14 45-8XC21-1AL2**		1	1 unit	101	5.971
DC operation												
115	37	**55**	81	93	24 DC	B	**3RA14 44-8XC21-1BB4**		1	1 unit	101	8.520
150	47	**75**	103	110	24 DC	B	**3RA14 45-8XC21-1BB4**		1	1 unit	101	8.539

1) Coil operating range at 50 Hz: 0.8 ... 1.1 x U_s; at 60 Hz: 0.85 ... 1.1 x U_s.

Mountable accessories (to be ordered separately):



The fully wired and tested contactor assembly includes the following components:



The connecting leads are not shown.

Accessories	Order No.	Page
(4) Mechanical interlock, lateral Depth compensation required K3: 0 mm; K2: 27.5 mm [1]	3RA19 24-2B	3/43
(7) Solid-state time-delay auxiliary switch block, front [2]	3RT19 26-2G...	3/117
(15) Auxiliary switch block, lateral	3RH19 21-1EA..	3/114
(16) Surge suppressors	3RT19 .6-1....	3/119
(19) Push-in lug [3] for timing relay screw mounting	3RP19 03	[4]
(20) 1-phase line-side terminal	3RA19 43-3L	3/53

Individual parts	Order No. K1	K3	K2	Page
(1)(2)(3) Contactors, 55 kW	3RT10 44	3RT10 44	3RT10 35	3/16
(1)(2)(3) Contactors, 75 kW	3RT10 45	3RT10 45	3RT10 36	3/16
(8) Timing relay, lateral	3RP15 74-1N.30			[4]
(9) Auxiliary switch block with 1 unassigned NO contact	3RH19 21-1CA10			3/112
(10) Auxiliary switch block for local control				
2 units	3RH19 21-1CA01			
3 units	3RH19 21-1CA10			3/112
(11) Base plate	3RA19 42-2E			3/53
(6) Installation kit	3RA19 43-2C			3/53

The installation kit contains the star jumper on the top and the wiring jumper on the bottom for connecting the main conducting paths.

1) Use the 3RA19 42-2B base plate for this configuration.

2) Generally possible. If a solid-state time-delay auxiliary switch block is mounted onto the front of K3, a standard auxiliary switch block can only be mounted onto the side.

3) Not part of the scope of supply of the preassembled contactor assemblies; can be ordered as an accessory.

4) See Monitoring and Control Devices: 3RP, 7PV timing relays -> 3RP15 timing relays in 22.5 mm industrial enclosure.

*** You can order this quantity or a multiple thereof.**

Selection and ordering data

Version	Size	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx. kg
Installation kits								
The installation kit contains: mechanical interlock, 3 connecting clips, star jumper, wiring connectors on the top and bottom	**S00-S00-S00**	▶	**3RA19 13-2B**		1	1 set	101	0.048
The installation kit contains: 5 connecting clips, star jumper, wiring connectors on the top and bottom	**S0-S0-S0**	▶	**3RA19 23-2B**		1	1 set	101	0.061
The installation kit contains: star jumper, wiring connector on the bottom	**S2-S2-S0**	▶	**3RA19 33-2C**		1	1 set	101	0.051
	S2-S2-S2	▶	**3RA19 33-2B**		1	1 set	101	0.072
	S3-S3-S2	▶	**3RA19 43-2C**		1	1 set	101	0.139
(Wiring connector on the top is not included in the scope of supply. A double infeed between the line contactor and the delta contactor is recommended.)	**S3-S3-S3**	▶	**3RA19 43-2B**		1	1 set	101	0.165
	S6-S6-S6	A	**3RA19 53-2B**		1	1 set	101	0.843
	S10-S10-S10	A	**3RA19 63-2B**		1	1 set	101	1.782
	S12-S12-S12	B	**3RA19 73-2B**		1	1 set	101	2.205
1-phase line-side terminals								
Conductor cross-section: 95 mm²	**S3**	A	**3RA19 43-3L**		1	1 unit	101	0.280
3-phase line-side terminals								
Line-side terminal block for the line contactor for large conductor cross-sections								
Conductor cross-section: 6 mm²	**S00**	▶	**3RA19 13-3K**		1	1 unit	101	0.022
Conductor cross-section: 25 mm²	**S0**	▶	**3RV19 15-5A**		1	1 unit	101	0.043
Conductor cross-section: 50 mm²	**S2**	▶	**3RV19 35-5A**		1	1 unit	101	0.115
Three-phase busbars								
Bridging phase-by-phase of all line-side terminals of								
the line contactor (K1) and	**S0**	D	**3RT19 26-4CC20**		1	1 unit	101	0.033
the delta contactor (K3)	**S2**	▶	**3RV19 35-1A**		1	1 unit	101	0.140
Links for paralleling, 3-pole (star jumpers)								
 3RT19 26-4BA31								
Without connection terminal (the links for paralleling can be reduced by one pole)	**S00**	▶	**3RT19 16-4BA31**		1	1 unit	101	0.003
	S0	▶	**3RT19 26-4BA31**		1	1 unit	101	0.006
	S2	▶	**3RT19 36-4BA31**		1	1 unit	101	0.015
	S3	▶	**3RT19 46-4BA31**		1	1 unit	101	0.028
	S6[1]	▶	**3RT19 56-4BA31**		1	1 unit	101	0.161
	S10, S12[1]	▶	**3RT19 66-4BA31**		1	1 unit	101	0.533
Base plates								
For customer assembly of contactor assemblies for wye-delta starting with a **laterally mounted** timing relay								
Side-by-side mounting	**S2, S2, S0**	B	**3RA19 32-2E**		1	1 unit	101	0.441
10 mm clearance between K3 and K2	**S2, S2, S2**	B	**3RA19 32-2F**		1	1 unit	101	0.484
Side-by-side mounting	**S3, S3, S2**	B	**3RA19 42-2E**		1	1 unit	101	0.668
10 mm clearance between K1, K3 and K2	**S6, S6, S3**	B	**3RA19 52-2E**		1	1 unit	101	1.805
	S6, S6, S6	B	**3RA19 52-2F**		1	1 unit	101	1.945
	S10, S10, S6	B	**3RA19 62-2E**		1	1 unit	101	3.177
	S10, S10, S10	B	**3RA19 62-2F**		1	1 unit	101	3.392
	S12, S12, S10	B	**3RA19 72-2E**		1	1 unit	101	3.597
	S12, S12, S12	B	**3RA19 72-2F**		1	1 unit	101	3.681
For customer assembly of contactor assemblies for wye-delta starting with a **front-mounted** timing relay, 10 mm clearance between K1, K3 and K2	**S2, S2, S0**	B	**3RA19 32-2B**		1	1 unit	101	0.429
	S2, S2, S2	B	**3RA19 32-2B**		1	1 unit	101	0.429
	S3, S3, S2	B	**3RA19 42-2B**		1	1 unit	101	0.707

1) The 3RT19 56-4EA1 (S6) or 3RT19 66-4EA1 (S10, S12) cover can be used for touch protection.

*** You can order this quantity or a multiple thereof.**

3TD6 reversing contactor assemblies, 335 kW

Overview

The contactor assemblies are suitable for use in any climate and the contactors are mechanically interlocked. They are finger-safe according to EN 50274.

Complete units and components for customer assembly are available. For motor protection, either overload relays for individual mounting or thermistor motor protection trip units must be ordered separately.

Complete units

3TD68 contactor assemblies each consist of two mechanically interlocked 3TF68 contactors. Electrical interlocking is wired. The main and control circuits are wired according to the circuit diagrams.

An internal circuit diagram, a type designation and an identification plate are provided on a common cover.

Auxiliary contacts

The contactor assemblies each have 2 NO + 2 NC contacts per contactor. 1 NO + 1 NC contacts with momentary-contact operation and 2 NO + 1 NC contacts with continuous operation are unassigned.

Selection and ordering data

Size	Rated data AC-3					Auxiliary contacts per direction of rotation		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and				Version									
	690 V	230 V	**400 V**	500 V	690 V										
	A	kW	**kW**	kW	kW	NO	NC	V AC							kg
Complete units															
AC operation, 50/60 Hz															
14	630	200	**335**	434	600	4	4	110 … 132	C	**3TD68 04-2CF7**		1	1 unit	101	56.000
								200 … 240	C	**3TD68 04-2CM7**		1	1 unit	101	54.000

* You can order this quantity or a multiple thereof.

3TE6 contactor assemblies for wye-delta starting, 630 kW

Overview

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

3TE contactor assemblies are available as complete units and components for customer assembly.

The complete units are optionally supplied without a main conducting path connection between the line contactor and the delta contactor.

Motor protection

3TE68 contactor assemblies are supplied without overload protection. Overload relays or thermistor motor protection trip units must be ordered separately.

The overload relay can be either mounted onto the line contactor or separately fitted. It must be set to 0.58 times the rated motor current.

Selection and ordering data

Size	Rated data AC-3					Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e up to	Ratings of induction motors at 50 Hz and											
	690 V	230 V	**400 V**	500 V	690 V								
	A	kW	**kW**	kW	kW	V AC							kg
Complete units, reversing time up to 10 s													
AC operation, 50 Hz													
Without main conducting path connection between mains and delta contactor													
14	1090	315	**630**	800	1000	110	C	**3TE68 04-5CF0**		1	1 unit	101	58.000
						230/220[1)]	C	**3TE68 04-5CP0**		1	1 unit	101	58.000

For motor protection, overload relays for individual mounting must be ordered separately, see Protection Equipment: Overload Relays -> 3RB2 Solid-State Overload Relays.

1) Operating range at 220 V:
0.85 ... 1.15 x U_S;
lower operating range limit according to IEC 60947.

*** You can order this quantity or a multiple thereof.**

3RT14 Contactors for Switching Resistive Loads (AC-1)

3-pole, 140 ... 690 A

Overview

AC and DC operation (size S3)

UC operation (AC/DC) (sizes S6 to S12)

IEC 60947, EN 60947 (VDE 0660)

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

3RT14 contactors are used for switching resistive loads (AC-1) or as contactors, for example, for variable-speed drives that normally only have to carry the current.

The accessories for the SIRIUS 3RT10 contactors can also be used here.

For more detailed descriptions about the sizes S3 to S12, see 3RT10 Motor Contactors.

Selection and ordering data

Size	Rated data AC-1, T_u: 40 °C					Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e	Ratings of AC loads (p.f. = 0.95) at											
	up to 690 V	230 V	400 V	500 V	690 V								
	A	kW	kW	kW	kW	V							kg
With screw terminals · for screwing and snapping onto 35 mm and 75 mm standard mounting rails													
	AC operation												
S3	**140**	53	92	115	159	24 AC, 50 Hz	B	**3RT14 46-1AB00**		1	1 unit	101	1.850
						110 AC, 50 Hz	B	**3RT14 46-1AF00**		1	1 unit	101	1.828
						230 AC, 50 Hz	▶	**3RT14 46-1AP00**		1	1 unit	101	1.834
	DC operation · DC solenoid system												
S3	**140**	53	92	115	159	24 DC	▶	**3RT14 46-1BB40**		1	1 unit	101	2.835
						220 DC	B	**3RT14 46-1BM40**		1	1 unit	101	2.779



3RT14 46-1A..0

*** You can order this quantity or a multiple thereof.**

3RT14 Contactors for Switching Resistive Loads (AC-1)

3-pole, 140 ... 690 A

AC/DC operation *(40 Hz to 60 Hz, DC)*
Auxiliary and control conductors: screw terminals
Withdrawable coils
Integrated coil circuit *(varistor)*
Main conductors: bar connections



3RT14 6.

Size	Rated data AC-1, T_u: 40 °C					Auxiliary contacts		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
	Operational current I_e	Ratings of AC loads (p.f. = 0.95) at				Version									
	up to 690 V A	230 V kW	400 V kW	500 V kW	690 V kW	NO	NC	V							kg
Conventional operating mechanism															
S6	**275**	105	180	225	310	2	2	110 ... 127 ▶		**3RT14 56-6AF36**		1	1 unit	101	3.360
								220 ... 240 ▶		**3RT14 56-6AP36**		1	1 unit	101	3.330
S10	**400**	151	263	329	454	2	2	110 ... 127 ▶		**3RT14 66-6AF36**		1	1 unit	101	6.586
								220 ... 240 ▶		**3RT14 66-6AP36**		1	1 unit	101	6.551
S12	**690**	261	454	568	783	2	2	110 ... 127	A	**3RT14 76-6AF36**		1	1 unit	101	10.465
								220 ... 240 ▶		**3RT14 76-6AP36**		1	1 unit	101	10.366
Solid-state operating mechanism · for 24 V DC PLC output															
S6	**275**	105	180	225	310	2	2	96 ... 127	B	**3RT14 56-6NF36**		1	1 unit	101	3.327
								200 ... 277	A	**3RT14 56-6NP36**		1	1 unit	101	3.400
S10	**400**	151	263	329	454	2	2	96 ... 127	B	**3RT14 66-6NF36**		1	1 unit	101	12.569
								200 ... 277	A	**3RT14 66-6NP36**		1	1 unit	101	6.550
S12	**690**	261	454	568	783	2	2	96 ... 127	B	**3RT14 76-6NF36**		1	1 unit	101	10.489
								200 ... 277	A	**3RT14 76-6NP36**		1	1 unit	101	10.192
Solid-state operating mechanism · for 24 V DC PLC output/PLC relay output, with indication of remaining lifetime (RLT)															
S6	**275**	105	180	225	310	1	1	96 ... 127	B	**3RT14 56-6PF35**		1	1 unit	101	3.895
								200 ... 277	B	**3RT14 56-6PP35**		1	1 unit	101	4.197
S10	**400**	151	263	329	454	1	1	200 ... 277	B	**3RT14 66-6PP35**		1	1 unit	101	5.700
S12	**690**	261	454	568	783	1	1	200 ... 277	B	**3RT14 76-6PP35**		1	1 unit	101	10.650
Solid-state operating mechanism · with AS-Interface and indication of remaining lifetime (RLT)															
S6	**275**	105	180	225	310	1	1	96 ... 127	B	**3RT14 56-6QF35**		1	1 unit	101	3.100
								200 ... 277	B	**3RT14 56-6QP35**		1	1 unit	101	3.100
S10	**400**	151	263	329	454	1	1	200 ... 277	B	**3RT14 66-6QP35**		1	1 unit	101	10.200
S12	**690**	261	454	568	783	1	1	200 ... 277	B	**3RT14 76-6QP35**		1	1 unit	101	6.459

For other voltages, see page 3/29.
For accessories, see page 3/112.
For spare parts, see page 3/126.

*** You can order this quantity or a multiple thereof.**

3RT13 Contactors for Switching Resistive Loads (AC-1)

4-pole, 4 NO, 18 ... 140 A

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.

Selection and ordering data

AC operation, 4 NO contacts
Screw terminals

Rated data AC-1, T_u: 40/60 °C		Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of AC loads (p.f. = 0.95) at 50 Hz and **400 V**			Order No.	Price per PU				
A	**kW**	V							kg
For screw and snap-on mounting onto 35 mm standard mounting rails									
Size S00[1]									
18 / 16	**12 / 11**	24, 50/60 Hz	▶	**3RT13 16-1AB00**		1	1 unit	101	0.206
		110, 50/60 Hz	▶	**3RT13 16-1AF00**		1	1 unit	101	0.204
		230, 50/60 Hz	▶	**3RT13 16-1AP00**		1	1 unit	101	0.203
22 / 20	**14.5 / 13**	24, 50/60 Hz	▶	**3RT13 17-1AB00**		1	1 unit	101	0.205
		110, 50/60 Hz	▶	**3RT13 17-1AF00**		1	1 unit	101	0.203
		230, 50/60 Hz	▶	**3RT13 17-1AP00**		1	1 unit	101	0.203
Size S0									
35 / 30[2]	**22 / 20**	24, 50 Hz	▶	**3RT13 25-1AB00**		1	1 unit	101	0.393
		110, 50 Hz	▶	**3RT13 25-1AF00**		1	1 unit	101	0.392
		230, 50 Hz	▶	**3RT13 25-1AP00**		1	1 unit	101	0.394
40 / 35[2]	**26 / 23**	24, 50 Hz	▶	**3RT13 26-1AB00**		1	1 unit	101	0.393
		110, 50 Hz	▶	**3RT13 26-1AF00**		1	1 unit	101	0.391
		230, 50 Hz	▶	**3RT13 26-1AP00**		1	1 unit	101	0.394



3RT13 1.-1A.00



3RT13 2.-1A.00

Size S00: Snap-on auxiliary switch blocks according to EN 50005.

Sizes S0 to S3: Snap-on auxiliary switch blocks according to EN 50012 and EN 50005 (for S0 max. 2 auxiliary contacts, please note information in the Catalog LV 1 T).

For other voltages, see page 3/29.
For accessories, see page 3/110.
For spare parts, see page 3/126.

1) For size S00: coil operating range at 50 Hz: 0.8 ... 1.1 x U_s, at 60 Hz: 0.85 ... 1.1 x U_s.

2) Minimum conductor cross-section 10 mm².

AC operation, 4 NO contacts
Cage Clamp terminals

Rated data AC-1, T_u: 40/60 °C		Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of AC loads (p.f. = 0.95) at 50 Hz and **400 V**			Order No.	Price per PU				
A	**kW**	V							kg
For screw and snap-on mounting onto 35 mm standard mounting rails									
Size S00[1]									
18 / 16	**12 / 11**	24, 50/60 Hz	B	**3RT13 16-2AB00**		1	1 unit	101	0.202
		110, 50/60 Hz	B	**3RT13 16-2AF00**		1	1 unit	101	0.198
		230, 50/60 Hz	▶	**3RT13 16-2AP00**		1	1 unit	101	0.202
22 / 20	**14.5 / 13**	24, 50/60 Hz	B	**3RT13 17-2AB00**		1	1 unit	101	0.201
		110, 50/60 Hz	B	**3RT13 17-2AF00**		1	1 unit	101	0.200
		230, 50/60 Hz	▶	**3RT13 17-2AP00**		1	1 unit	101	0.201

Size S00: Snap-on auxiliary switch blocks according to EN 50005.

For other voltages, see page 3/29.
For accessories, see page 3/110.
For spare parts, see page 3/127.

1) For size S00: coil operating range at 50 Hz: 0.8 ... 1.1 x U_s, at 60 Hz: 0.85 ... 1.1 x U_s.

*** You can order this quantity or a multiple thereof.**

AC and DC operation, 4 NO contacts
Screw terminals

Rated data AC-1, T_u: 40/60 °C		Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of AC loads (p.f. = 0.95) at 50 Hz and 400 V			Order No.	Price per PU				
A	kW	V							kg
For screw and snap-on mounting onto 35 mm standard mounting rails									
AC operation									
Size S2									
60 / 55	**39 / 36**	24 AC, 50 Hz	B	**3RT13 36-1AB00**		1	1 unit	101	0.989
		110 AC, 50 Hz	B	**3RT13 36-1AF00**		1	1 unit	101	0.994
		230 AC, 50 Hz	▶	**3RT13 36-1AP00**		1	1 unit	101	0.985
Size S3									
110 / 100	**72 / 66**	24 AC, 50 Hz	B	**3RT13 44-1AB00**		1	1 unit	101	2.200
		110 AC, 50 Hz	B	**3RT13 44-1AF00**		1	1 unit	101	2.194
		230 AC, 50 Hz	▶	**3RT13 44-1AP00**		1	1 unit	101	2.170
140 / 120	**92 / 79**	24 AC, 50 Hz	B	**3RT13 46-1AB00**		1	1 unit	101	2.188
		110 AC, 50 Hz	B	**3RT13 46-1AF00**		1	1 unit	101	2.208
		230 AC, 50 Hz	▶	**3RT13 46-1AP00**		1	1 unit	101	2.168
DC operation · DC solenoid system									
Size S00									
18 / 16	**12 / 11**	24 DC	▶	**3RT13 16-1BB40**		1	1 unit	101	0.264
		220 DC	B	**3RT13 16-1BM40**		1	1 unit	101	0.262
22 / 20	**14.5 / 13**	24 DC	▶	**3RT13 17-1BB40**		1	1 unit	101	0.263
		220 DC	B	**3RT13 17-1BM40**		1	1 unit	101	0.260
Size S0									
35 / 30 [1]	**22 / 20**	24 DC	▶	**3RT13 25-1BB40**		1	1 unit	101	0.624
		220 DC	B	**3RT13 25-1BM40**		1	1 unit	101	0.628
40 / 35 [1]	**26 / 23**	24 DC	▶	**3RT13 26-1BB40**		1	1 unit	101	0.625
		220 DC	B	**3RT13 26-1BM40**		1	1 unit	101	0.630
Size S2									
60 / 55	**39 / 36**	24 DC	▶	**3RT13 36-1BB40**		1	1 unit	101	1.576
		220 DC	B	**3RT13 36-1BM40**		1	1 unit	101	1.591
Size S3									
110 / 100	**72 / 66**	24 DC	B	**3RT13 44-1BB40**		1	1 unit	101	3.183
		220 DC	B	**3RT13 44-1BM40**		1	1 unit	101	3.135
140 / 120	**92 / 79**	24 DC	B	**3RT13 46-1BB40**		1	1 unit	101	3.193
		220 DC	B	**3RT13 46-1BM40**		1	1 unit	101	3.134



3RT13 36-1A.00



3RT13 4.-1A.00

Size S00: snap-on auxiliary switch blocks according to EN 50005
Sizes S0 to S3: snap-on auxiliary switch blocks according to EN 50012 and EN 50005
(for S0 max. 2 auxiliary contacts, please note information in the Catalog LV 1 T).

For other voltages, see page 3/29.
For accessories, see page 3/110.
For spare parts, see page 3/126.

1) Minimum conductor cross-section 10 mm².

*** You can order this quantity or a multiple thereof.**

3RT13 Contactors for Switching Resistive Loads (AC-1)

4-pole, 4 NO, 18 ... 140 A

DC operation, 4 NO contacts
Cage Clamp terminals

Rated data AC-1, T_u: 40/60 °C		Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of AC loads (p.f. = 0.95) at 50 Hz and 400 V			Order No.	Price per PU				
A	kW	V							kg
For screw and snap-on mounting onto 35 mm standard mounting rails									
DC operation · DC solenoid system									
Size S00									
18 / 16	**12 / 11**	24 DC	▶	**3RT13 16-2BB40**		1	1 unit	101	0.260
		220 DC	B	**3RT13 16-2BM40**		1	1 unit	101	0.253
22 / 20	**14.5 / 13**	24 DC	A	**3RT13 17-2BB40**		1	1 unit	101	0.260
		220 DC	B	**3RT13 17-2BM40**		1	1 unit	101	0.254



3RT13 1.-2B..0

Size S00: snap-on auxiliary switch blocks according to EN 50005

For other voltages, see page 3/29.
For accessories, see page 3/110.
For spare parts, see page 3/127.

*** You can order this quantity or a multiple thereof.**

3TK1 Contactors for Switching Resistive Loads (AC-1)

4-pole, 4 NO, 200 ... 1000 A

Overview

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

The contactors also comply with the requirements of NFC 63–110 and NFC 20–040.

The contactors are suitable for use in any climate. They are finger-safe according to EN 50274. Terminal covers may have to be fitted onto the connecting bars, depending on the configuration with other devices.

Solenoids for 3TK10 to 3TK13 contactors: as withdrawable coils.

Surge suppression

Control circuit

Solenoids for 3TK1 contactors: can be retrofitted with RC elements.

Selection and ordering data

Screw terminals
Screw mounting



3TK13

Rated data AC-1					Auxiliary contacts		Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)		PS*	PG	Weight per PU approx.
Operational current I_e up to 690 V (at 40 °C)	Ratings of AC loads (p.f. = 0.95) at				Version										
	230 V	400 V	690 V	1000 V											
A	kW	kW	kW	kW	NO	NC	V AC								kg
AC operation															
200	75	130	225	205	2	2	220 ... 230, 50 Hz	B	**3TK10 42-0AP0**		1	1 unit	101	4.423
							230 ... 240, 50 Hz	D	**3TK10 42-0AU0**		1	1 unit	101	4.449
							110/120, 50/60 Hz	C	**3TK10 42-0AF0**		1	1 unit	101	4.379
							24, 50 Hz	D	**3TK10 42-0AB0**		1	1 unit	101	4.432
250	90	165	280	200	2	2	220 ... 230, 50 Hz	B	**3TK11 42-0AP0**		1	1 unit	101	4.746
							230 ... 240, 50 Hz	D	**3TK11 42-0AU0**		1	1 unit	101	4.476
							110/120, 50/60 Hz	D	**3TK11 42-0AF0**		1	1 unit	101	4.634
							24, 50 Hz	D	**3TK11 42-0AB0**		1	1 unit	101	4.738
300	110	195	340	325	2	2	220 ... 230, 50 Hz	B	**3TK12 42-0AP0**		1	1 unit	101	7.158
							230 ... 240, 50 Hz	D	**3TK12 42-0AU0**		1	1 unit	101	7.167
							110/120, 50/60 Hz	D	**3TK12 42-0AF0**		1	1 unit	101	7.127
							24, 50 Hz	D	**3TK12 42-0AB0**		1	1 unit	101	7.129
350	130	230	395	370	2	2	220 ... 230, 50 Hz	B	**3TK13 42-0AP0**		1	1 unit	101	7.156
							230 ... 240, 50 Hz	D	**3TK13 42-0AU0**		1	1 unit	101	7.172
							110/120, 50/60 Hz	D	**3TK13 42-0AF0**		1	1 unit	101	7.118
							24, 50 Hz	D	**3TK13 42-0AB0**		1	1 unit	101	7.136
550	205	360	620	510	2	2	220 ... 230, 50 Hz[1)]	B	**3TK14 42-0AP0**		1	1 unit	101	18.938
							230 ... 240, 50 Hz	D	**3TK14 42-0AU0**		1	1 unit	101	19.041
							110/120, 50/60 Hz	C	**3TK14 42-0AF0**		1	1 unit	101	19.094
800	300	525	905	575	2	2	220 ... 230, 50 Hz[1)]	B	**3TK15 42-0AP0**		1	1 unit	101	19.068
							230 ... 240, 50 Hz	D	**3TK15 42-0AU0**		1	1 unit	101	19.100
							110/120, 50/60 Hz	C	**3TK15 42-0AF0**		1	1 unit	101	19.076
1000	375	655	1135	--	2	2	220 ... 230, 50 Hz[1)]	B	**3TK17 42-0AP0**		1	1 unit	101	20.030
							230 ... 240, 50 Hz	D	**3TK17 42-0AU0**		1	1 unit	101	20.080
							110/120, 50/60 Hz	D	**3TK17 42-0AF0**		1	1 unit	101	20.100

For accessories, see page 3/134 onwards.
For spare parts, see page 3/142 onwards.

1) At 60 Hz: 240 V.

*** You can order this quantity or a multiple thereof.**

3TK20 Contactors

4-pole, 4 kW

Overview

AC and DC operation

IEC 60947 (VDE 0660).

The contactors are suitable for use in any climate.

The contactors with screw terminals are finger-safe according to EN 50274.

The contactors are available in versions with screw terminals, 6.3 mm plug connectors and solder pin connectors for soldering in printed circuit boards.

Application

The main area of application for the 3TK2 contactors with flat connectors is in household equipment. These contactors are also suitable for simple electric controllers. No auxiliary switch blocks can be retrofitted.

Selection and ordering data

Size 00
AC-1: operational current I_e = 16 A (at 55 °C)

Rated data Utilization categories AC-2 and AC-3					Main contacts		DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of induction motors at 50 Hz and				Version								
at 400/ 380 V	230/ 220 V	**400/ 380 V**	500 V	690/ 660 V									
A	kW	**kW**	kW	kW	NO	NC							kg
Contactors with screw terminals · for screw and snap-on mounting onto 35 mm standard mounting rail													
AC operation													
9	2.4	**4**	4	4	4	--	B	**3TK20 40-0AP0**		1	1 unit	101	0.190
					3	1	B	**3TK20 31-0AP0**		1	1 unit	101	0.188
					2	2	B	**3TK20 22-0AP0**		1	1 unit	101	0.188
DC operation · DC solenoid system													
9	2.4	**4**	4	4	4	--	B	**3TK20 40-0BB4**		1	1 unit	101	0.210
					3	1	B	**3TK20 31-0BB4**		1	1 unit	101	0.210
					2	2	B	**3TK20 22-0BB4**		1	1 unit	101	0.209
Contactors with 6.3 mm x 0.8 mm flat connectors · for screw and snap-on mounting onto 35 mm standard mounting rail													
AC operation													
9	2.4	**4**	4	--	4	--	C	**3TK20 40-3AP0**		1	1 unit	101	0.166
					3	1	C	**3TK20 31-3AP0**		1	1 unit	101	0.164
					2	2	C	**3TK20 22-3AP0**		1	1 unit	101	0.180
DC operation · DC solenoid system													
9	2.4	**4**	4	--	4	--	C	**3TK20 40-3BB4**		1	1 unit	101	0.185
					3	1	C	**3TK20 31-3BB4**		1	1 unit	101	0.187
					2	2	C	**3TK20 22-3BB4**		1	1 unit	101	0.189
Contactors with 6.3 mm x 0.8 mm flat connectors · for screw mounting (diagonal)													
AC operation													
9	2.4	**4**	4	--	4	--	B	**3TK20 40-7AP0**		1	1 unit	101	0.161
					3	1	B	**3TK20 31-7AP0**		1	1 unit	101	0.163
					2	2	B	**3TK20 22-7AP0**		1	1 unit	101	0.162
DC operation · DC solenoid system													
9	2.4	**4**	4	--	4	--	B	**3TK20 40-7BB4**		1	1 unit	101	0.183
					3	1	B	**3TK20 31-7BB4**		1	1 unit	101	0.187
					2	2	B	**3TK20 22-7BB4**		1	1 unit	101	0.183
Contactors with solder pin connectors for printed circuit boards[1] · for screw mounting (diagonal)													
AC operation													
9	2.4	**4**	4	--	4	--	B	**3TK20 40-6AP0**		1	1 unit	101	0.159
					3	1	B	**3TK20 31-6AP0**		1	1 unit	101	0.160
					2	2	B	**3TK20 22-6AP0**		1	1 unit	101	0.159
DC operation · DC solenoid system													
9	2.4	**4**	4	--	**4**	--	B	**3TK20 40-6BB4**		1	1 unit	101	0.182
					3	1	B	**3TK20 31-6BB4**		1	1 unit	101	0.183
					2	2	B	**3TK20 22-6BB4**		1	1 unit	101	0.181


3TK20 ..-0...


3TK20 ..-3...


3TK20 ..-7...


3TK20 ..-6...

For accessories, see page 3/137.

1) Operating range at AC-1
220 V: 0.85 to 1.15 x U_s; lower operating range limit according to IEC 60947.

*** You can order this quantity or a multiple thereof.**

Contactor	Type	3TK20
Rated control supply voltages (the 10th and 11th position of the order number must be changed)		
AC operation		
Coils for AC 50 and 60 Hz		
Rated control supply voltage U_s		
Coils for AC 50 Hz		
50 Hz	**60 Hz**	
V AC	**V AC**	
230/220	**276**	**P0** [1]

1) Operating range at 220 V:
0.85 to 1.15 x U_s; lower operating range limit according to IEC 60947.

Please inquire about other voltages.

Contactor	Type	3TK20
Rated control supply voltages (the 10th and 11th position of the order number must be changed)		
DC operation		
Rated control supply voltage U_s		
V DC		
24		**B4**

3RT15 Contactors

4-pole, 2 NO + 2 NC, 4 ... 18.5 kW

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.

Selection and ordering data

AC and DC operation
2 NO contacts + 2 NC contacts[1)]
Screw terminals

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40/60 °C	Rated control supply voltage U_s	DT	Screw terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of induction motors at 50 Hz and	Operational current I_e			Order No.	Price per PU				
400 V	**400 V**									
A	**kW**	A	V							kg
For screw and snap-on mounting onto 35 mm standard mounting rails										
AC operation										
Size S00[2)]										
9	**4**	18 / 16	24 AC, 50/60 Hz	B	**3RT15 16-1AB00**		1	1 unit	101	0.205
			110 AC, 50/60 Hz	B	**3RT15 16-1AF00**		1	1 unit	101	0.204
			230 AC, 50/60 Hz	▶	**3RT15 16-1AP00**		1	1 unit	101	0.202
12	**5.5**	22 / 20	24 AC, 50/60 Hz	A	**3RT15 17-1AB00**		1	1 unit	101	0.205
			110 AC, 50/60 Hz	▶	**3RT15 17-1AF00**		1	1 unit	101	0.203
			230 AC, 50/60 Hz	▶	**3RT15 17-1AP00**		1	1 unit	101	0.205
Size S0										
25	**11**	40 / 35[3)]	24 AC, 50 Hz	B	**3RT15 26-1AB00**		1	1 unit	101	0.395
			110 AC, 50 Hz	▶	**3RT15 26-1AF00**		1	1 unit	101	0.390
			230 AC, 50 Hz	▶	**3RT15 26-1AP00**		1	1 unit	101	0.393
Size S2										
40	**18.5**	55 / 50	24 AC, 50 Hz	B	**3RT15 35-1AB00**		1	1 unit	101	0.983
			110 AC, 50 Hz	B	**3RT15 35-1AF00**		1	1 unit	101	0.991
			230 AC, 50 Hz	▶	**3RT15 35-1AP00**		1	1 unit	101	0.984
DC operation · DC solenoid system										
Size S00										
9	**4**	18 / 16	24 DC	▶	**3RT15 16-1BB40**		1	1 unit	101	0.263
			220 DC	B	**3RT15 16-1BM40**		1	1 unit	101	0.262
12	**5.5**	22 / 20	24 DC	▶	**3RT15 17-1BB40**		1	1 unit	101	0.265
			220 DC	B	**3RT15 17-1BM40**		1	1 unit	101	0.259
Size S0										
20	**11**	40 / 35[3)]	24 DC	▶	**3RT15 26-1BB40**		1	1 unit	101	0.625
			220 DC	B	**3RT15 26-1BM40**		1	1 unit	101	0.626
Size S2										
40	**18.5**	55 / 50	24 DC	▶	**3RT15 35-1BB40**		1	1 unit	101	1.583
			220 DC	B	**3RT15 35-1BM40**		1	1 unit	101	1.585



3RT15 1.-1....



3RT15 26.-1 .

Size S00: snap-on auxiliary switch blocks according to EN 50005
Sizes S0 to S3: snap-on auxiliary switch blocks according to EN 50012 and EN 50005
(for S0 max. 2 auxiliary contacts, please note information in the Catalog LV 1 T).

For other voltages, see page 3/29.
For accessories, see page 3/110.
For spare parts, see page 3/126.

1) For switching poles; not suitable for reversing duty.

2) For size S00: coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s
at 60 Hz: 0.85 ... 1.1 x U_s.

3) Required conductor cross-section: 10 mm².

*** You can order this quantity or a multiple thereof.**

AC and DC operation
2 NO contacts + 2 NC contacts[1)]
Cage Clamp terminals

Rated data AC-2 and AC-3, T_u: up to 60 °C		Rated data AC-1, T_u: 40/60 °C	Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e	Ratings of induction motors at 50 Hz and	Operational current I_e			Order No.	Price per PU				
400 V	**400 V**									
A	**kW**	A	V							kg
For screw and snap-on mounting onto 35 mm standard mounting rails										
			AC operation							
			Size S00[2)]							
9	**4**	18 / 16	24 AC, 50/60 Hz	B	**3RT15 16-2AB00**		1	1 unit	101	0.198
			110 AC, 50/60 Hz	B	**3RT15 16-2AF00**		1	1 unit	101	0.196
			230 AC, 50/60 Hz	►	**3RT15 16-2AP00**		1	1 unit	101	0.201
12	**5.5**	22 / 20	24 AC, 50/60 Hz	B	**3RT15 17-2AB00**		1	1 unit	101	0.200
			110 AC, 50/60 Hz	B	**3RT15 17-2AF00**		1	1 unit	101	0.199
			230 AC, 50/60 Hz	►	**3RT15 17-2AP00**		1	1 unit	101	0.201
			DC operation · DC solenoid system							
			Size S00							
9	**4**	18 / 16	24 DC	►	**3RT15 16-2BB40**		1	1 unit	101	0.260
			220 DC	B	**3RT15 16-2BM40**		1	1 unit	101	0.256
12	**5.5**	22 / 20	24 DC	B	**3RT15 17-2BB40**		1	1 unit	101	0.262
			220 DC	B	**3RT15 17-2BM40**		1	1 unit	101	0.255



3RT15 1.-2....

For other voltages, see page 3/29.
For accessories, see page 3/110.
For spare parts, see page 3/127.

1) For switching poles; not suitable for reversing duty.

2) For size S00: coil operating range
at 50 Hz: 0.8 ... 1.1 x U_s
at 60 Hz: 0.85 ... 1.1 x U_s.

*** You can order this quantity or a multiple thereof.**

3RT16 Capacitor Contactors

12.5 ... 50 kvar

Overview

AC operation

IEC 60947, EN 60947 (VDE 0660)

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

The 3RT16 capacitor switching contactors are special variants of the size S00 to S3 SIRIUS contactors. The capacitors are precharged by means of the mounted leading NO contacts and resistors; only then do the main contacts close.

This prevents disturbances in the power system and welding of the contactors.

Only discharged capacitors are permitted to be switched on with capacitor contactors.

The auxiliary switch block which is snapped onto the capacitor contactor contains the three leading NO contacts and in the case of S00 one standard NC contact (in addition to one NO contact in the basic unit) and in the case of S0 and S3 one standard NO contact, which is unassigned. Size S00 also contains another unassigned NO contact in the basic unit.

In addition, a 2-pole auxiliary contact block can be mounted laterally on the 3RT16 47 capacitor contactors (2 NO, 2 NC or 1 NO + 1 NC versions); type 3RH19 21-1EA.. . The fitting of auxiliary switches for 3RT16 17 and 3RT16 27 is not expandable.

For the capacitor making and switching capacity of the basic 3RT10 contactor variant, see Technical Specifications.

Selection and ordering data

AC operation
Screw terminals



3RT16 17-1A.03



3RT16 27-1A.01



3RT16 47-1A.01

Utilization category AC-6b Switching of AC capacitors for an ambient temperature of 60 °C[1]				Auxiliary contacts, unas-signed		Rated control supply voltage U_s[2]		DT	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Capacitor rating at operating voltage 50/60 Hz									Order No.	Price per PU				
230 V kvar	400 V kvar	525 V kvar	690 V kvar	NO	NC	V AC	Hz							kg
For screw and snap-on mounting onto 35 mm standard mounting rails														
Size S00														
3 ... 7.5	5 ... 12.5	7.5 ... 15	10 ... 21	1	1	24	50 / 60	▶	**3RT16 17-1AB03**		1	1 unit	101	0.278
						110		B	**3RT16 17-1AF03**		1	1 unit	101	0.276
						230		▶	**3RT16 17-1AP03**		1	1 unit	101	0.275
Size S0[3]														
3.5 ... 15	6 ... 25	7.8 ... 30	10 ... 42	1	--	24	50	B	**3RT16 27-1AB01**		1	1 unit	101	0.440
						110		B	**3RT16 27-1AF01**		1	1 unit	101	0.430
						230		▶	**3RT16 27-1AP01**		1	1 unit	101	0.431
Size S3														
3.5 ... 30	5 ... 50	7.5 ... 60	10 ... 84	1	--	24	50	B	**3RT16 47-1AB01**		1	1 unit	101	2.037
						110		B	**3RT16 47-1AF01**		1	1 unit	101	2.040
						230		▶	**3RT16 47-1AP01**		1	1 unit	101	2.033

For other voltages, see page 3/29.
For accessories, see page 3/114.

1) For size S3: 55 °C.

2) Operating range: 0.85 ... 1.1 x U_s.

3) For conductor cross-sections > 6 mm^2 Use 3RV19 25-5AB terminals (2 units).

*** You can order this quantity or a multiple thereof.**

Overview

DC operation

IEC 60947-4-1, EN 60947-4-1 (VDE 0660, Part 102), for requirements according to IEC 60077-1 and IEC 60077-2.

The contactor relays are finger-safe according to EN 50274. The size S00 contactor relays have Cage Clamp connections for all terminals.

Ambient temperature

The permissible ambient temperature for operation of the contactor relays (across the full coil operating range) is -40 °C to +70 °C.

Uninterrupted duty at temperatures > +55 °C reduces the mechanical endurance, the current-carrying capacity of the conducting paths and the operating frequency.

Application

For operation in installations which are subject both to considerable variations in the control voltage and to high ambient temperatures, e.g. railway applications under extreme climatic conditions, rolling mills, etc.

Control and auxiliary circuits

The coils of the contactor relays have an extended tolerance from 0.7 to 1.25 x U_s and are fitted as standard with varistors to provide protection against voltage surges. The opening delay is consequently 2 to 5 ms longer than for standard contactors.

3RH11..-0LA0

The DC solenoid systems of the contactor relays are modified (to hold-in coil) by means of a series resistor.

The size S00 contactor relays are supplied prewired with a plug-on module containing the series resistor. The varistor is integrated. A 4-pole auxiliary switch block (according to EN 50005) can be fitted additionally.

Mounting

At ambient temperatures up to 70 °C, the size S00 contactor relays are allowed to be mounted side by side.

3RH1122-2K.40

These contactor relays have an extended tolerance from 0.7 to 1.25 x U_s; the coils are fitted with varistors as standard. An additional series resistor is not required. Please note:

- Size S00: It is not possible to mount an auxiliary switch block.

At ambient temperatures > 60 °C ≤ 70 °C, a clearance of 10 mm is required when they are mounted side by side.

Selection and ordering data

DC operation · DC solenoid system
Cage Clamp terminals
For screw and snap-on mounting onto standard mounting rail
Solenoid fitted with varistor



3RH11 22-2K.40:



3RH11 22-2K.40-0LA0

Rated operational current I_e/AC-15/AC-14 T_u: 70 °C at				Contacts		Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
				Version				Order No.	Price per PU				
230 V	400 V	500 V	690 V										
A	A	A	A	NO	NC	V DC							kg
3RH11 contactor relays													
Size S00													
Cage Clamp terminals for all connections													
6	3	2	1	2	2 [1]	24 [2] 110 [2]	▶ A	**3RH11 22-2KB40** **3RH11 22-2KF40**		1 1	1 unit 1 unit	101 101	0.255 0.256
6	3	2	1	2	1 [3]	24 110	A A	**3RH11 22-2KB40-0LA0** **3RH11 22-2KF40-0LA0**		1 1	1 unit 1 unit	101 101	0.284 0.285

1) It is not possible to mount an auxiliary switch block. A clearance of 10 mm is required for side-by-side mounting at ambient temperatures > 60 °C.

2) Version without series resistor.

3) One 4-pole auxiliary switch block according to EN 50005 can be mounted; no clearance required up to 70 °C.

*** You can order this quantity or a multiple thereof.**

Contactors with Extended Tolerance 0.7 ... 1.25 x U_s, for Railway Applications

3TH4 contactor relays

Overview

3TH4 contactor relays

EN 60947-4-1.

For requirements according to IEC 60077-1 and IEC 60077-2.

The contactors are finger-safe according to EN 50274. Terminal covers may have to be fitted onto the connecting bars, depending on the configuration with other devices.

Application

For operation in plants which are subject both to considerable variations in the control voltage and to high ambient temperatures, e.g. in railway applications.

Selection and ordering data

With screw terminals
For screw and snap-on mounting onto 35 mm standard mounting rail
Solenoid fitted with varistor



3TH4

Contacts	Rated operational current I_e/AC-15/AC-14				Contacts[1]			Rated control supply voltage U_s	DT	Order No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
					Ident. No. acc. to EN 50011										
	230 V	400 V	500 V	690 V											
Number	A	A	A	A		NO	NC	V							kg
3TH42 contactor relays · DC operation · DC solenoid system															
8	**10**	6	4	2	**44 E**	4	4	24 DC	B	**3TH42 44-0LB4**		1	1 unit	101	0.674
								110 DC	B	**3TH42 44-0LF4**		1	1 unit	101	0.661
					53 E	5	3	24 DC	C	**3TH42 53-0LB4**		1	1 unit	101	0.669
								110 DC	C	**3TH42 53-0LF4**		1	1 unit	101	0.660
					62 E	6	2	24 DC	B	**3TH42 62-0LB4**		1	1 unit	101	0.667
								110 DC	B	**3TH42 62-0LF4**		1	1 unit	101	0.663

For accessories, see page 3/139.

1) Contacts not extendable.

*** You can order this quantity or a multiple thereof.**

Contactors with Extended Tolerance 0.7 ... 1.25 x U_s, for Railway Applications

3RT10 motor contactors, 5.5 ... 45 kW

Overview

DC operation

IEC 60947-4-1, EN 60947-4-1 (VDE 0660, Part 102), for requirements according to IEC 60077-1 and IEC 60077-2.

The contactors are finger-safe according to EN 50274 (exception: series resistors S0 to S3). The contactors are available with both Cage Clamp and screw terminals. The size S00 contactors have Cage Clamp terminals for all connections. The auxiliary conductor and coil terminals of sizes S0 to S3 are all Cage Clamp terminals.

Ambient temperature

The permissible ambient temperature for operation of the contactors (across the full coil operating range) is -40 °C to +70 °C.

Uninterrupted duty at temperatures > +55 °C reduces the mechanical endurance, the current-carrying capacity of the conducting paths and the operating frequency.

Dimensions

Attaching resistors increases the width of contactor sizes S0 to S3 (see Dimensional Drawings).

Application

For operation in installations which are subject both to considerable variations in the control voltage and to high ambient temperatures, e.g. railway applications under extreme climatic conditions, rolling mills, etc.

Control and auxiliary circuits

The coils of the contactors have an extended tolerance from 0.7 to 1.25 x U_s and are fitted as standard with varistors to provide protection against voltage surges. The opening delay is consequently 2 to 5 ms longer than for standard contactors.

3RT10 ..-0LA0

The DC solenoid systems of the contactors are modified (to hold-in coil) by means of a series resistor.

The size S00 contactors are supplied prewired with a plug-on module containing the series resistor. The varistor is integrated. A 4-pole auxiliary switch block (according to EN 50005) can be fitted additionally.

The size S0 to S3 contactors are equipped on the front with an auxiliary switch block with 2 NO + 2 NC contacts. The separate series resistor, which is attached laterally next to the contactor on the 35 mm standard mounting rail, is fitted with connecting leads for mounting the contactors. A circuit diagram showing the terminals is stuck onto each contactor. One NC of the auxiliary contacts is required for the series resistor function. The selection and ordering data shows the number of additional, unassigned auxiliary contacts. It is only possible to extend the number of auxiliary contacts with size S00.

Mounting

At ambient temperatures up to 70 °C, the size S00 contactors and contactor relays are allowed to be mounted side by side. The resistor module of the size S0 to S3 contactors must be mounted to the left of the contactor owing to the prefabricated connecting leads.

3RT10 17-2K.4.,
3RT10 2.-3K.40

These contactors have an extended tolerance from 0.7 to 1.25 x U_s; the coils are fitted with varistors as standard. An additional series resistor is not required.
Please note:

- Size S00: it is not possible to mount an auxiliary switch block.
- Size S0: up to two single-pole auxiliary switch blocks can be mounted.

At ambient temperatures > 60 °C ≤ 70 °C, a clearance of 10 mm is required when they are mounted side by side.

3RT10 contactors with contactor control unit, extended tolerance

Control and auxiliary circuits

The coils of the contactors have an extended tolerance from 0.7 to 1.25 x U_s and are fitted as standard with varistors to provide protection against voltage surges. The opening delay is consequently 2 ms to 5 ms longer than for standard contactors.

3RT10 ..-.X.40-0LA2

The contactors are energized using series-connected control electronics, ensuring the coil operating range of 0.7 to 1.25 x U_s at an ambient temperature of 70 °C. They are supplied as complete self-contained units with a built-on contactor control unit. A varistor is integrated for damping opening surges in the coil.

The possibility of mounting auxiliary switches is the same as that for equivalent standard contactors.

Mounting

At ambient temperatures up to 70 °C, sizes S0 to S3 of these contactor versions are allowed to be mounted side by side.

Ambient temperature

The permissible ambient temperature for operation of the contactors (across the full operating range of the coils) is -40 °C to +70 °C.
Uninterrupted duty at temperatures > +55 °C reduces the mechanical endurance, the current-carrying capacity of the conducting paths and the operating frequency.

Dimensions

Because of the built-on contactor control unit, the height of the size S0 to S3 contactors increases by up to 34 mm (see Dimensional Drawings).

Contactors with Extended Tolerance 0.7 ... 1.25 x U_s, for Railway Applications

3RT10 motor contactors, 5.5 ... 45 kW

Selection and ordering data

DC operation · DC solenoid system
Cage Clamp terminals
For screw and snap-on mounting onto standard mounting rail
Solenoid fitted with varistor



3RT10 17-2K.4.-0LA0



3RT10 2.-3K.40



3RT10 3.-3K.44-0LA0

Rated data AC-2 and AC-3 T_u: 70 °C					Auxiliary contacts		Rated control supply voltage U_s	DT	Cage Clamp terminals		PU (UNIT, SET, M)	PS*	PG	Weight per PU approx.
Operational current I_e at	Rating of induction motors at				Version				Order No.	Price per PU				
400 V	230 V	**400 V**	500 V	690 V										
A	kW	**kW**	kW	kW	NO	NC	V DC							kg
3RT10 contactors for switching motors														
Size S00														
Cage Clamp terminals for all connections														
12	3	**5.5**	5.5	5.5	1[1]	--	24[3]	▶	**3RT10 17-2KB41**		1	1 unit	101	0.256
							110[3]	B	**3RT10 17-2KF41**		1	1 unit	101	0.256
12	3	**5.5**	5.5	5.5	--	1[1]	24[3]	▶	**3RT10 17-2KB42**		1	1 unit	101	0.256
							110[3]	B	**3RT10 17-2KF42**		1	1 unit	101	0.255
12	3	**5.5**	5.5	5.5	--	1[2]	24	A	**3RT10 17-2KB42-0LA0**		1	1 unit	101	0.283
							110	B	**3RT10 17-2KF42-0LA0**		1	1 unit	101	0.285
Size S0														
Cage Clamp terminals for coil connections and auxiliary contacts														
17	4	**7.5**	10	11	--	--[4]	24[3]	▶	**3RT10 25-3KB40**		1	1 unit	101	0.580
							110[3]	B	**3RT10 25-3KF40**		1	1 unit	101	0.574
25	5.5	**11**	11	11	--	--[4]	24[3]	▶	**3RT10 26-3KB40**		1	1 unit	101	0.581
							110[3]	B	**3RT10 26-3KF40**		1	1 unit	101	0.575
17	4	**7.5**	10	11	2	2[5]	24	B	**3RT10 25-3KB44-0LA0**		1	1 unit	101	0.760
							110	B	**3RT10 25-3KF44-0LA0**		1	1 unit	101	0.745
25	5.5	**11**	11	11	2	2[5]	24	B	**3RT10 26-3KB44-0LA0**		1	1 unit	101	0.758
							110	B	**3RT10 26-3KF44-0LA0**		1	1 unit	101	0.742
Size S2														
Cage Clamp terminals for coil connections and auxiliary contacts														
32	7.5	**15**	18.5	18.5	2	2[5]	24	B	**3RT10 34-3KB44-0LA0**		1	1 unit	101	1.630
							110	B	**3RT10 34-3KF44-0LA0**		1	1 unit	101	1.664
40	11	**18.5**	22	22	2	2[5]	24	B	**3RT10 35-3KB44-0LA0**		1	1 unit	101	1.648
							110	B	**3RT10 35-3KF44-0LA0**		1	1 unit	101	1.656
50	15	**22**	30	22	2	2[5]	24	B	**3RT10 36-3KB44-0LA0**		1	1 unit	101	1.647
							110	B	**3RT10 36-3KF44-0LA0**		1	1 unit	101	1.669
Size S3														
Cage Clamp terminals for coil connections and auxiliary contacts														
65	18.5	**30**	37	43	2	2[5]	24	B	**3RT10 44-3KB44-0LA0**		1	1 unit	101	3.070
							110	B	**3RT10 44-3KF44-0LA0**		1	1 unit	101	3.028
80	22	**37**	45	55	2	2[5]	24	B	**3RT10 45-3KB44-0LA0**		1	1 unit	101	3.085
							110	B	**3RT10 45-3KF44-0LA0**		1	1 unit	101	2.670
95	22	**45**	55	55	2	2[5]	24	B	**3RT10 46-3KB44-0LA0**		1	1 unit	101	3.090
							110	B	**3RT10 46-3KF44-0LA0**		1	1 unit	101	3.042

For spare parts, see page 3/127.

1) It is not possible to mount an auxiliary switch block. A clearance of 10 mm is required for side-by-side mounting at ambient temperatures >60 °C.
2) One 4-pole auxiliary switch block according to EN 50005 can be mounted; no clearance required up to 70 °C.
3) Version without series resistor.
4) Up to two single-pole auxiliary switch blocks can be mounted. A clearance of 10 mm is required for side-by-side mounting at ambient temperatures >60 °C.
5) The number of auxiliary contacts cannot be increased; no clearance required up to 70 °C.

*** You can order this quantity or a multiple thereof.**