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NEW
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Article No.

3RA1943-2C
3RA1943-2B
3RA1953-2B
3RA1953-2N

Or directly in the Internet, e. g. www.siemens.com/product?3RA1943-2C

Price groups
PG 41A, 41B, 41E, 41H, 42F

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Note:
3RT1 contactors in sizes S00 to S12 and 3RA1 contactor assemblies in sizes S00 to S3 can be found

- in the Catalog Add-On IC 10 AO · 2016 at the Information and Download Center
- in the Interactive Catalog CA 01
- in the Industry Mall

Conversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-tool

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Overview

More information

Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RT_3TK_3TC
Conversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-tool
TIA Selection Tool Cloud (TST Cloud), see https://mall.industry.siemens.com/spice/TSTWeb/?kmat=Contactor





Size		**S00**				**S0**					
Type		3RT201				3RT202					
3RT20 contactors											
Type		**3RT2015**	**3RT2016**	**3RT2017**	**3RT2018**	**3RT2023**	**3RT2024**	**3RT2025**	**3RT2026**	**3RT2027**	**3RT2028**
AC, DC operation		(p. 3/50, 3/55 ... 3/58)				(p. 3/51, 3/52, 3/59 ... 3/61, 3/63)					
AC-3											
I_e/AC-3/400 V	A	7	9	12	16	9	12	17	25	32	38
400 V	**kW**	**3**	**4**	**5.5**	**7.5**	**4**	**5.5**	**7.5**	**11**	**15**	**18.5**
230 V	kW	1.5	2.2	3	4	2.2	3	4	5.5	7.5	11
690 V	kW	4	5.5	5.5	7.5	7.5	7.5	11	11	18.5	18.5
1 000 V	kW	--	--	--	--	--	--	--	--	--	--
AC-4 (at I_a = 6 x I_e)											
400 V	**kW**	**3**	**4**	**4**	**5.5**	**4**	**5.5**	**7.5**	**7.5**	**11**	**11**
400 V (200 000 operating cycles)	kW	1.15	2	2	2.5	2	2.6	3.5	4.4	6	6
AC-1 (40 °C, ≤ 690 V)											
I_e	**A**	**18**	**22**	**22**	**22**	**40**	**40**	**40**	**40**	**50**	**50**
Accessories for contactors											
Auxiliary switch blocks	• On front	**3RH29, 3RA28** (p. 3/89 ... 3/96)				**3RH29, 3RA28** (p. 3/89 ... 3/96)					
	• Lateral	**3RH29** (p. 3/93)				**3RH29** (p. 3/93)					
Function modules	• Direct-on-line starting, star-delta (wye-delta) starting	**3RA281.** (p. 3/101)				**3RA281.** (p. 3/101)					
	• IO-Link, AS-Interface	**3RA271.-.AA00** (p. 3/102, 3/103)				**3RA271.-.AA00** (p. 3/102, 3/103)					
Surge suppressors		**3RT2916** (p. 3/98, 3/99)				**3RT2926** (p. 3/98, 3/99)					
3RU2 and 3RB3 overload relays											
3RU thermal overload relays		**3RU2116** 0.1 ... 16 A (p. 7/88)				**3RU2126** 1.8 ... 40 A (p. 7/88)					
3RB electronic overload relays											
• for standard applications		**3RB3016, 3RB3113** 0.1 ... 16 A (p. 7/101 ... 7/103)				**3RB3026, 3RB3123** 0.1 ... 40 A (p. 7/101 ... 7/103)					
• for High-Feature applications		**3RB22, 3RB23 and 3RB24** (p. 7/124, 7/132) **with 3RB2906-2.G1** (p. 7/136) **current measuring module** 0.3 ... 25 A				**3RB22, 3RB23 and 3RB24** (p. 7/124, 7/132) **with 3RB2906-2.G1** (p. 7/136) **current measuring module** 0.3 ... 25 A					
3RV20 motor starter protectors											
Motor starter protectors		**3RV2011** 0.11 ... 16 A (p. 7/28)				**3RV2021** 0.45 ... 40 A (p. 7/28)					
Link modules		**3RA1921, 3RA2911** (p. 7/53)				**3RA2921** (p. 7/53)					
3RA23 reversing contactor assemblies											
Complete units	Type	**3RA2315**	**3RA2316**	**3RA2317**	**3RA2318**	**--**	**3RA2324**	**3RA2325**	**3RA2326**	**3RA2327**	**3RA2328**
		(p. 3/157)					(p. 3/158)				
400 V	**kW**	**3**	**4**	**5.5**	**7.5**		**5.5**	**7.5**	**11**	**15**	**18.5**
Assembly kits, etc.		**3RA2913-2AA.** (p. 3/105)				**--**	**3RA2923-2AA.** (p. 3/105)				
Function modules		**3RA271.-.BA00** (p. 3/102)				**--**	**3RA271.-.BA00** (p. 3/102)				
3RA24 contactor assemblies for star-delta (wye-delta) starting											
Complete units	Type	**3RA2415**	**3RA2416**	**3RA2417**		**3RA2423**		**3RA2425**	**3RA2426**		
		(p. 3/174)				(p. 3/175)					
400 V	**kW**	**5.5**	**7.5**	**11**		**11**		**15/18.5**	**22**		
Assembly kits/wiring modules		**3RA2913-2BB.** (p. 3/106)				**3RA2923-2BB.** (p. 3/106)					
Function modules		**3RA271.-.CA00** (p. 3/102)				**3RA271.-.CA00** (p. 3/102)					

Note:

Safety characteristics for contactors, see "Standards and Approvals", page 16/6.

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Size		**S2**				**S3**		
Type		3RT203				3RT204		
3RT20 contactors								
Type		**3RT2035**	**3RT2036**	**3RT2037**	**3RT2038**	**3RT2045**	**3RT2046**	**3RT2047**
AC, DC operation		(p. 3/53, 3/62, 3/64)				(p. 3/54, 3/62, 3/65)		
AC-3								
I_e/AC-3/400 V	A	40	50	65	80	80	95	110
400 V	**kW**	**18.5**	**22**	**30**	**37**	**37**	**45**	**55**
230 V	kW	11	15	18.5	22	22	22	30
690 V	kW	22	22	37	45	55	75	90
1 000 V	kW	--	--	--	--	37	37	37
AC-4 (at I_a = 6 x I_e)								
400 V	**kW**	**18.5**	**22**	**30**	**37**	**37**	**45**	**55**
400 V	kW	11.6	12.6	14.7	15.8	17.9	22	24.3
(200 000 operating cycles)								
AC-1 (40 °C, ≤ 690 V)								
I_e	**A**	**60**	**70**	**80**	**90**	125	130	130
Accessories for contactors								
Auxiliary switch blocks	• On front	**3RH29, 3RA28**			(p. 3/89 ... 3/96)	**3RH29, 3RA28**		(p. 3/89 ... 3/96)
	• Lateral	**3RH29**			(p. 3/93)	**3RH29**		(p. 3/93)
Function modules	• Direct-on-line starting	**3RA283.**			(p. 3/101)	**3RA283.**		(p. 3/101)
	• IO-Link, AS-Interface	**3RA271.-.AA00**			(p. 3/102, 3/103)	**3RA271.-.AA00**		(p. 3/102, 3/103)
Surge suppressors		**3RT2936**			(p. 3/98, 3/99)	**3RT2936**[1], **3RT2946**		(p. 3/98, 3/99)
Terminal covers		**3RT2936-4EA2**			(p. 3/112)	**3RT2946-4EA2**		(p. 3/112)
3RU2 and 3RB overload relays								
3RU thermal overload relays		**3RU2136**	11 ... 80 A		(p. 7/88)	**3RU2146**	28 ... 100 A	(p. 7/88)
3RB electronic overload relays								
• For standard applications		**3RB3036, 3RB3133**	12.5 ... 80 A		(p. 7/101 ... 7/103)	**3RB3046, 3RB3143**	12.5 ... 115 A	(p. 7/101 ... 7/103)
• For High-Feature applications		**3RB22, 3RB23 and 3RB24 with 3RB2906-2JG1 current measuring module**	10 ... 100 A		(p. 7/124, 7/132) (p. 7/136)	**3RB22, 3RB23 and 3RB24 with 3RB2906-2JG1 current measuring module**	10 ... 100 A	(p. 7/124, 7/132) (p. 7/136)
3RV20 motor starter protectors								
Motor starter protectors		**3RV2031, 3RV2032**		9.5 ... 80 A	(p. 7/28)	**3RV2041, 3RV2042**	28 ... 100 A	(p. 7/28)
Link modules		**3RA2931**			(p. 7/53)	**3RA1941**		(p. 7/53)
3RA23 reversing contactor assemblies								
Complete units	Type	**3RA2335** (p. 3/159)	**3RA2336**	**3RA2337**	**3RA2338**	**3RA2345** (p. 3/160)	**3RA2346**	**3RA2347**
400 V	**kW**	**18.5**	**22**	**30**	**37**	**37**	**45**	**55**
Assembly kits/wiring modules		**3RA2933-2AA.**			(p. 3/105)	**3RA2943-2AA.**		(p. 3/105)
Function modules		**3RA271.-.BA00**			(p. 3/102)	**3RA271.-.BA00**		(p. 3/102)
Mechanical interlocks		**3RA2934-2B**			(p. 3/109)	**3RA2934-2B**		(p. 3/109)
3RA24 contactor assemblies for star-delta (wye-delta) starting								
Complete units	Type	**3RA2434** (p. 3/176)	**3RA2435**	**3RA2436**	**3RA2437**	**3RA2444** (p. 3/177)	**3RA2445**	**3RA2446**
400 V	**kW**	**22/30**	**37**	**45**	**55**	**55**	**75**	**90**
Assembly kits/wiring modules		**3RA2933-2BB./-2C**			(p. 3/106)	**3RA2943-2BB./-2C**		(p. 3/106)
Function modules		**3RA271.-.CA00**			(p. 3/102)	**3RA271.-.CA00**		(p. 3/102)

[1] From product version E03 onwards, 3RT2936-1B/-1E surge suppressors can be used for 3RT2.4 contactors.

Note:

Safety characteristics for contactors, see "Standards and approvals", page 16/6.

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Introduction





Size			**S6**			**S10**			**S12**	
Type			3RT105			3RT1.6			3RT1.7	
3RT10 contactors · 3RT12 vacuum contactors										
Type			**3RT1054**	**3RT1055**	**3RT1056**	**3RT1064**	**3RT1065**	**3RT1066**	**3RT1075**	**3RT1076**
AC, DC operation			(p. 3/66 ... 3/68)			(p. 3/66 ... 3/68)			(p. 3/66 ... 3/68)	
Type			--	--	--	**3RT1264** (p. 3/129)	**3RT1265**	**3RT1266**	**3RT1275** (p. 3/129)	**3RT1276**
AC-3										
I_e/AC-3/400 V		A	115	150	185	225	265	300	400	500
400 V		**kW**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
230 V		kW	37	45	55	55	75	90	132	160
690 V	3RT10/3RT12	kW	110	132	160	200	250	250	400	400/500
1 000 V	3RT10/3RT12	kW	75	90	90	90/315	132/355	132/400	250/560	250/710
AC-4 (at I_a = 6 x I_e)										
400 V		**kW**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
400 V	3RT10/3RT12	kW	29	38	45	54/78	66/93	71/112	84/140	98/161
(200 000 operating cycles)										
AC-1 (40 °C, ≤ 690 V)										
I_e	3RT10/3RT12	**A**	**160**	**185**	**215**	**275/330**	**330**	**330**	**430/610**	**610**
3RT14 AC-1 contactors										
Type			**3RT1456** (p. 4/13, 4/14)			**3RT1466** (p. 4/13, 4/14)			**3RT1476** (p. 4/13, 4/14)	
I_e/AC-1/40 °C/≤ 690 V		**A**	**275**			**400**			**690**	
Accessories for contactors										
Auxiliary switch blocks	• On front • Lateral		**3RH19, 3RT1926** **3RH19** (p. 3/92, 3/97) (p. 3/94, 3/95)							
Surge suppressors			**3RT1956-1C** (RC element) (p. 3/99)							
Terminal covers			**3RT1956-4EA.** (p. 3/112)			**3RT1966-4EA.** (p. 3/112)				
Box terminal blocks			**3RT1955-4G, 3RT1956-4G** (p. 3/110)			**3RT1966-4G** (p. 3/110)				
3RB2 overload relays										
3RB electronic overload relays										
• for standard applications			**3RB2056** 50 ... 200 A (p. 7/113, 7/114) **3RB2153** 50 ... 200 A (p. 7/115)			**3RB2066** 55 ... 250 A or 160 ... 630 A (p. 7/113, 7/114) **3RB2163** 55 ... 250 A or 160 ... 630 A (p. 7/115)				
• for High-Feature applications			**3RB22, 3RB23 and 3RB24** (p. 7/124) (p. 7/132) **with 3RB2956-2TH2 current measuring module** (p. 7/136) 20 ... 200 A			**3RB22, 3RB23 and 3RB24** (p. 7/124) (p. 7/132) **with 3RB2966-2WH2 current measuring module** (p. 7/136) 63 ... 630 A				
3RV10 molded case motor starter protectors										
Molded case motor starter protectors			**3RV1063** 40 ... 200 A (p. 7/71)			**3RV1073** 160 ... 400 A (p. 7/71)			**3RV1083** 252 ... 630 A (p. 7/71)	
Reversing contactor assemblies[1]										
Complete units	Type		--							
400 V		**kW**	**55**	**75**	**90**	**110**	**132**	**160**	**200**	**250**
Assembly kits/ wiring modules			**3RA1953-2A** (p. 3/105)			**3RA1963-2A** (p. 3/105)			**3RA1973-2A** (p. 3/105)	
Mechanical interlocks			**3RA1954-2A** (p. 3/109)							
Contactor assemblies for star-delta (wye-delta) starting[1]										
Complete units	Type		--							
400 V		**kW**	--							
Assembly kits/ wiring modules			**3RA1953-2B** (p. 3/107)			**3RA1963-2B** (p. 3/107)			**3RA1973-2B** (p. 3/107)	

[1] Contactor assemblies for customer assembly:
- Reversing contactor assemblies see pages 3/162 to 3/164,
- Contactor assemblies for star-delta (wye-delta) starting see pages 3/179 to 3/184.

Note:

Safety characteristics for contactors, see "Standards and approvals", page 16/6.

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Size		**14**	
Type		3TF6	
3TF68/3TF69 vacuum contactors			
Type		**3TF68** (p. 3/130, 3/131)	**3TF69** (p. 3/130, 3/131)
AC-3			
I_e/AC-3/400 V	A	630	820
400 V	**kW**	**335**	**450**
230 V	kW	200	260
690 V	kW	600	800
1 000 V	kW	600	800
AC-4 (at I_a = 6 x I_e)			
400 V	**kW**	**355**	**400**
400 V (200 000 operating cycles)	kW	168	191
AC-1 (40 °C, ≤ 690 V)			
I_e	**A**	**700**	**910**

Accessories for contactors			
Auxiliary switch blocks			
• Lateral		**3TY7561**	(p. 3/132)
Surge suppressors		**3TX7572**	(p. 3/133)
Terminal covers		**3TX7686, 3TX7696**	(p. 3/133)
3RB2 overload relays			
3RB electronic overload relays			
• for standard applications		**3RB2066, 3RB2163** 55 ... 250 A or 160 ... 630 A (p. 7/113, 7/114) (p. 7/115)	**3RB22, 3RB23 and 3RB24 with 3RB2906-2.G1 current measuring module with 3UF series transformer up to 820 A** (p. 7/124, 7/132) (p. 7/136)
• for High-Feature applications		**3RB22, 3RB23 and 3RB24 with 3RB2966-2WH2 current measuring module** 63 ... 630 A (p. 7/124, 7/132) (p. 7/136)	63 ... 820 A
3RV10 molded case motor starter protectors			
Molded case motor starter protectors		**3RV1083** 252 ... 630 A	(p. 7/71)
Reversing contactor assemblies			
Complete units	Type	**--**	
400 V	**kW**	**335**	
Assembly kits/wiring modules		**3TX7680-1A**	(Industry Mall)
Mechanical interlocks		**3TX7686-1A**	(Industry Mall)
Contactor assemblies for star-delta (wye-delta) starting			
Complete units	Type	**--**	
400 V	**kW**	**630**	
Assembly kits/wiring modules		**3TX7680-1B**	(Industry Mall)

Note:

Safety characteristics for contactors, see "Standards and approvals", page 16/6.

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Introduction



Size			--
Type			3TG10
3TG10 power relays/miniature contactors			
Type			**3TG10**
Number of main contacts			4
AC, DC operation			(p. 3/146)
AC-1			
I_e at 400 V	55 °C	**A**	**20**
P at 400 V		**kW**	**13**
At 230 V		kW	7.5
AC-2 and AC-3			
I_e up to 400 V		A	8.4
P at 400 V		**kW**	**4**

Connection methods

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

Devices of the 3TF2 series are also available for connection with flat connectors and solder pin connectors.

The 3TG10 power relays/miniature contactors are available with screw terminals or flat connectors.

- Screw terminals
- Spring-type terminals
- Flat connectors
- Solder pin connections

The terminals are indicated in the corresponding tables by the symbols shown on orange backgrounds.

Use of 3RT contactors, 3RT and 3TF vacuum contactors, reversing contactor assemblies, and contactor assemblies for star-delta (wye-delta) starting with IE3/IE4 motors

Note:

For the use of 3RT contactors, 3RT and 3TF vacuum contactors, reversing contactor assemblies and contactor assemblies for star-delta (wye-delta) starting in conjunction with highly energy-efficient IE3/IE4 motors, please observe the information on dimensioning and configuring, see Application Manual "Controls with IE3/IE4 Motors", https://support.industry.siemens.com/cs/ww/en/view/94770820.

For more information, see page 1/7.

SUVA-certified safety contactors

We offer special safety contactors for use in safety-related applications. They have NC contacts with mirror contact function and they have SUVA certification. This means they have non-removable auxiliary switch blocks and cannot be operated manually. They thus comply with all requirements for use in safety applications.

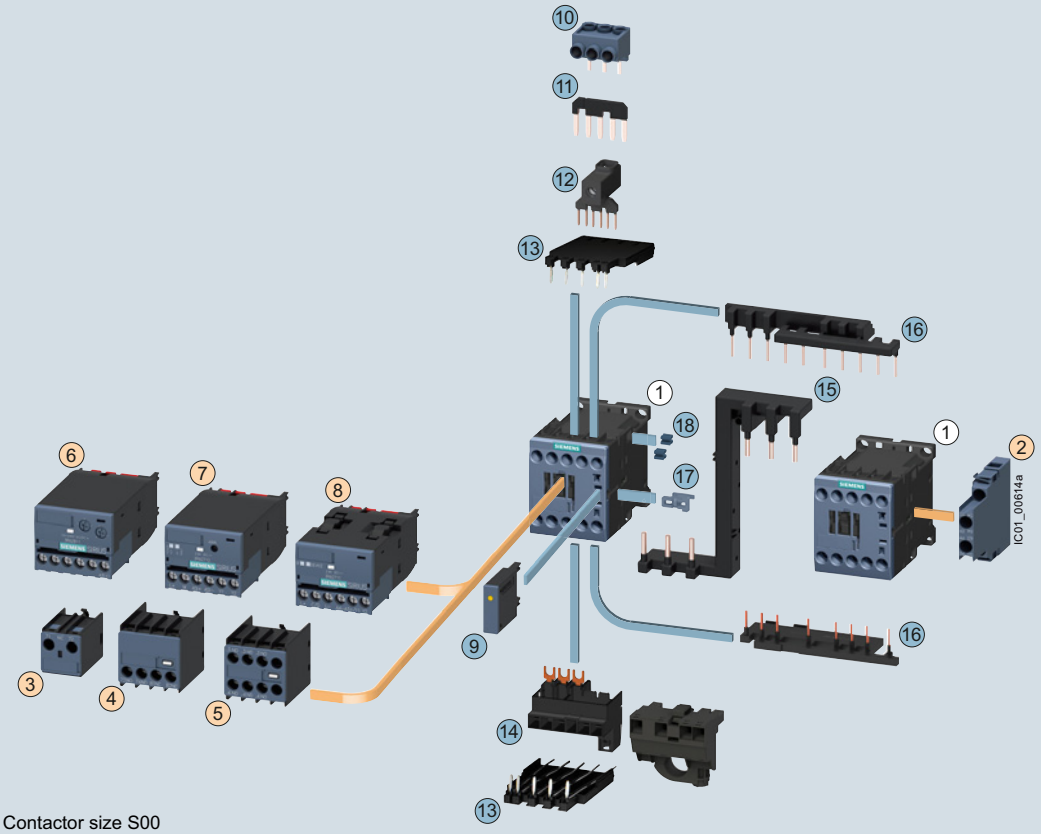
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Overview

The SIRIUS family of controls

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

3RT2 contactors
Size S00 with mountable accessories



(1) Contactor size S00

(2) 2-pole auxiliary switch block, laterally mountable
(3) 1-pole auxiliary switch block, for snapping onto the front cable entry from the top
(4) 2-pole auxiliary switch block, for snapping onto the front cable entry from the bottom
(5) 4-pole auxiliary switch block, for snapping onto the front
(6) 3RA28 function module
(7) 3RA27 function module for AS-Interface, direct-on-line starting
(8) 3RA27 function module for IO-Link, direct-on-line starting
(9) Surge suppressor with/without LED
(10) Three-phase feeder terminal

(11) Star jumper, 3-pole, without connecting terminal
(12) Link for paralleling, 3-pole, with connecting terminal
(13) Solder pin adapter
(14) Connection module (adapter and connector) for contactors with screw-type connection
(15) Safety main current connector for two contactors

Assembly kit 3RA2913-2AA1
comprising:

(16) Wiring modules on the top and bottom for connecting the main, auxiliary and control current paths, electrical interlock [1] included, can be broken off (NC contact interlock)
(17) Mechanical interlocks [2]
(18) Two connecting clips for two contactors [2]

For contactors
For contactors and coupling contactors

[1] 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

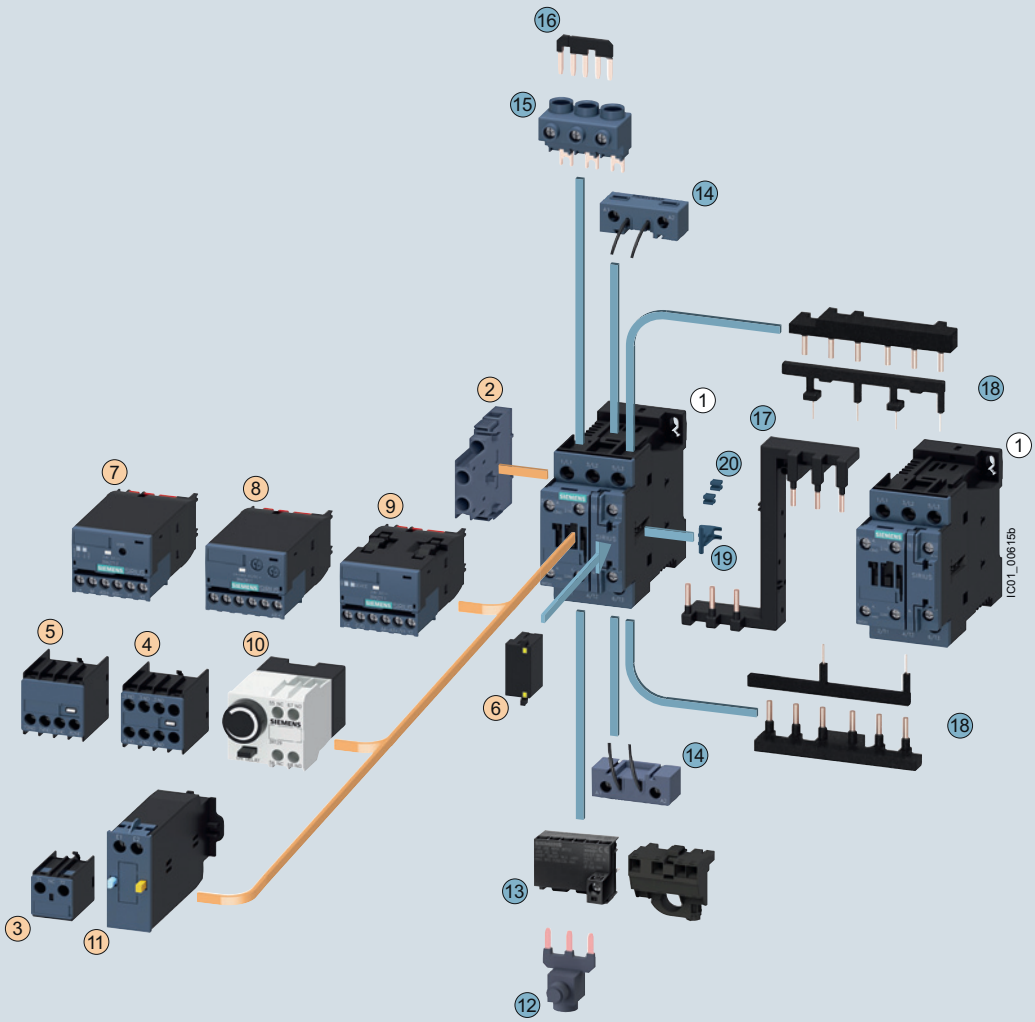
[2] The parts (17) and (18) can only be ordered together as 3RA2912-2H mechanical connectors.

For accessories and spare parts, see pages 3/71 to 3/119.

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General data

3RT2 contactors
Size S0 with mountable accessories



(1) Contactor size S0

(2) 2-pole auxiliary switch block, laterally mountable
(3) 1-pole auxiliary switch block, for snapping onto the front cable entry from the top
(4) 4-pole auxiliary switch block, for snapping onto the front
(5) 2-pole auxiliary switch block, for snapping onto the front cable entry from the bottom
(6) Surge suppressor with/without LED
(7) 3RA27 function modules for AS-Interface, direct-on-line starting
(8) 3RA28 function modules
(9) 3RA27 function modules for IO-Link, direct-on-line starting
(10) Pneumatically delayed auxiliary switch block
(11) Mechanical latching block

(12) Link for paralleling, 3-pole, with connecting terminal
(13) Connection module (adapter and plug) for contactors with screw-type connection
(14) Coil terminal module, on the top and bottom
(15) Three-phase feeder terminal
(16) Link for paralleling (star jumper), 3-pole, without connecting terminal
(17) Safety main current connector for two contactors

Assembly kit 3RA2923-2AA1
comprising:
(18) Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included (NC contact interlock)
(19) Mechanical interlocks [1)]
(20) Two connecting clips for two contactors [1)]

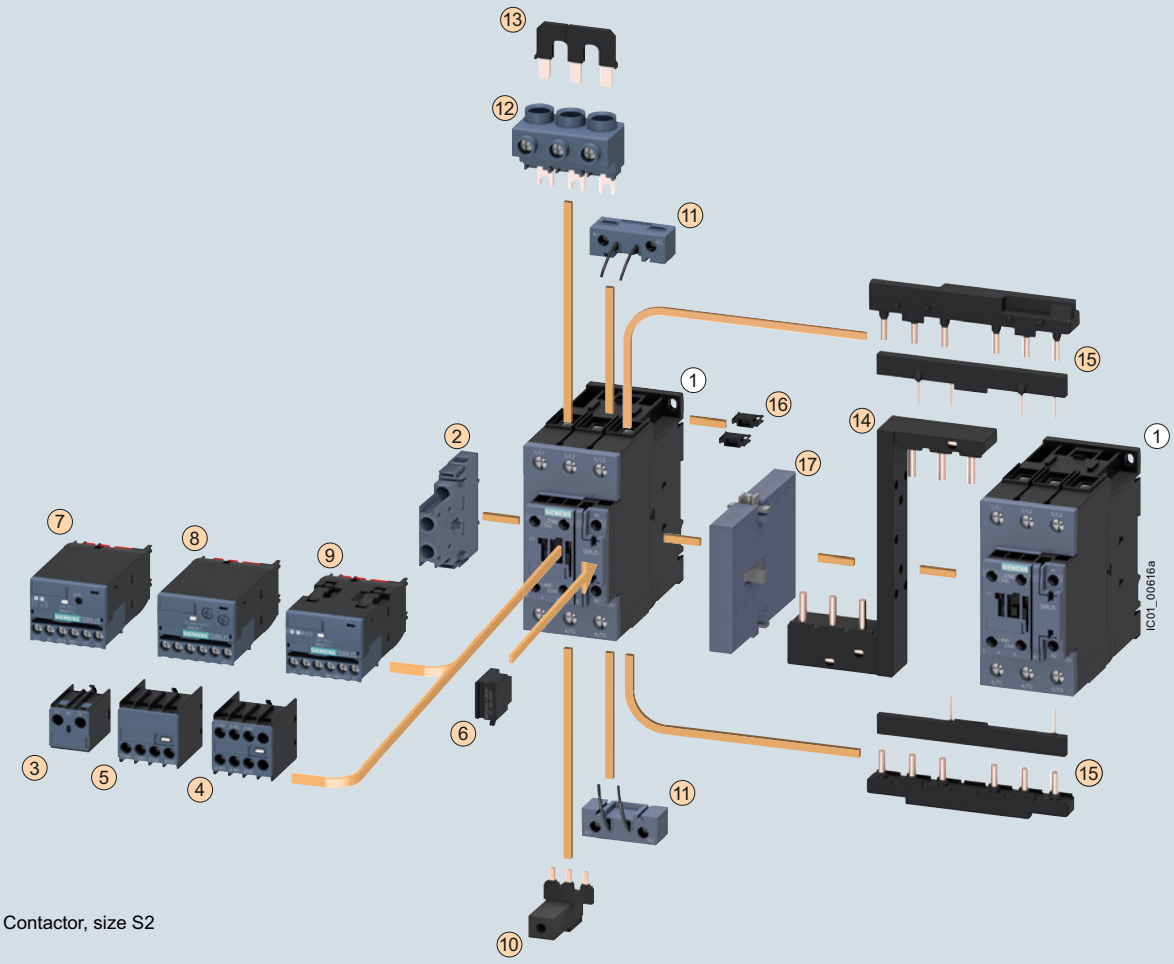
For contactors
For contactors and coupling contactors

[1)] The parts (19) and (20) can only be ordered together as 3RA2912-2H mechanical connectors.

For accessories and spare parts, see pages 3/71 to 3/119.

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3RT2 contactors
Size S2 with mountable accessories



(1) Contactor, size S2

(2) 2-pole auxiliary switch block, laterally mountable
(3) 1-pole auxiliary switch block, for snapping onto the front, cable entry from above
(4) 4-pole auxiliary switch block, for snapping onto the front
(5) 2-pole auxiliary switch block, for snapping onto the front, cable entry from below
(6) Surge suppressor with/without LED
(7) 3RA27 function modules for AS-Interface, direct-on-line starting
(8) 3RA28 function modules
(9) 3RA27 function modules for IO-Link, direct-on-line starting
(10) Link for paralleling, 3-pole, with connection terminal
(11) Coil terminal module, top and bottom
(12) Three-phase feeder terminal
(13) Link for paralleling (star jumper), 3-pole, without connection terminal
(14) Safety main current connector for two contactors

Assembly kit 3RA2933-2AA1
comprising:

(15) Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included (NC contact interlock)
(16) Two connecting clips for two contactors

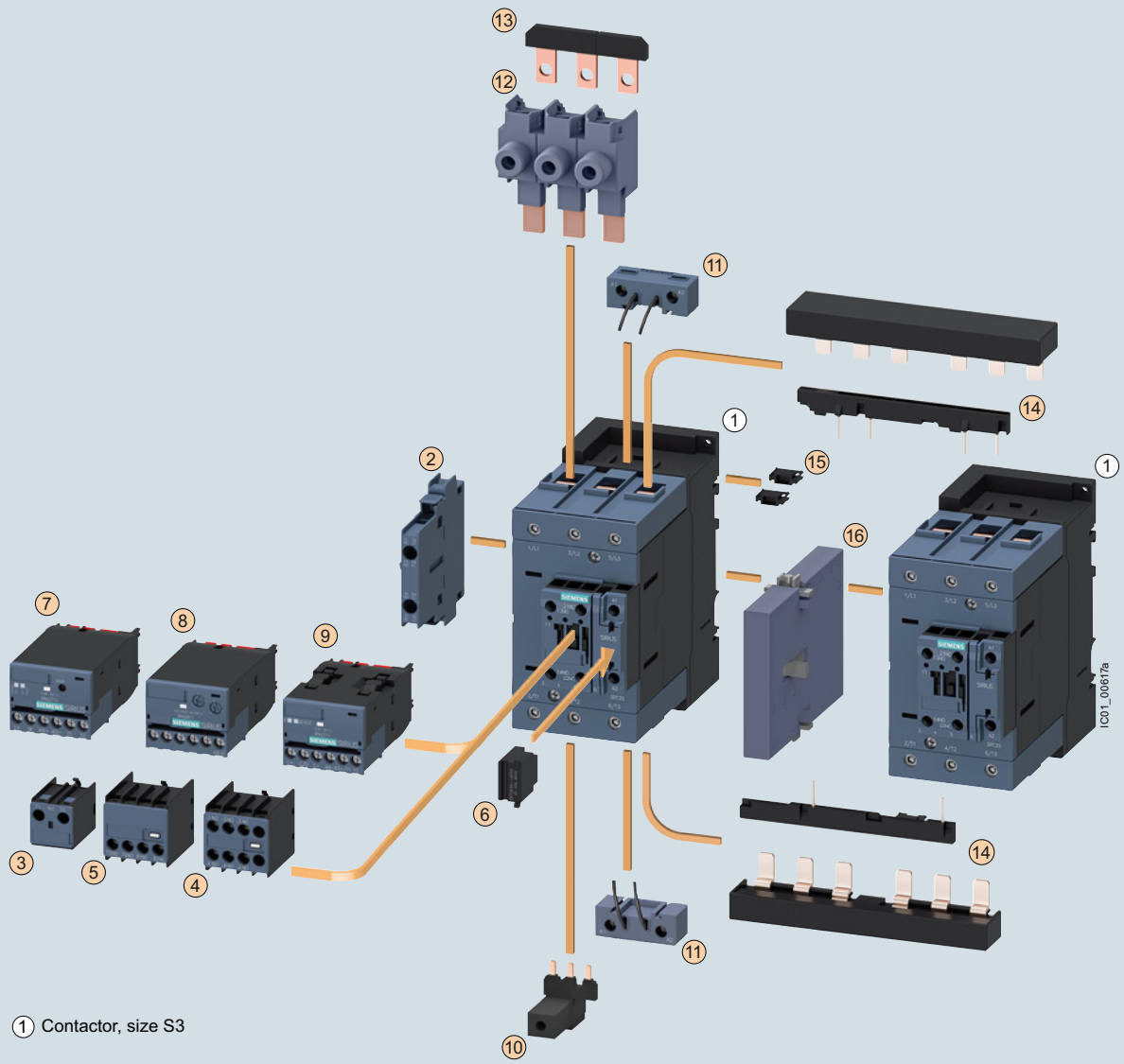
To be ordered separately:
(17) Mechanical interlocks

For accessories and spare parts, see pages 3/71 to 3/119.

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General data

3RT2 contactors
Size S3 with mountable accessories



(1) Contactor, size S3

(2) 2-pole auxiliary switch block, laterally mountable
(3) 1-pole auxiliary switch block, for snapping onto the front, cable entry from above
(4) 4-pole auxiliary switch block, for snapping onto the front
(5) 2-pole auxiliary switch block, for snapping onto the front, cable entry from below
(6) Surge suppressor with/without LED
(7) 3RA27 function modules for AS-Interface, direct-on-line starting
(8) 3RA28 function modules
(9) 3RA27 function modules for IO-Link, direct-on-line starting

(10) Links for paralleling, 3-pole, with connection terminal
(11) Coil terminal module, top and bottom
(12) Single-phase infeed terminals (3 units)
(13) Links for paralleling (star jumper), 3-pole without connecting terminal

Assembly kit 3RA2943-2AA1 comprising:

(14) Wiring modules on the top and bottom for connecting the main, auxiliary and control current paths, electrical interlock[1] included, can be broken off (NC contact interlock)
(15) Two connectors for two contactors

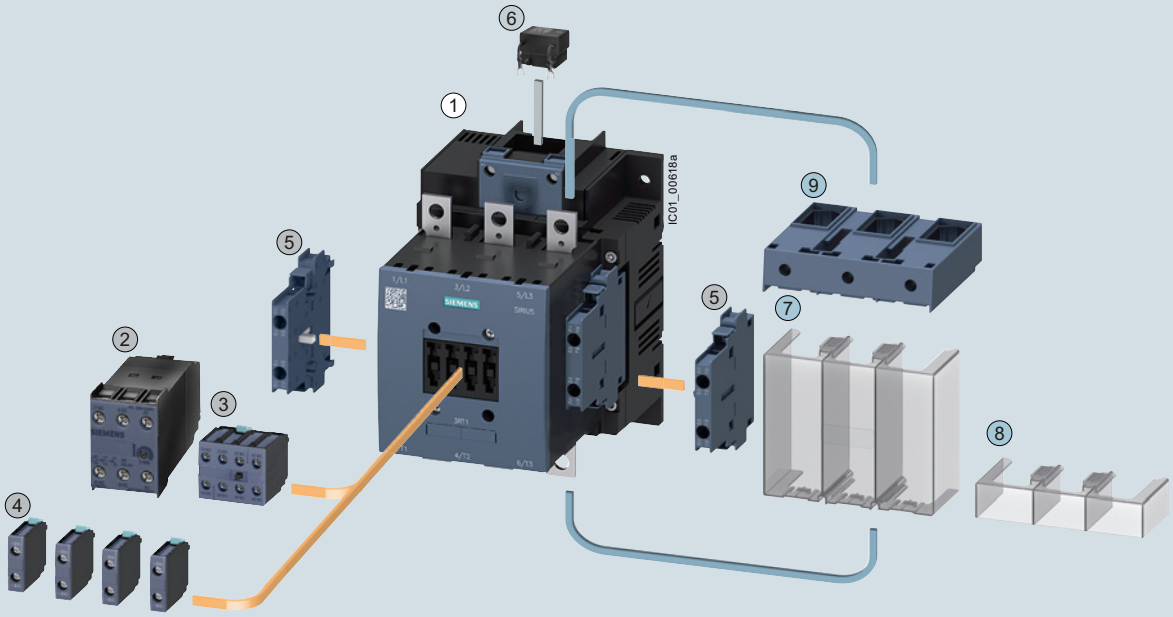
To be ordered separately:
(16) Mechanical interlock

[1] 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

For accessories and spare parts, see pages 3/71 to 3/119.

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



(1) 3RT10 and 3RT14 air-break contactor, sizes S6, S10 and S12

(2) Auxiliary switch block, solid-state time-delay (ON or OFF-delay or star-delta (wye-delta) starting)
(3) 4-pole auxiliary switch block
(4) 1-pole auxiliary switch block (up to 4 can be snapped on)
(5) 2-pole auxiliary switch block, laterally mountable left or right
(6) Surge suppressor (RC element) for plugging into top of withdrawable coil

(7) Terminal cover for cable lug and busbar connection
(8) Terminal cover for box terminal
(9) Box terminal block

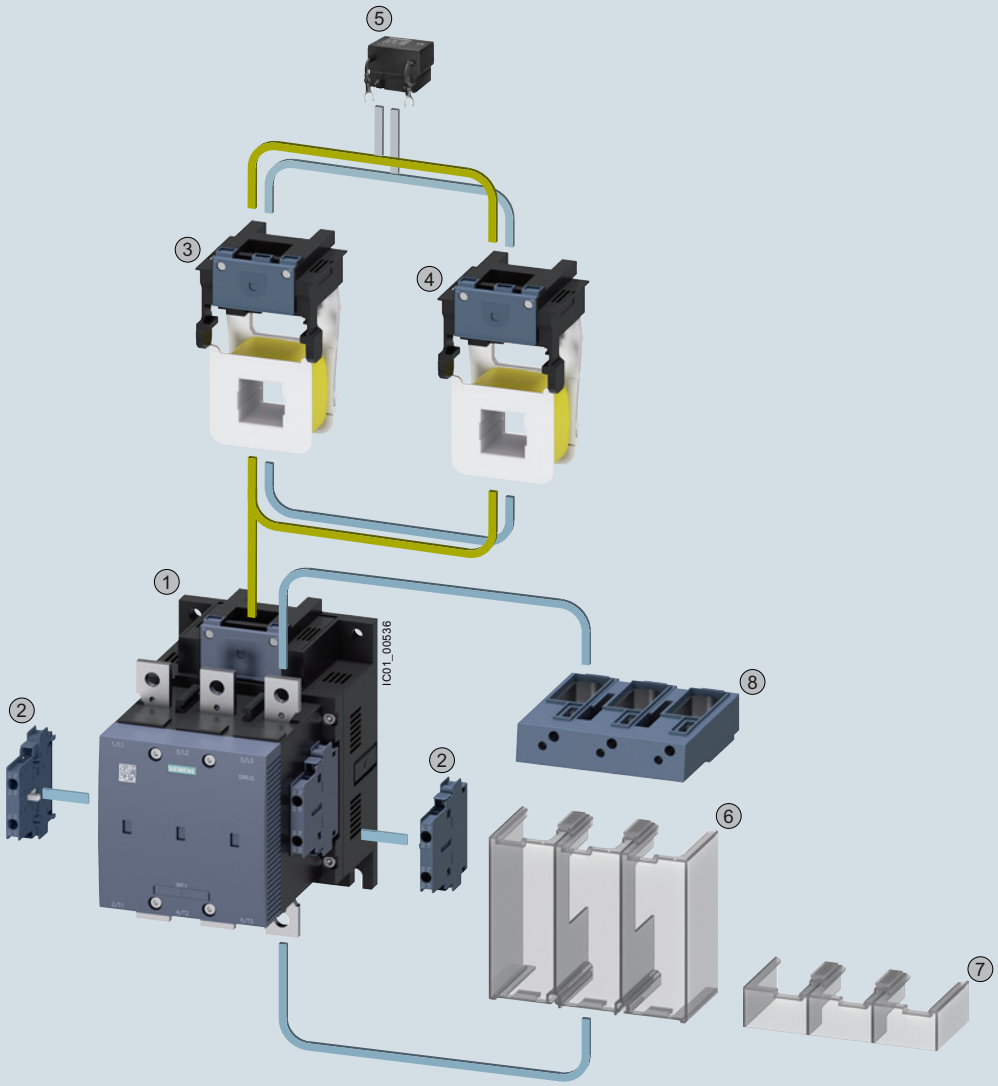
Accessories identical for sizes S6 to S12
Different accessories for sizes S6 and S10/S12

For accessories and spare parts, see pages 3/71 to 3/119.

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General data

3RT12 vacuum contactors
Sizes S10 to S12 with mountable accessories
(illustration for basic unit)



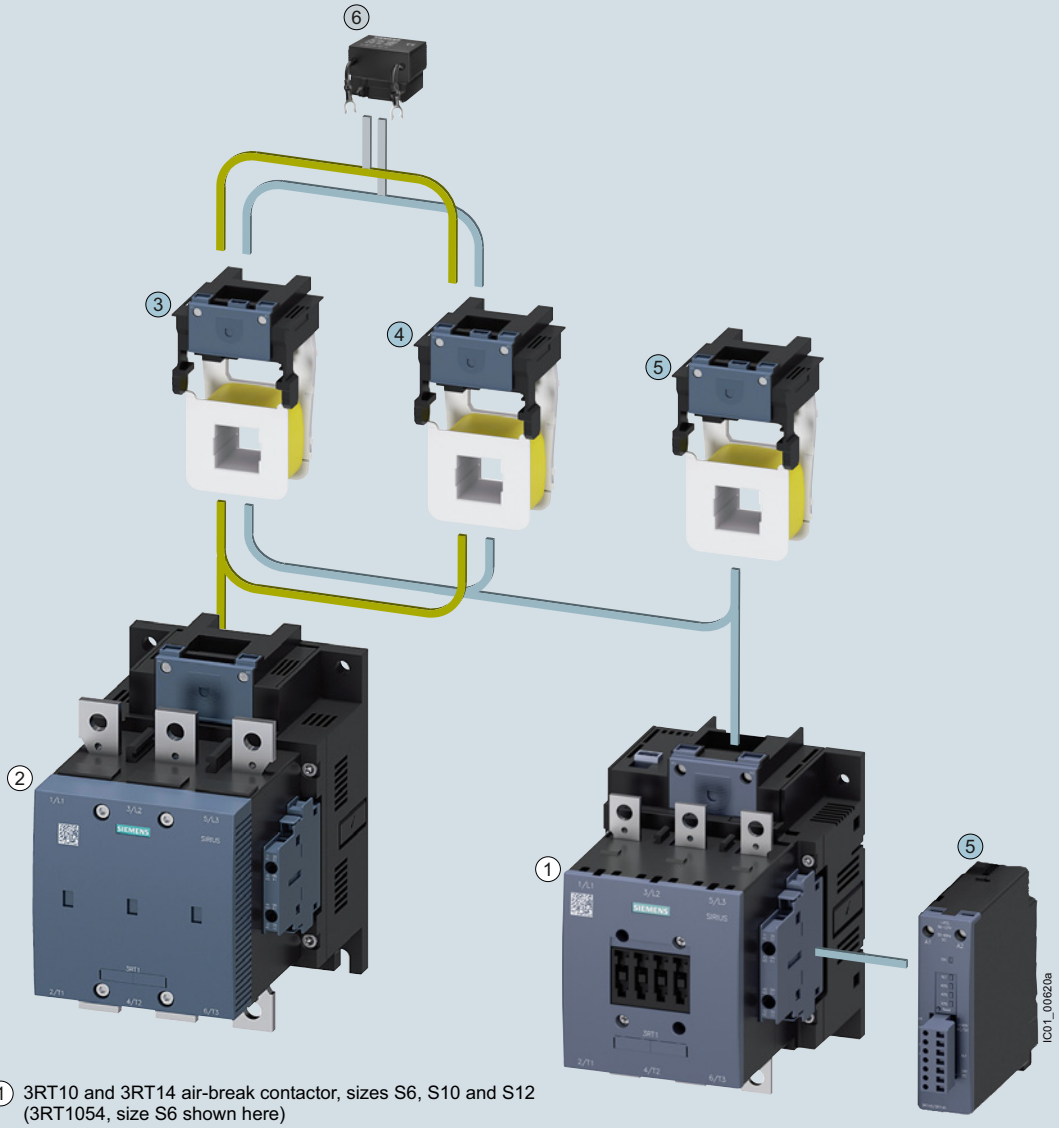
1 3RT12 vacuum contactor, sizes S10 and S12

2 2-pole auxiliary switch block, laterally mountable left or right
3 Withdrawable coils for 3RT1...-.A... contactors with conventional operating mechanism
4 Withdrawable coils for 3RT1...-.N... contactors with solid-state operating mechanism
5 Surge suppressor (RC element) for plugging into top of withdrawable coil
6 Terminal cover for cable lug and busbar connection
7 Terminal cover for box terminal
8 Box terminal block

For accessories and spare parts, see pages 3/132 to 3/135.

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3RT1 contactors
Sizes S6 to S12 with mountable accessories



(1) 3RT10 and 3RT14 air-break contactor, sizes S6, S10 and S12
(3RT1054, size S6 shown here)

(2) 3RT12 vacuum contactor, sizes S10 and S12
(3RT1266, size S10 shown here)

(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**... air-break contactors with solid-state operating mechanism and remaining lifetime indicator

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

◯ Same accessories for sizes S6 to S12
◯ Different accessories depending on size

For accessories and spare parts for
- 3RT10 and 3RT14 contactors, see pages 3/71 to 3/119
- 3RT12 vacuum contactors, see pages 3/132 to 3/135

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SIRIUS 3RT contactors, 3-pole up to 250 kW

Overview

Version	Size	Ratings of three-phase motors at 50 Hz and 400 V kW	Connection methods: Screw terminals	Connection methods: Spring-type terminals	Type	Page
Power contactors for switching motors						
AC operation						
Basic unit	S00	3 ... 7.5	✓	✓	3RT201.-.A.0.	3/50
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor)			✓	✓	3RT201.-..P04-3MA0	3/50
Basic unit	S0	4 ... 18.5	✓	✓	3RT202.-.A.00	3/51
• With removable mounted auxiliary switch block			✓	✓	3RT202.-.A.04	3/52
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor)			✓	✓	3RT202.-.CL24-3MA0	3/52
Basic unit	S2	18.5 ... 37	✓	✓	3RT203.-.A.00	3/53
• With removable mounted auxiliary switch block			✓	--	3RT203.-1A.04	3/53
• With permanently mounted auxiliary switch block			✓	✓	3RT203.-.CL24-3MA0	3/53
Basic unit	S3	37 ... 55	✓	✓	3RT204.-.A.00	3/54
• With removable mounted auxiliary switch block			✓	--	3RT204.-1A.04	3/54
• With permanently mounted auxiliary switch block			✓	--	3RT204.-1CL24-3MA0	3/54
DC operation						
Basic unit	S00	3 ... 7.5	✓	✓	3RT201.-.B.4.	3/55
• With integrated coil circuit (diode)			✓	✓	3RT201.-.FB4.	3/55
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and integrated coil circuit (diode)			✓	✓	3RT201.-..B44-3MA0	3/56
• With voltage tap-off			✓	✓	3RT201.-.BB4.-0CC0	3/56
Basic unit	S0	4 ... 18.5	✓	✓	3RT202.-.B.40	3/59
• With coil circuit plugged into front (diode assembly)			✓	✓	3RT202.-.FB40	3/59
• With removable mounted auxiliary switch block			✓	✓	3RT202.-.BB44	3/59
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor)			✓	✓	3RT202.-..B44-3MA0	3/60
• With voltage tap-off			✓	✓	3RT202.-.BB40-0CC0	3/60
DC operation for direct control from the PLC (coupling relays)						
Basic unit						
• With and without integrated coil circuit	S00	3 ... 5.5	✓	✓	3RT201.-..B4.	3/57, 3/58
• With integrated coil circuit	S0	4 ... 15	✓	✓	3RT202.-.KB40	3/61
	S2	18.5 ... 37	✓	✓	3RT203.-.KB40	3/62
	S3	37 and 45	✓	✓	3RT204.-.KB40	3/62
AC/DC operation (50/60 Hz AC or DC)						
Basic unit with integrated coil circuit	S0	5.5 ... 18.5	✓	✓	3RT202.-.N.30	3/63
Basic unit with integrated coil circuit	S2	18.5 ... 37	✓	✓	3RT203.-.N.30	3/64
• With removable mounted auxiliary switch block			✓	--	3RT203.-1N.34	3/64
• With permanently mounted auxiliary switch block			✓	✓	3RT203.-.NB34-3MA0	3/64
• With voltage tap-off			✓	✓	3RT203.-.NB30-0CC0	3/64
Basic unit with integrated coil circuit	S3	37 ... 55	✓	✓	3RT204.-.N.30	3/65
• With removable mounted auxiliary switch block			✓	--	3RT204.-1N.34	3/65
• With permanently mounted auxiliary switch block			✓	✓	3RT204.-.NB34-3MA0	3/65
• With voltage tap-off			✓	✓	3RT204.-.NB30-0CC0	3/65
Basic unit with conventional operating mechanism	S6 ... S12	55 ... 250	✓[1]	✓	3RT10..-.A.36	3/66
Basic unit with solid-state operating mechanism with the option of control via a separate 24 V DC control signal input						
• Fail-safe control signal input for safety-related applications up to SIL CL 3	S6 ... S12	55 ... 250	✓[1]	--	3RT10..-.S.36	3/67
• Standard control signal input			✓[1]	✓	3RT10..-.N.36	3/68
• Standard control signal input, with remaining lifetime indication (RLT)			✓[1]	--	3RT10..-.P.35	3/68

-- Version not possible

✓ Version possible

[1] Connection method:
- Main circuit: Busbar connection (optionally with box terminals),
- Auxiliary/control circuit: Screw terminals or spring-type terminals.

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Contactors with screw terminals: 3RT2 (sizes S00 to S3) and 3RT1 (sizes S6 to S12)

3RT contactors, sizes S00 to S12

Our power range:

- Contactors for switching motors:
  - Size S00: 3RT201 up to 7.5 kW
  - Size S0: 3RT202 up to 18.5 kW
  - Size S2: 3RT203 up to 37 kW
  - Size S3: 3RT204 up to 55 kW
  - Sizes S6 to S12: 3RT10 up to 250 kW
- For vacuum contactors for switching motors, see from page 3/120 onwards:
  - Sizes S10 and S12: 3RT12 up to 250 kW
  - Size 14: 3TF6 up to 450 kW

Standards

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

Ambient conditions

If the devices are used in ambient conditions which deviate from common industrial conditions (IEC 60721-3-3 "Stationary Use, Weather-Protected"), information must be obtained about possible restrictions with regard to the reliability and endurance of the device and possible protective measures. In this case contact our Technical Assistance,
Tel.: +49 (911) 895-5900
Email: technical-assistance@siemens.com

Auxiliary contact complement

- Size S00: an auxiliary contact is integrated in the basic device.
- Sizes S0 to S3: the basic units contain two integrated auxiliary contacts (1 NO + 1 NC).
  All basic units, with the exception of coupling relays, can be expanded using auxiliary switch blocks; see page 3/83 for the permitted selection of auxiliary switches.
- Sizes S6 to S12: These contactors are supplied with two laterally mounted auxiliary switch blocks. The fitting of auxiliary switches is possible on the front and on the side (the 3RT12 vacuum contactor is an exception: only lateral fitting of auxiliary switches is possible here).

For detailed information about fitting of auxiliary switches, see pages 3/83 to 3/88.

Contact reliability

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

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

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Connection methods

Main circuit

- Sizes S00 and S0: screw or spring-type terminals, spring-type terminals with convenient plug-in design for device connectors
- Sizes S2 and S3: screw terminals with box terminal; direct connection to the connecting bar possible with cable lugs for S3 when the box terminal is removed.
- Sizes S6 to S12: screw terminals with connecting bars that the cables can be connected to using either cable lugs or flexible or rigid busbars. Alternatively, box terminals are available as accessories.

Auxiliary/control circuit

- Sizes S00 to S12: Screw or spring-type terminals

Electromagnetic compatibility (EMC)

The 3RT contactors fulfill the requirements for environment category A.

Note:

When the contactors are used in an environment with frequency converters, the configuration notes in the Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies" must be observed, see "More information" on page 3/18.

Short-circuit protection

Short-circuit protection of contactors without overload relays, see "Technical specifications":

- For 3RT2 contactors, see pages 3/23, 3/29, 3/33 and 3/38
- For 3RT1 contactors, see page 3/43

Refer to the manuals for details of short-circuit protection of the contactors with overload relays; see "More information" on page 3/18.

For fuseless assembly of motor feeders consisting of 3RV2 motor starter protector and 3RT2 contactor, selection guides are available; see "SIRIUS 3RA2 load feeders" from page 8/4 onwards.

For the dimensioning of load feeders, see the following Configuration Manuals:

- "Load feeders – Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188
- "Configuring SIRIUS Innovations for UL – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/53433538

Motor protection

3RT2 contactors

For protection against overload, 3RU2 thermal overload relays (see page 7/88 onwards) or 3RB3 electronic overload relays (see page 7/101 onwards) can be mounted on the 3RT2 contactors.

3RT1 contactors

For protection against overload, 3RB2 electronic overload relays (see page 7/113 onwards) can be mounted on the 3RT1 contactors.

Plant and application monitoring

For monitoring and measuring in the application, 3RR2 monitoring relays can be mounted on the 3RT2 contactors (see page 10/64).

Ratings of three-phase motors

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

The power rating specifications of the contactors in kW (in accordance with IEC 60947-4-1, Table G) are guide values for 4-pole standard motors at 50 Hz AC and specified voltage (e.g. 400 V). The actual starting and rated data of the motor to be switched must be considered when selecting the units. The motor current, motor protection device and the permissible contactor current according to the utilization category must be aligned with each other.

Surge suppression

3RT contactors supplied without a coil circuit can be retrofitted with RC elements, varistors, diodes or diode assemblies (assembly of diode and Zener diode for short break times) for damping opening surges in the coil. See page 3/99.

- Size S00: the surge suppressors are plugged onto the front of the contactors here. Space is provided for them next to a snap-on auxiliary switch block.
- Sizes S0 and S3: the surge suppressors can be plugged onto the front of the devices. In the case of size S3 contactors, surge suppressors can only be used as from product version E03.
- Sizes S6 to S12: Exchangeable operating mechanisms with integrated coil circuit (varistor)

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (for details, see the relevant manual → "More information" on page 3/18).

Contactors with voltage tap-off

3RT2 contactors

The size S00 to S3 contactors with voltage tap-off are special versions for mounting the SIRIUS 3RA27 function modules for connection to the control system via IO-Link or AS-Interface (see from page 3/75 onwards).

Without a function module, these contactors can be used like the standard versions.

For more information on IO-Link and AS-Interface, see "Industrial Communication", from page 2/1 onwards.

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Operating mechanism types

3RT2 contactors

3RT2 contactors are available as versions with conventional AC or DC operating mechanisms or as versions with a wide-range solid-state operating mechanism and a universal actuating voltage (AC or DC operation possible).

DC coupling contactors with reduced power consumption are also ideally suited for connection to the controller.

With an operating range between 0.8 to 1.1 x U_S, control takes place via the control supply voltage connection A1 - A2 as is typically the case.

3RT1 contactors

The following control and/or actuator versions are available in sizes S6 to S12:

- Conventional operating mechanisms
- Solid-state operating mechanisms
  Overvoltage damping of the operating mechanism coil is already integrated in the electronics for contactors with solid-state operating mechanisms. The operating mechanisms are powered via a supply voltage with an operating range from 0.8 to 1.1 x Us, optionally also controlled depending on the chosen mode of operation. Alternatively, control is via the separate 24 V DC control signal input. Various rated voltage ranges for AC/DC control are available.

  The following versions are available:
  - With two operating modes: Direct control or via CPU input
  - As above, but additionally with remaining lifetime indication (RLT)
  - With fail-safe PLC input for simplification of safety applications (without mode of operation selection)

Solenoid coils/drive units

3RT2 contactors

Coil replacement is possible for sizes S0 to S3.

3RT1 contactors

The operating mechanisms for 3RT10..-.A/-.N/-.P contactors are removable and can be replaced simply by unlocking and pulling them out.

IMPORTANT: Removal or changing of the operating mechanism is not permitted for 3RT10..-.S contactors with fail-safe control.

Safety applications

Contactors are a significant part of safety-related applications. They are generally the actuators that perform the switching operation leading to the safe disconnection of the corresponding application or system.

In addition to the provision of safety-related device data in the technical specifications and the Safety Evaluation Tool for the easy evaluation of the overall system, as well as accessories for simple and space-saving design, 3RT1 contactors that can be controlled directly by fail-safe controllers via fail-safe modules are also available in the high power range from 55 kW upwards.

For more information on safety systems, see from page 11/1 onwards.

Contactors for special applications

- SIRIUS 3RT.4 contactors for resistive loads (AC-1), 3-pole, see from page 4/5 onwards
- SIRIUS 3RT20 and 3RT10 contactors with an extended application range, 3-pole (for rail applications), see from page 4/49 onwards

Article No. scheme

Product versions		Article number
SIRIUS power contactors		**3RT2** □□□ – □□□□□ – □□□□
Device type	e.g. 0 = 3-pole motor contactor	□
Size of the contactor	e.g. 4 = S3	□
Power dependent on size	e.g. 5 = 37 kW in the case of S3	□
Type of electrical connection	e.g. 1 = screw terminals (main and auxiliary circuits)	□
Operating range / solenoid coil circuit	e.g. A = AC standard / without coil circuit	□
Rated control supply voltage	e.g. P0 = 230 V AC, 50 Hz	□□
Auxiliary switches	e.g. 0 = in the case of S3: 1 NO + 1 NC integrated	□
Special version		□□□□
Example		**3RT2 0 4 5 – 1 A P 0 0**

Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

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Technical specifications

More information

Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16134/td

FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16134/faq

Manuals, see

- System Manual "SIRIUS Modular System – System Overview", https://support.industry.siemens.com/cs/WW/en/view/60311318
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557
- Application Manual "Controls with IE3/IE4 Motors", https://support.industry.siemens.com/cs/ww/en/view/94770820

Type			Contactors		
			3RT2		3RT1
Size			S00 to S2	S3	S6 to S12
Rated data of the auxiliary contacts					
According to IEC/EN 60947-5-1 Data applies to integrated auxiliary contacts and conventional contacts in the auxiliary switch blocks					
Rated insulation voltage U_i (pollution degree 3)		V	690	1 000 (3RT20. .-0CC0: 690)	--
• For laterally mountable auxiliary switch blocks		V	690	690	500
• For front mountable auxiliary switch blocks		V	690	690	690
Conventional thermal current I_{th} = rated operational current I_e/AC-12		A	10		
AC load					
Rated operational current I_e/AC-15/AC-14					
• For rated operational voltage U_e	Up to 230 V	A	10[1]	6	6
	400 V	A	3		3
	500 V	A	2		2
	690 V	A	1		1[2]
DC load					
Rated operational current I_e/DC-12					
• For rated operational voltage U_e	24 V	A	10		10
	60 V	A	6		6
	110 V	A	3		3
	125 V	A	2		2
	220 V	A	1		1
	440 V	A	0.3		0.3
	600 V	A	0.15		0.15[2]
Rated operational current I_e/DC-13					
• For rated operational voltage U_e	24 V	A	10[1]		10[3]
	60 V	A	2		2
	110 V	A	1		1
	125 V	A	0.9		0.9
	220 V	A	0.3		0.3
	440 V	A	0.14		0.14
	600 V	A	0.1		0.15[2]
Contact reliability at 17 V, 1 mA Acc. to IEC/EN 60947-5-4			Frequency of contact faults < 10^{-8} i.e. < 1 fault per 100 million operating cycles		

1) 3RH22, 3RH29, 3RT2…-….4, 3RT2…-….6: I_e = 6 A at AC-15/AC-14 and DC-13.

2) For laterally mountable auxiliary switch blocks, only the rated operational voltages up to 500 V apply.

3) For laterally mountable auxiliary switch blocks, DC-13/at 24 V: Max. 6 A.

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Type	3RT contactors
Size	S00 to S12

Contact endurance of the auxiliary contacts

It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The contact endurance is mainly dependent on the breaking current.

Sizes S00 to S3

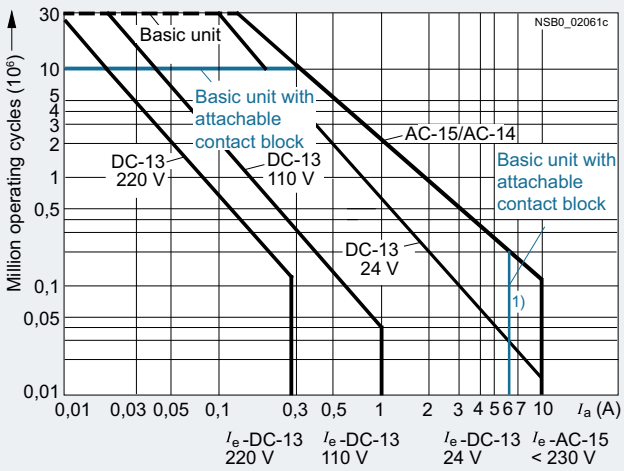


Diagram legend:
I_a = Breaking current
I_e = Rated operational current

The characteristic curves apply to:
- Integrated auxiliary contacts on 3RT2.
- 3RH2911, 3RH2921 auxiliary switch blocks[1)]

Sizes S6 to S12

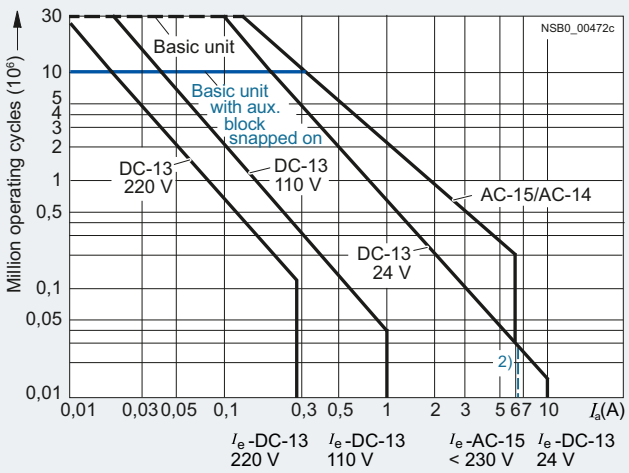


Diagram legend:
I_a = Breaking current
I_e = Rated operational current

The characteristic curves apply to:
- Integrated auxiliary contacts on 3RT10
- 3RH1911, 3RH1921 auxiliary switch blocks[3)]

1) 3RH22, 3RH29, 3RT2…-….4, 3RT2…-….6: I_e = 6 A at AC-15/AC-14 and DC-13, 3RT2.4: I_e = 6 A at AC-15/AC-14.

2) For laterally mountable auxiliary switch blocks, DC-13/at 24 V: Max. 6 A.

3) For laterally mountable auxiliary switch blocks, only the rated operational voltages up to 500 V apply.

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Type
Size

Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching resistive and inductive AC loads (AC-1/AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The rated operational current I_e complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

If a shorter contact endurance is sufficient, the rated operational current I_e/AC-4 can be increased.

If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100}\left(\frac{A}{B} - 1\right)}$$

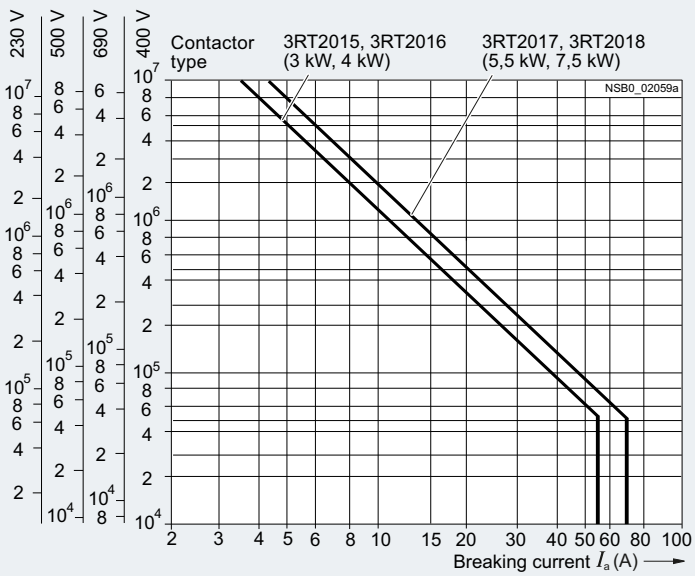
Characters in the equation:

- X Contact endurance for mixed operation in operating cycles
- A Contact endurance for normal operation ($I_a = I_e$) in operating cycles
- B Contact endurance for inching (I_a = multiple of I_e) in operating cycles
- C Inching operations as a percentage of total switching operations

3RT2 contactors
S00 and S0

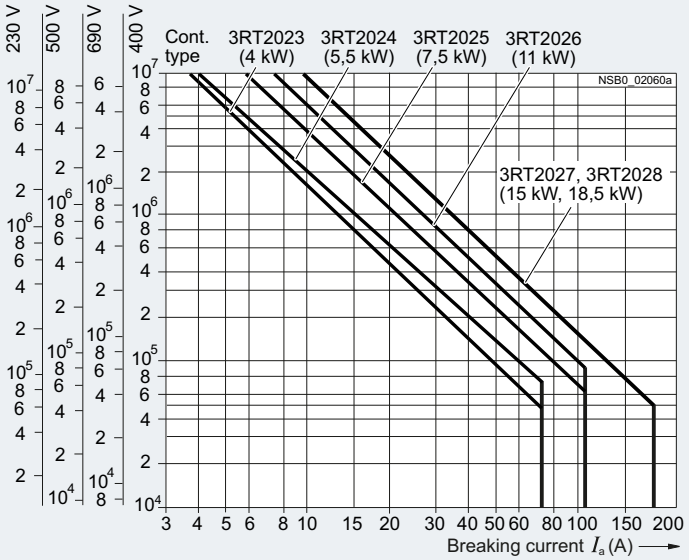
Size S00

Operating cycles at



Size S0

Operating cycles at



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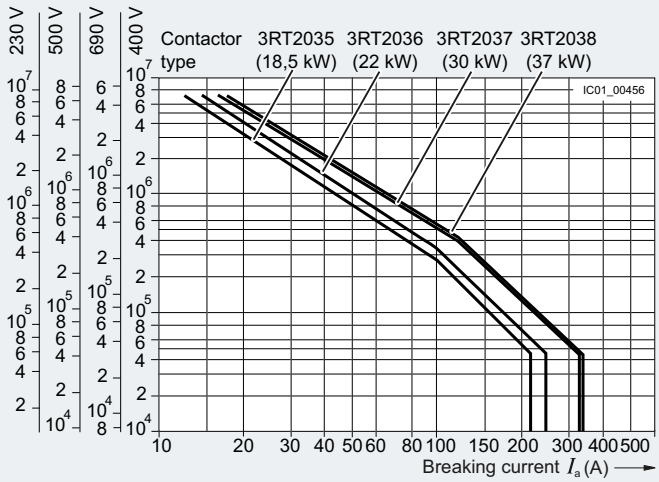
Type
Size

Contact endurance of the main contacts

3RT2 contactors
S2 to S12

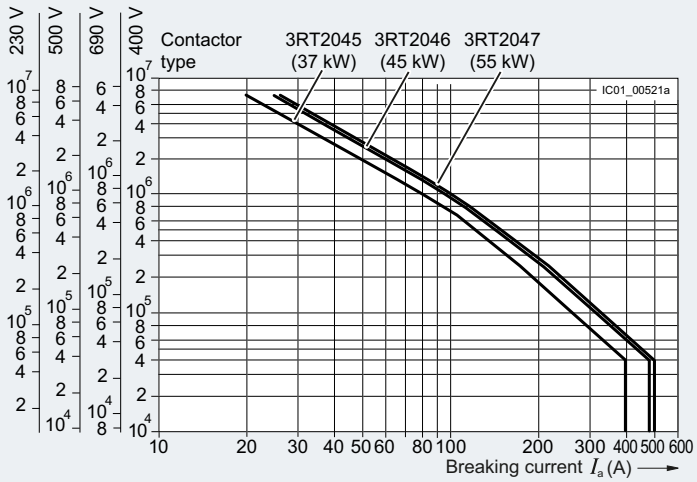
Size S2

Operating cycles at



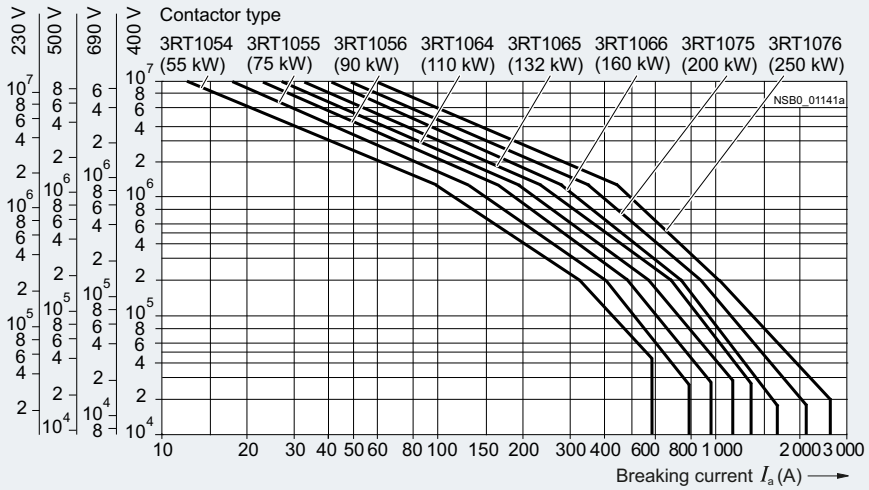
Size S3

Operating cycles at



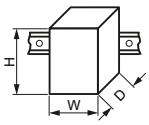
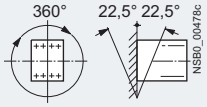
Sizes S6 to S12

Operating cycles at



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SIRIUS 3RT contactors, 3-pole up to 250 kW

			Contactors	
Type			3RT2015, 3RT2016	3RT2017, 3RT2018
Size			S00	
General data				
Dimensions (W x H x D)				
• Basic unit				
- Screw terminals		mm	45 x 58 x 73	
- Spring-type terminals		mm	45 x 70 x 73	
• Basic unit with mounted auxiliary switch block				
- Screw terminals		mm	45 x 58 x 117	
- Spring-type terminals		mm	45 x 70 x 121	
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block				
- Screw terminals		mm	45 x 58 x 147	
- Spring-type terminals		mm	45 x 70 x 147	
Permissible mounting position				
The contactors are designed for operation on a vertical mounting surface.				
Upright mounting position				
Mechanical endurance				
• Basic unit		Operating cycles	30 million	
• Basic unit with mounted auxiliary switch block		Operating cycles	10 million	
• Basic unit with solid-state compatible auxiliary switch block		Operating cycles	5 million	
Electrical endurance			For contact endurance of the main contacts, see page 3/20.	
Rated insulation voltage U_i (pollution degree 3)		V	690	
Rated impulse withstand voltage U_{imp}		kV	6	
Protective separation between the coil and the main contacts acc. to IEC 60947-1, Appendix N		V	400	
Mirror contacts				
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.				
• 3RT2.1. (removable auxiliary switch block)			Yes, this applies to both the basic unit as well as to between the basic unit and the mounted auxiliary switch block acc. to IEC 60947-4-1, Appendix F	
• 3RH2919-.NF.. solid-state compatible auxiliary switch blocks			No mirror contact for size S00	
Ambient temperature				
• During operation		°C	-25 ... +60	
• During storage		°C	-55 ... +80	
Degree of protection acc. to IEC 60529				
• On front			IP20 (screw terminals and spring-type terminals)	
• Connecting terminal			IP20 (screw terminals and spring-type terminals)	
Touch protection acc. to IEC 60529			Finger-safe (screw terminals and spring-type terminals)	
Shock resistance				
• Rectangular pulse				
- AC operation		*g*/ms	6.7/5 and 4.2/10	7.3/5 and 4.7/10
- DC operation		*g*/ms	6.7/5 and 4.2/10	7.3/5 and 4.7/10
• Sine pulse				
- AC operation		*g*/ms	10.5/5 and 6.6/10	11.4/5 and 7.3/10
- DC operation		*g*/ms	10.5/5 and 6.6/10	11.4/5 and 7.3/10

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			Contactors	
Type			3RT2015, 3RT2016	3RT2017, 3RT2018
Size			S00	
Short-circuit protection				
Main circuit				
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1				
- Type of coordination "1"		A	35	50
- Type of coordination "2"		A	20	25
- Weld-free (test conditions acc. to IEC 60947-4-1)		A	10	
• Miniature circuit breaker (up to 230 V) with C characteristic Short-circuit current 1 kA, type of coordination "1"		A	10	
Auxiliary circuit				
Short-circuit test acc. to IEC/EN 60947-5-1				
• With fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current I_k = 1 kA		A	10	
• With 230 V miniature circuit breaker, C characteristic with short-circuit current I_k = 400 A		A	6	
Short-circuit protection for contactors with overload relays			See "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188	
Short-circuit protection for fuseless load feeders			See 3RA2 load feeders on page 8/4 onwards	
Control				
Solenoid coil operating range				
• AC operation	50 Hz		0.8 ... 1.1 x U_s	
	60 Hz		0.85 ... 1.1 x U_s	
• DC operation	Up to 50 °C		0.8 ... 1.1 x U_s	
	Up to 60 °C		0.85 ... 1.1 x U_s	
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)				
• AC operation, 50/60 Hz, standard version				
- Closing		VA	27/24.3	37/33
- P.f.			0.8/0.75	
- Closed		VA	4.2/3.3	5.7/4.4
- P.f.			0.25/0.25	
• AC operation, 50 Hz, for USA/Canada				
- Closing		VA	26.4	36
- P.f. for closing			0.81	0.8
- Closed		VA	4.4	5.9
- P.f. for closed			0.24	
• AC operation, 60 Hz, for USA/Canada				
- Closing		VA	31.7	43
- P.f. for closing			0.81	0.8
- Closed		VA	4.8	6.5
- P.f. for closed			0.25	
• DC operation (closing = closed)		W	4	
Permissible residual current of the electronics (with 0 signal)				
• AC operation			< 3 mA x (230 V/U_s)[1]	< 4 mA x (230 V/U_s)[1]
• DC operation			< 10 mA x (24 V/U_s)[1]	
Operating times at 1.0 x U_s[2]				
Total break time = Opening delay + Arcing time				
• AC operation				
- Closing delay		ms	9.5 ... 24	9 ... 22
- Opening delay		ms	4 ... 14	4.5 ... 15
• DC operation				
- Closing delay		ms	35 ... 50	
- Opening delay		ms	7 ... 12	
• Arcing time		ms	10 ... 15	

[1] The 3RT2916-1GA00 additional load module is recommended for higher residual currents, see page 3/114.

[2] The OFF-delay times of the NO contacts and the ON-delay times of the NC contacts increase if the contactor coils are attenuated against voltage peaks (suppression diode 6x to 10x; diode assembly 2x to 6x; suppression diode +1 to 5 ms; varistor +2 to 5 ms).

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SIRIUS 3RT contactors, 3-pole up to 250 kW

			Coupling contactors		
Type			3RT201.-.HB4.	3RT201.-.JB4.	3RT201.-.KB4.
Size			S00		
Control					
Solenoid coil operating range			0.7 ... 1.25 x U_s		
Power consumption of the solenoid coils (for cold coil) Closing = Closed	At U_s 24 V DC	W	2.8		
Permissible residual current of the electronics (with 0 signal)			< 6 mA x (24 V/U_s)		
Upright mounting position			On request		
Overvoltage configuration of the solenoid coil			No overvoltage damping 	Built-in diode 	Built-in suppressor diode 
Operating times					
• Closing delay					
- ON-delay NO		ms	35 ... 60		
- OFF-delay NC		ms	25 ... 40		
• Opening delay					
- ON-delay NO		ms	7 ... 20	38 ... 65	7 ... 20
- OFF-delay NC		ms	20 ... 30	55 ... 75	20 ... 30

			Coupling contactors		
Type			3RT201.-1MB4.-0KT0	3RT201.-1VB4.	3RT201.-1SB4.
Size			S00		
Control					
Solenoid coil operating range			0.85 ... 1.85 x U_s		
Power consumption of the solenoid coils (for cold coil) Closing = Closed	At U_s 24 V DC	W	1.6		
Permissible residual current, upright mounting position			On request		
Overvoltage configuration of the solenoid coil			No overvoltage damping 	Built-in diode 	Built-in suppressor diode 
Operating times					
• Closing delay					
- ON-delay NO		ms	25 ... 90		
- OFF-delay NC		ms	15 ... 80		
• Opening delay					
- ON-delay NO		ms	5 ... 20	20 ... 80	5 ... 20
- OFF-delay NC		ms	10 ... 30	30 ... 90	10 ... 30

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Type				Contactors 3RT2015	3RT2016	3RT2017	3RT2018
Size				S00			
Rated data of the main contacts							
Load rating with AC							
Utilization category AC-1, switching resistive loads							
• Rated operational currents I_e	At 40 °C up to 690 V		A	18	22		
	At 60 °C up to 690 V		A	16	20		
• Rated power for AC loads[1] P.f. = 0.95 (at 60 °C)		230 V	kW	6	7.5		
		400 V	kW	10.5	13		
		690 V	kW	18	22		
• Minimum conductor cross-section for loads with I_e	At 40 °C		mm^2	2.5	4		
	At 60 °C		mm^2	2.5			
Utilization categories AC-2 and AC-3							
• Rated operational currents I_e		Up to 400 V	A	7	9	12	16
		440 V	A	7	9	11	14
		500 V	A	6	7.7	9.2	12.4
		690 V	A	4.9	6.7		8.9
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz		At 230 V	kW	1.5	2.2	3	4
		400 V	kW	3	4	5.5	7.5
		690 V	kW	4	5.5		7.5
Thermal load capacity	10 s current		A	56	72	96	128
Power loss per conducting path	At I_e/AC-3		W	0.42	0.7	1.24	2.2
Utilization category AC-4 (at $I_a = 6 \times I_e$)[2]							
• Maximum values							
- Rated operational current I_e		Up to 400 V	A	6.5	8.5		11.5
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz		Up to 400 V	kW	3	4		5.5
• The following applies to a contact endurance of about 200 000 operating cycles:							
- Rated operational currents I_e		Up to 400 V	A	2.6	4.1		5.5
		690 V	A	1.8	3.3		4.4
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz		At 230 V	kW	0.67	1.1		1.5
		400 V	kW	1.15	2		2.5
		690 V	kW	1.15	2.5		3.5

1) Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

2) The data applies to 3RT2516 and 3RT2517 contactors (2 NO + 2 NC) up to a rated operational voltage of 400 V only.

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				Contactors	
Type				3RT2015	3RT2016 to 3RT2018
Size				S00	
Rated data of the main contacts (continued)					
Load rating with DC					
Utilization category DC-1, switching resistive loads (*L/R* ≤ 1 ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A		15	20
	60 V	A		15	20
	110 V	A		1.5	2.1
	220 V	A		0.6	0.8
	440 V	A		0.42	0.6
	600 V	A		0.42	0.6
- 2 conducting paths in series	Up to 24 V	A		15	20
	60 V	A		15	20
	110 V	A		8.4	12
	220 V	A		1.2	1.6
	440 V	A		0.6	0.8
	600 V	A		0.5	0.7
- 3 conducting paths in series	Up to 24 V	A		15	20
	60 V	A		15	20
	110 V	A		15	20
	220 V	A		15	20
	440 V	A		0.9	1.3
	600 V	A		0.7	1
Utilization category DC-3/DC-5, shunt-wound and series-wound motors (*L/R* ≤ 15 ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A		15	20
	60 V	A		0.35	0.5
	110 V	A		0.1	0.15
	220 V	A		--	
	440 V	A		--	
	600 V	A		--	
- 2 conducting paths in series	Up to 24 V	A		15	20
	60 V	A		3.5	5
	110 V	A		0.25	0.35
	220 V	A		--	
	440 V	A		--	
	600 V	A		--	
- 3 conducting paths in series	Up to 24 V	A		15	20
	60 V	A		15	20
	110 V	A		15	20
	220 V	A		1.2	1.5
	440 V	A		0.14	0.2
	600 V	A		0.14	0.2
Switching frequency					
Switching frequency *z* in operating cycles/hour					
Contactors without overload relays					
• No-load switching frequency	AC/DC		h^{-1}	10 000	
• Switching frequency *z* during rated operation[1)]					
- I_e/AC-1	At 400 V		h^{-1}	1 000	
- I_e/AC-2	At 400 V		h^{-1}	750	
- I_e/AC-3	At 400 V		h^{-1}	750	
- I_e/AC-4	At 400 V		h^{-1}	250	
Contactors with overload relays					
• Mean value			h^{-1}	15	

[1)] Dependence of the switching frequency *z'* on the operational current *I'* and operational voltage *U'*: $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

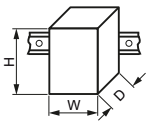
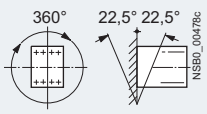
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Type		**Contactors**
		3RT2015 to 3RT2018
Size		**S00**
Conductor cross-sections		
Main conductors, auxiliary conductors and coil terminals (1 or 2 conductors can be connected)		**Screw terminals**
• Solid or stranded	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]; max. 2 x 4
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)[1]; 2 x (18 ... 14)[1]; 2 x 12
• Terminal screw		M3 (for Pozidriv size 2; ∅ 5 ... 6)
• Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)
Main conductors, auxiliary conductors and coil terminals[2] (1 or 2 conductors can be connected)		**Spring-type terminals**
• Operating devices	mm	3.0 x 0.5
• Solid or stranded	mm^2	2 x (0.5 ... 4)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 2.5)
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 12)
Auxiliary conductors for front and laterally mounted auxiliary switches[2] (1 or 2 conductors can be connected)		
• Operating devices	mm	3.0 x 0.5
• Solid or stranded	mm^2	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)

[1] If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

[2] Max. external diameter of the cable insulation: 3.6 mm. On spring-type terminals with conductor cross-sections ≤ 1 mm^2, an insulation stop must be used, see page 3/115.

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			Contactors	
Type			3RT2023 to 3RT2025	3RT2026 to 3RT2028
Size			S0	
General data				
Dimensions (W x H x D)				
AC operation				
• Basic unit				
- Screw terminals		mm	45 x 85 x 97	
- Spring-type terminals		mm	45 x 102 x 97	
• Basic unit with mounted auxiliary switch block				
- Screw terminals		mm	45 x 85 x 141	
- Spring-type terminals		mm	45 x 102 x 145	
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block				
- Screw terminals		mm	45 x 85 x 171	
- Spring-type terminals		mm	45 x 102 x 171	
DC operation				
• Basic unit				
- Screw terminals		mm	45 x 85 x 107	
- Spring-type terminals		mm	45 x 102 x 107	
• Basic unit with mounted auxiliary switch block				
- Screw terminals		mm	45 x 85 x 151	
- Spring-type terminals		mm	45 x 102 x 155	
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block				
- Screw terminals		mm	45 x 85 x 181	
- Spring-type terminals		mm	45 x 102 x 181	
Permissible mounting position				
The contactors are designed for operation on a vertical mounting surface.				
Upright mounting position			Special version required, also applies to 3RT202.-.K.40 coupling contactors	
Mechanical endurance				
• Basic unit and basic unit with mounted auxiliary switch block		Operating cycles	10 million	
• Basic unit with solid-state compatible auxiliary switch block		Operating cycles	5 million	
Electrical endurance			For contact endurance of the main contacts, see page 3/20.	
Rated insulation voltage U_i (pollution degree 3)		V	690	
Rated impulse withstand voltage U_{imp}		kV	6	
Protective separation between the coil and the main contacts (acc. to IEC 60947-1, Appendix N)		V	400	
Mirror contacts A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.				
• Integrated auxiliary switches			Yes, acc. to IEC 60947-4-1, Appendix F	
• 3RT2.2. (removable auxiliary switch block)			Yes, acc. to IEC 60947-4-1, Appendix F	
Permissible ambient temperature				
• During operation		°C	-25 ... +60	
• During storage		°C	-55 ... +80	
Degree of protection acc. to IEC 60529				
• On front			IP20 (screw terminals and spring-type terminals)	
• Connecting terminal			IP20 (screw terminals and spring-type terminals)	
Touch protection acc. to IEC 60529			Finger-safe (screw terminals and spring-type terminals)	
Shock resistance				
• Rectangular pulse				
- AC operation		*g*/ms	7.5/5 and 4.7/10	8.3/5 and 5.3/10
- DC operation		*g*/ms	10/5 and 7.5/10	
• Sine pulse				
- AC operation		*g*/ms	11.8/5 and 7.4/10	13.5/5 and 8.3/10
- DC operation		*g*/ms	15/5 and 10/10	

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		Contactors		
Type		3RT2023 to 3RT2025	3RT2026	3RT2027, 3RT2028
Size		S0		
Short-circuit protection				
Main circuit				
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1				
- Type of coordination "1"	A	63	100	125
- Type of coordination "2"	A	25	35	50
- Weld-free (test conditions according to IEC 60947-4-1)	A	10	16	
• Miniature circuit breaker with C characteristic (short-circuit current 3 kA, type of coordination "1")	A	25	32	40
Auxiliary circuit				
• Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)	A	10		
• 230 V miniature circuit breaker, C characteristic (short-circuit current $I_k < 400$ A)	A	10		
Short-circuit protection for contactors with overload relays		See "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188		
Short-circuit protection for fuseless load feeders		See 3RA2 load feeders on page 8/4 onwards		

		Contactors				
Type		3RT2023 to 3RT2025	3RT2026 to 3RT2028	3RT202.-.NB3	3RT202.-.NF3..	3RT202.-.NP3
Size		S0				
Control						
Type of operating mechanism		AC or DC		AC/DC		
Solenoid coil operating range	AC/DC	0.8 ... 1.1 x U_s [1]		0.7 ... 1.3 x U_s [2]		
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)						
• AC operation, 50 Hz, standard version						
- Closing	VA	65	77	6.6	11.9	12.7
- P.f.		0.82		0.98		
- Closed	VA	7.6	9.8	1.9	1.6	3.9
- P.f.		0.25		0.86	0.79	0.51
• AC operation, 50/60 Hz, standard version						
- Closing	VA	68/67	81/79	6.6/6.7	11.9/12.0	12.7/14.7
- P.f.		0.72/0.74		0.98/0.98		
- Closed	VA	7.9/6.5	10.5/8.5	1.9/2.0	1.6/1.8	3.9/4.3
- P.f.		0.25/0.28		0.86/0.82	0.79/0.74	0.51/0.56
• AC operation, 50 Hz, for USA/Canada						
- Closing	VA	65	77	--		
- P.f.		0.82	0.82	--		
- Closed	VA	7.6	9.8	--		
- P.f.		0.25	0.28	--		
• AC operation, 60 Hz, for USA/Canada						
- Closing	VA	73	87	--		
- P.f.		0.76		--		
- Closed	VA	7.2	9.4	--		
- P.f.		0.28		--		
• DC operation (closing = closed)	W	5.9/5.9		5.9/1.4	10.2/1.3	14.3/1.9
Permissible residual current of the electronics (with 0 signal)						
• AC operation	mA	< 6 mA x (230 V/U_s)		< 7 mA x (230 V/U_s)		
• DC operation	mA	< 16 mA x (24 V/U_s)				
Operating times at 1.0 x U_s [3]						
• AC operation						
- Closing delay	ms	10 ... 18	10 ... 17	65 ... 80	50 ... 70	60 ... 80
- Opening delay	ms	4 ... 16		30 ... 45	35 ... 45	30 ... 50
• DC operation						
- Closing delay	ms	55 ... 80		60 ... 80	56 ... 70	60 ... 80
- Opening delay	ms	16 ... 17		30 ... 45	35 ... 45	30 ... 50
• Arcing time	ms	10				

[1] Coil operating range
- At 50 Hz: 0.8 to 1.1 x U_s
- At 60 Hz: 0.85 to 1.1 x U_s.

[2] The following applies to $U_{s\,max}$ = 280 V: Upper limit = 1.1 x $U_{s\,max}$.

[3] The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 ms to 5 ms, diode assembly: 2x to 6x).

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SIRIUS 3RT contactors, 3-pole up to 250 kW

Type			**Coupling contactors 3RT202.-.KB4.**
Size			**S0**
Control			
Solenoid coil operating range			0.7 ... 1.25 x U_s
Power consumption of the solenoid coils (for cold coil) Closing = Closed	At U_s 24 V DC	W	4.5
Permissible residual current of the electronics (with 0 signal)			< 10 mA x (24 V/U_s)
Overvoltage configuration of the solenoid coil			Built-in varistor  U
Operating times			
• Closing delay			
- ON-delay NO		ms	65 ... 90
- OFF-delay NC		ms	55 ... 80
• Opening delay			
- ON-delay NO		ms	19 ... 21
- OFF-delay NC		ms	25 ... 31

Type			**Contactors 3RT2023**	**3RT2024**	**3RT2025**	**3RT2026**	**3RT2027**	**3RT2028**
Size			**S0**					
Rated data of the main contacts								
Load rating with AC								
Utilization category AC-1, switching resistive loads								
• Rated operational current I_e	At 40 °C up to 690 V	A	40				50	
	At 60 °C up to 690 V	A	35				42	
• Rated power for AC loads[1] P.f. = 0.95 (at 60 °C)	230 V	kW	13.3				15.5	
	400 V	kW	23				27.5	
	690 V	kW	40				47.5	
• Minimum conductor cross-section for loads with I_e	At 40 °C	mm^2	10					
	At 60 °C	mm^2	10					
Utilization categories AC-2 and AC-3								
• Rated operational currents I_e	Up to 400 V	A	9	12	17	25	32	38
	440 V	A	9	12	17	22	32	35
	500 V	A	9	12	17	18	32	
	690 V	A	9		13		21	
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	At 230 V	kW	2.2	3	4	5.5	7.5	11
	400 V	kW	4	5.5	7.5	11	15	18.5
	690 V	kW	7.5		11		18.5	
Thermal load capacity	10 s current	A	80	110	150	200	260	300
Power loss per conducting path	At I_e/AC-3	W	0.4	0.5	0.9	1.6	2.7	3.8
Utilization category AC-4 (for I_a = 6 x I_e)								
• Maximum values:								
- Rated operational current I_e	Up to 400 V	A	8.5	12.5	15.5		22	
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 400 V	kW	4	5.5	7.5		11	
• The following applies to a contact endurance of about 200 000 operating cycles:								
- Rated operational currents I_e	Up to 400 V	A	4.1	5.5	7.7	9	12	
	690 V	A	3.3	5.5	7.7	9	12	
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 110 V	kW	0.5	0.73	1	1.2	1.6	
	230 V	kW	1.1	1.5	2	2.5	3.4	
	400 V	kW	2	2.6	3.5	4.4	6	
	690 V	kW	2.5	4.6	6	7.7	10.3	

[1] Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

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				Contactors	
Type				3RT2023 to 3RT2025	3RT2026 to 3RT2028
Size				S0	
Rated data of the main contacts (continued)					
Load rating with DC					
Utilization category DC-1, switching resistive loads (*L/R* ≤ 1 ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A		35	
	60 V	A		20	
	110 V	A		4.5	
	220 V	A		1	
	440 V	A		0.4	
	600 V	A		0.25	
- 2 conducting paths in series	Up to 24 V	A		35	
	60 V	A		35	
	110 V	A		35	
	220 V	A		5	
	440 V	A		1	
	600 V	A		0.8	
- 3 conducting paths in series	Up to 24 V	A		35	
	60 V	A		35	
	110 V	A		35	
	220 V	A		35	
	440 V	A		2.9	
	600 V	A		1.4	
Utilization category DC-3/DC-5, shunt-wound and series-wound motors (*L/R* ≤ 15 ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A		20	
	60 V	A		5	
	110 V	A		2.5	
	220 V	A		1	
	440 V	A		0.09	
	600 V	A		0.06	
- 2 conducting paths in series	Up to 24 V	A		35	
	60 V	A		35	
	110 V	A		15	
	220 V	A		3	
	440 V	A		0.27	
	600 V	A		0.16	
- 3 conducting paths in series	Up to 24 V	A		35	
	60 V	A		35	
	110 V	A		35	
	220 V	A		10	
	440 V	A		0.6	
	600 V	A		0.6	
Switching frequency					
Switching frequency *z* in operating cycles/hour					
Contactors without overload relays					
• No-load switching frequency	AC	h^{-1}		5 000	
	DC	h^{-1}		1 500	
• Switching frequency *z* during rated operation[1)]					
- I_e/AC-1	At 400 V	h^{-1}		1 000	
- I_e/AC-2	At 400 V	h^{-1}		1 000	750
- I_e/AC-3	At 400 V	h^{-1}		1 000	750
- I_e/AC-4	At 400 V	h^{-1}		300	250
Contactors with overload relays					
• Mean value		h^{-1}		15	

1) Dependence of the switching frequency *z'* on the operational current *I'* and operational voltage *U'*: $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

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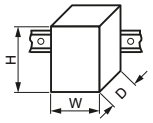
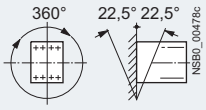
SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors
Type		3RT2023 to 3RT2028
Size		S0
Conductor cross-sections		
Main conductors (1 or 2 conductors can be connected)		**Screw terminals**
• Solid or stranded	mm^2	2 x (1 ... 2.5)[1]; 2 x (2.5 ... 10)[1]
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (1 ... 2.5)[1]; 2 x (2.5 ... 6)[1]; 1 x 10
• AWG cables, solid or stranded	AWG	2 x (16 ... 12)[1]; 2 x (14 ... 8)[1]
• Terminal screws - Tightening torque	Nm	M4 (for Pozidriv size 2; ∅ 5 ... 6) 2 ... 2.5 (18 ... 22 lb.in)
Auxiliary conductors (1 or 2 conductors can be connected)		
• Solid or stranded	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)[1]; 2 x (18 ... 14)[1]
• Terminal screws - Tightening torque	Nm	M3 (for Pozidriv size 2; ∅ 5 ... 6) 0.8 ... 1.2 (7 ... 10.3 lb.in)
Main conductors[2] (1 or 2 conductors can be connected)		**Spring-type terminals**
• Operating devices	mm	3.0 x 0.5
• Solid or stranded	mm^2	2 x (1 ... 10)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (1 ... 6)
• Finely stranded without end sleeve	mm^2	2 x (1 ... 6)
• AWG cables, solid or stranded	AWG	2 x (18 ... 8)
Auxiliary conductors[2] (1 or 2 conductors can be connected)		
• Operating devices		3.0 x 0.5
• Solid or stranded	mm^2	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)

[1] If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

[2] Max. external diameter of the cable insulation: 3.6 mm. On spring-type terminals with conductor cross-sections ≤ 1 mm^2, an insulation stop must be used, see page 3/115.

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Type			**Contactors**			
			3RT2035	**3RT2036**	**3RT2037**	**3RT2038**
Size			**S2**			
General data						
Dimensions (W x H x D)						
• Basic unit						
- Screw/spring-type terminals		mm	55 x 114 x 130			
• Basic unit with mounted auxiliary switch block						
- Screw terminals		mm	55 x 114 x 174			
- Spring-type terminals		mm	55 x 114 x 178			
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block						
- Screw/spring-type terminals		mm	55 x 114 x 204			
Permissible mounting position						
The contactors are designed for operation on a vertical mounting surface.						
Upright mounting position			Special version required			
Mechanical endurance						
• Basic units and basic units with mounted auxiliary switch block		Operating cycles	10 million			
• Basic units with solid-state compatible auxiliary switch block		Operating cycles	5 million			
Electrical endurance			For contact endurance of the main contacts, see page 3/21 onwards.			
Rated insulation voltage U_i (pollution degree 3)		V	690			
Rated impulse withstand voltage U_{imp}		kV	6			
Protective separation between the coil and the main contacts (acc. to IEC 60947-1, Appendix N)		V	400			
Mirror contacts						
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.						
• Integrated auxiliary switches			Yes, acc. to IEC 60947-4-1, Appendix F			
• 3RT2.3. (removable auxiliary switch block)			Yes, acc. to IEC 60947-4-1, Appendix F			
Permissible ambient temperature						
• During operation		°C	-25 ... +60			
• During storage		°C	-55 ... +80			
Degree of protection acc. to IEC 60529						
• On front			IP20			
• Connecting terminal			IP00 (for higher degree of protection, use additional terminal covers)			
Touch protection acc. to IEC 60529			Finger-safe for vertical touching from the front			
Shock resistance						
• Rectangular pulse						
- AC operation		*g*/ms	11.8/5 and 7.4/10			
- DC operation		*g*/ms	7.7/5 and 4.5/10			
• Sine pulse						
- AC operation		*g*/ms	18.5/5 and 11.6/10			
- DC operation		*g*/ms	12/5 and 7/10			
Short-circuit protection						
Main circuit						
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1						
- Type of coordination "1"		A	160		250	
- Type of coordination "2"		A	80		125	160
- Weld-free (test conditions acc. to IEC 60947-4-1)		A	16	25	50	
Auxiliary circuit						
• Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)		A	10			
• 230 V miniature circuit breaker, C characteristic (short-circuit current $I_k < 400$ A)		A	10			
Short-circuit protection for contactors with overload relays			See "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188			
Short-circuit protection for fuseless load feeders			See 3RA2 load feeders, from page 8/4 onwards			

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SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors		Coupling contactors
Type		3RT203.-.A...	3RT203.-.N.3.	3RT203.-.KB4.
Size		S2		
Control				
Type of operating mechanism		AC	AC/DC	DC
Solenoid coil operating range				
• AC operation[1]		0.8 ... 1.1 x U_s	--	
• AC/DC operation[1]		--	0.8 ... 1.1 x U_s	--
• DC operation		--		0.8 ... 1.2 x U_s
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)				
• AC operation, 50 Hz, standard version				
- Closing	VA	190	--	
- P.f.		0.72	--	
- Closed	VA	16	--	
- P.f.		0.37	--	
• AC operation, 50/60 Hz, standard version				
- Closing	VA	210/188	--	
- P.f.		0.69/0.65	--	
- Closed	VA	17.2/16.5	--	
- P.f.		0.36/0.39	--	
• AC operation, 60 Hz, for USA/Canada				
- Closing	VA	212	--	
- P.f.		0.67	--	
- Closed	VA	18.5	--	
- P.f.		0.37	--	
• AC/DC operation				
- Closing for AC operation	VA	--	40	--
- P.f.		--	0.95	--
- Closed for AC operation	VA	--	2	--
- P.f.		--	0.95	--
• DC operation				
- Closing for DC operation	W	--	23[2]	21.5
- Closed for DC operation	W	--	1	1
Permissible residual current of the electronics (with 0 signal)				
• AC/DC operation	mA	--	< 20	--
• DC operation	mA	--		< 20
Overvoltage configuration of the solenoid coil		--	Built-in varistor  U	Built-in varistor  U
Operating times at 0.7 ... 1.25 x U_s[3]				
Total break time = Opening delay + Arcing time				
• DC operation				
- Closing delay	ms	--		45 ... 60
- Opening delay	ms	--		35 ... 55
Operating times at 1.0 x U_s[3]				
• AC operation				
- Closing delay	ms	12 ...22	35 ... 80	--
- Opening delay	ms	10 ...18	30 ... 55	--
• DC operation				
- Closing delay	ms	--	35 ... 80	35 ... 80
- Opening delay	ms	--	30 ... 55	30 ... 55
• Arcing time	ms	10 ... 20		

1) Coil operating range
- At 50 Hz: 0.8 to 1.1 x U_s
- At 60 Hz: 0.85 to 1.1 x U_s.

2) In the case of AC/DC coils, increased starting currents (2.6 A on average) occur during the first 200 ms. For direct control from a PLC, we recommend special 3RT203.-.KB4. coupling contactors with adapted power consumption, suitable for a PLC output current of 2 A (see page 3/62).

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

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Type			Contactors 3RT2035	3RT2036	3RT2037	3RT2038
Size			S2			
Rated data of the main contacts						
Load rating with AC						
Utilization category AC-1, switching resistive loads						
• Rated operational current I_e	At 40 °C up to 690 V	A	60	70	80	90
	At 60 °C up to 690 V	A	55	60	70	80
• Rated power for AC loads[1] P.f. = 0.95 (at 60 °C)	230 V	kW	23	26	30	34
	400 V	kW	39	46	53	59
	690 V	kW	68	79	91	102
• Minimum conductor cross-section for loads with I_e	At 40 °C	mm^2	16	25		35
	At 60 °C	mm^2	16		25	
Utilization categories AC-2 and AC-3						
• Rated operational currents I_e	Up to 400 V	A	40	50	65	80
	440 V	A	40	50	65	80
	500 V	A	40	50	65	80
	690 V	A	24		47	58
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	At 230 V	kW	11	15	18.5	22
	400 V	kW	18.5	22	30	37
	690 V	kW	22		37	45
Thermal load capacity	10 s current	A	400	420	520	640
Power loss per conducting path	At I_e/AC-3	W	2.2	4	3.8	5.7
Utilization category AC-4 (for $I_a = 6 \times I_e$)						
• Maximum values						
- Rated operational current I_e	Up to 400 V	A	35	41	55	
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 400 V	kW	18.5	22	30	
• The following applies to a contact endurance of about 200 000 operating cycles:						
- Rated operational currents I_e	Up to 400 V	A	22	24	28	30
	690 V	A	18.5	20	22	24
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 110 V	kW	3.2	3.5	4.1	4.3
	230 V	kW	6.7	7.3	8.5	9.1
	400 V	kW	11.6	12.6	14.7	15.8
	690 V	kW	16.8	18.2	20	21.8

[1] Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

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Type				Contactors 3RT2035	3RT2036	3RT2037	3RT2038
Size				S2			
Rated data of the main contacts (continued)							
Load rating with DC							
Utilization category DC-1, switching resistive loads (*L/R* ≤ 1 ms)							
• Rated operational currents I_e (at 60 °C)							
- 1 conducting path	Up to 24 V	A		55			
	60 V	A		23			
	110 V	A		4.5			
	220 V	A		1			
	440 V	A		0.4			
	600 V	A		0.25			
- 2 conducting paths in series	Up to 24 V	A		55			
	60 V	A		45			
	110 V	A		45			
	220 V	A		5			
	440 V	A		1			
	600 V	A		0.8			
- 3 conducting paths in series	Up to 24 V	A		55			
	60 V	A		55			
	110 V	A		55			
	220 V	A		45			
	440 V	A		2.9			
	600 V	A		1.4			
Utilization category DC-3/DC-5, shunt-wound and series-wound motors (*L/R* ≤ 15 ms)							
• Rated operational currents I_e (at 60 °C)							
- 1 conducting path	Up to 24 V	A		35			
	60 V	A		6			
	110 V	A		2.5			
	220 V	A		1			
	440 V	A		0.1			
	600 V	A		0.06			
- 2 conducting paths in series	Up to 24 V	A		55			
	60 V	A		45			
	110 V	A		25			
	220 V	A		5			
	440 V	A		0.27			
	600 V	A		0.16			
- 3 conducting paths in series	Up to 24 V	A		55			
	60 V	A		55			
	110 V	A		55			
	220 V	A		25			
	440 V	A		0.6			
	600 V	A		0.35			
Switching frequency							
Switching frequency *z* in operating cycles/hour							
Contactors without overload relays							
• No-load switching frequency	AC	h^{-1}		5 000			
	AC/DC	h^{-1}		1 500			
• Switching frequency *z* during rated operation[1)]							
- I_e/AC-1	At 400 V	h^{-1}		1 200	1 000	800	700
- I_e/AC-2	At 400 V	h^{-1}		750	600	400	350
- I_e/AC-3	At 400 V	h^{-1}		1 000	800	700	500
- I_e/AC-4	At 400 V	h^{-1}		300	250	200	150
Contactors with overload relays							
• Mean value		h^{-1}		15			

1) Dependence of the switching frequency z' on the operational current I' and operational voltage U': $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

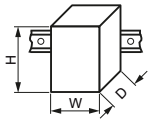
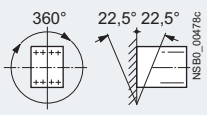
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Type		**Contactors** **3RT2035 to 3RT2038**
Size		**S2**
Conductor cross-sections		
Main conductors (1 or 2 conductors can be connected)		**Screw terminals**
• Solid or stranded	mm^2	2 x (1 ... 35)[1]; 1 x (1 ... 50)[1]
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (1 ... 25)[1]; 1 x (1 ... 35)[1]
• AWG cables, solid or stranded	AWG	2 x (18 ... 2)[1]; 1 x (18 ... 1)[1]
• Terminal screws - Tightening torque	Nm	Pozidriv size 2; ∅ 5 ... 6 3 ... 4.5 (27 ... 40 lb.in)
Auxiliary conductors and control conductors (1 or 2 conductors can be connected)		
• Solid or stranded	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)[1]; 2 x (18 ... 14)[1]
• Terminal screws - Tightening torque	Nm	M3 (for Pozidriv size 2; ∅ 5 ... 6) 0.8 ... 1.2 (7 ... 10.3 lb.in)
Auxiliary and control conductors[2] (1 or 2 conductors can be connected)		**Spring-type terminals**
• Operating devices	mm	3.0 x 0.5
• Solid or stranded	mm^2	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)

1) If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

2) Max. external diameter of the cable insulation: 3.6 mm.
On spring-type terminals with conductor cross-sections ≤ 1 mm^2, an insulation stop must be used, see page 3/115.

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		Contactors		
Type		3RT2045	3RT2046	3RT2047
Size		S3		
General data				
Dimensions (W x H x D)				
• Basic unit				
- Screw/spring-type terminals	mm	70 x 140 x 152		
• Basic unit with mounted auxiliary switch block				
- Screw terminals	mm	70 x 140 x 196		
- Spring-type terminals	mm	70 x 140 x 200		
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block				
- Screw/spring-type terminals	mm	70 x 140 x 226		
Permissible mounting position				
The contactors are designed for operation on a vertical mounting surface.				
Upright mounting position		 NSB0_00477a Special version required		
Mechanical endurance				
• Basic units and basic units with mounted auxiliary switch block	Operating cycles	10 million		
• Basic units with solid-state compatible auxiliary switch block	Operating cycles	5 million		
Electrical endurance		For contact endurance of the main contacts, see page 3/21.		
Rated insulation voltage U_i (pollution degree 3)	V	1 000 (3RT20..-.....-0CC0: 690)		
Rated impulse withstand voltage U_{imp}	kV	6		
Protective separation between the coil and the main contacts (acc. to IEC 60947-1, Appendix N)	V	690		
Mirror contacts				
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.				
• Integrated auxiliary switches		Yes, acc. to IEC 60947-4-1, Appendix F		
• 3RT2.4. (removable auxiliary switch block)		Yes, acc. to IEC 60947-4-1, Appendix F		
Permissible ambient temperature				
• During operation	°C	-25 ... +60		
• During storage	°C	-55 ... +80		
Degree of protection acc. to IEC 60529				
• On front		IP20		
• Connecting terminal		IP00 (for higher degree of protection, use additional terminal covers)		
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front		
Shock resistance				
• Rectangular pulse				
- AC operation	g/ms	10.3/5 and 6.7/10		
- DC operation	g/ms	6.7/5 and 4.0/10 (3RT204.-.KB40: 6.3/5 and 3.6/10)		
• Sine pulse				
- AC operation	g/ms	16.3/5 and 10.5/10		
- DC operation	g/ms	10.6/5 and 6.3/10 (3RT204.-.KB40: 9.8/5 and 5.6/10)		
Short-circuit protection				
Main circuit				
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1				
- Type of coordination "1"	A	250		
- Type of coordination "2"	A	160	160	200
- Weld-free (test conditions according to IEC 60947-4-1)	A	On request		
Auxiliary circuit				
• Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)	A	10		
• 230 V miniature circuit breaker, C characteristic (short-circuit current $I_k < 400$ A)	A	10		
Short-circuit protection for contactors with overload relays		See "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188		
Short-circuit protection for fuseless load feeders		See 3RA2 load feeders, from page 8/4 onwards		

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		Contactors		Coupling contactors
Type		3RT204.-.A...	3RT204.-.N.3.	3RT204.-.KB4.
Size		S3		
Control				
Type of operating mechanism		AC	AC/DC	DC
Solenoid coil operating range				
• AC operation[1]		0.8 ... 1.1 x U_s	--	
• AC/DC operation[1]		--	0.8 ... 1.1 x U_s	--
• DC operation		--		0.8 ... 1.2 x U_s
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)				
• AC operation, 50 Hz, standard version				
- Closing	VA	296	--	--
- P.f.		0.61	--	--
- Closed	VA	19	--	--
- P.f.		0.38	--	--
• AC operation, 50/60 Hz, standard version				
- Closing	VA	348/296	--	--
- P.f.		0.62/0.55	--	--
- Closed	VA	25/18	--	--
- P.f.		0.35/0.41	--	--
• AC operation, 60 Hz, for USA/Canada				
- Closing	VA	326	--	--
- P.f.		0.62	--	--
- Closed	VA	22	--	--
- P.f.		0.38	--	--
• AC/DC operation				
- Closing for AC operation	VA	--	163	--
- P.f.		--	0.95	--
- Closed for AC operation	VA	--	3.1	--
- P.f.		--	0.95	--
• DC operation				
- Closing for DC operation	W	--	76[2]	25
- Closed for DC operation	W	--	1.8	0.9
Permissible residual current of the electronics (with 0 signal)				
• AC/DC operation	mA	--	< 20	--
• DC operation	mA	--		< 20
Overvoltage configuration of the solenoid coil		--	Built-in varistor  U	Built-in varistor  U
Operating times at 0.8 ... 1.2 x U_s[3]				
Total break time = Opening delay + Arcing time				
• DC operation				
- Closing delay	ms	--		50 ... 70
- Opening delay	ms	--		38 ... 57
Operating times for 1.0 x U_s[3]				
• AC operation				
- Closing delay	ms	15 ...25	50 ... 70	--
- Opening delay	ms	11 ...20	38 ... 57	--
• DC operation				
- Closing delay	ms	--	50 ... 70	--
- Opening delay	ms	--	38 ... 57	--
• Arcing time	ms	10 ... 20		

1) Coil operating range
- At 50 Hz: 0.8 to 1.1 x U_s
- At 60 Hz: 0.85 to 1.1 x U_s.

2) In the case of AC/DC coils, increased starting currents (2.6 A on average) occur during the first 200 ms. For direct control from a PLC, we recommend special 3RT204.-.KB4. coupling contactors with adapted power consumption, suitable for a PLC output current of 2 A (see page 3/62).

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW

				Contactors		
Type				3RT2045	3RT2046	3RT2047
Size				S3		
Rated data of the main contacts						
Load rating with AC						
Utilization category AC-1, switching resistive loads						
• Rated operational current I_e	At 40 °C up to 690 V		A	125	130	
	At 60 °C up to 690 V		A	105	110	
• Rated power for AC loads[1] P.f. = 0.95 (at 60 °C)		230 V	kW	40	42	
		400 V	kW	69	72	
		690 V	kW	119	125	
• Minimum conductor cross-section for loads with I_e	At 40 °C		mm^2	50		
	At 60 °C		mm^2	35		
Utilization categories AC-2 and AC-3						
• Rated operational currents I_e		Up to 400 V	A	80	95	110
		500 V	A	80	95	110
		690 V	A	58	78	98
		1 000 V	A	30		
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz		At 230 V	kW	22	22	30
		400 V	kW	37	45	55
		690 V	kW	55	75	90
		1 000 V	kW	37		
Thermal load capacity		10 s current	A	760		880
Power loss per conducting path		At I_e/AC-3	W	5.3	6.6	7.9
Utilization category AC-4 (for $I_a = 6 \times I_e$)						
• Maximum values						
- Rated operational current I_e		Up to 400 V	A	66	80	97
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz		At 400 V	kW	37	45	55
• The following applies to a contact endurance of about 200 000 operating cycles:						
- Rated operational currents I_e		Up to 400 V	A	34	42	46
		690 V	A	24	30	36
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz		At 110 V	kW	4.9	6.1	6.7
		230 V	kW	10.4	12	14
		400 V	kW	17.9	22	24.3
		690 V	kW	21.8	27.4	32.9

[1] Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

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			Contactors		
Type			3RT2045	3RT2046	3RT2047
Size			S3		
Rated data of the main contacts (continued)					
Load rating with DC					
Utilization category DC-1, switching resistive loads (*L/R* ≤ 1 ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A	100		
	60 V	A	60		
	110 V	A	9		
	220 V	A	2		
	440 V	A	0.6		
	600 V	A	0.4		
- 2 conducting paths in series	Up to 24 V	A	100		
	60 V	A	100		
	110 V	A	100		
	220 V	A	10		
	440 V	A	1.8		
	600 V	A	1.0		
- 3 conducting paths in series	Up to 24 V	A	100		
	60 V	A	100		
	110 V	A	100		
	220 V	A	80		
	440 V	A	4.5		
	600 V	A	2.6		
Utilization category DC-3/DC-5, shunt-wound and series-wound motors (*L/R* ≤ 15 ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A	40		
	60 V	A	6		
	110 V	A	2.5		
	220 V	A	1		
	440 V	A	0.15		
	600 V	A	0.06		
- 2 conducting paths in series	Up to 24 V	A	100		
	60 V	A	100		
	110 V	A	100		
	220 V	A	7		
	440 V	A	0.42		
	600 V	A	0.16		
- 3 conducting paths in series	Up to 24 V	A	100		
	60 V	A	100		
	110 V	A	100		
	220 V	A	35		
	440 V	A	0.8		
	600 V	A	0.35		
Switching frequency					
Switching frequency *z* in operating cycles/hour					
Contactors without overload relays					
• No-load switching frequency	AC	h^{-1}	5 000		
	AC/DC	h^{-1}	1 000		
• Switching frequency *z* during rated operation[1)]					
- I_e/AC-1	At 400 V	h^{-1}	900		
- I_e/AC-2	At 400 V	h^{-1}	400	350	
- I_e/AC-3	At 400 V	h^{-1}	1 000	850	
- I_e/AC-4	At 400 V	h^{-1}	300	250	200
Contactors with overload relays					
• Mean value		h^{-1}	15		

1) Dependence of the switching frequency z' on the operational current I' and operational voltage U': $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

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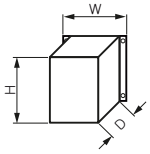
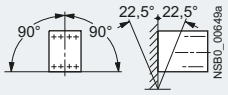
SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors
Type		3RT2045 to 3RT2047
Size		S3
Conductor cross-sections		
Main conductors (1 or 2 conductors can be connected)		**Screw terminals**
• Solid	mm^2	2 x (2.5 ... 16)[1]
• Stranded	mm^2	2 x (6 ... 16)[1]; 2 x (10 ... 50)[1]; 1 x (10 ... 70)[1]
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (2.5 ... 35)[1]; 1 x (2.5 ... 50)[1]
• AWG cables, solid or stranded	AWG	2 x (10 ... 1/0)[1]; 1 x (10 ... 2/0)[1]
• Terminal screws - Tightening torque	Nm	Hexagon socket, size 4 4.5 ... 6 (40 ... 53 lb.in)
Auxiliary conductors and control conductors (1 or 2 conductors can be connected)		
• Solid or stranded	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)[1]; 2 x (0.75 ... 2.5)[1]
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)[1]; 2 x (18 ... 14)[1]
• Terminal screws - Tightening torque	Nm	M3 (for Pozidriv size 2; ∅ 5 ... 6) 0.8 ... 1.2 (7 ... 10.3 lb.in)
Auxiliary and control conductors[2] (1 or 2 conductors can be connected)		**Spring-type terminals**
• Operating devices	mm	3.0 x 0.5
• Solid or stranded	mm^2	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm^2	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)

1) If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

2) Max. external diameter of the conductor insulation: 3.6 mm. On spring-type terminals with conductor cross-sections ≤ 1 mm^2, an insulation stop must be used, see page 3/115.

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Type			Contactors					
			3RT1054	3RT1055, 3RT1056	3RT1064 to 3RT1066		3RT1075	3RT1076
Size			S6		S10		S12	
General data								
Dimensions (W x H x D)								
• Basic unit		mm	120 x 172 x 170		145 x 210 x 202		160 x 214 x 225	
• Basic unit with mounted auxiliary switch block		mm	120 x 172 x 217		145 x 210 x 251		160 x 214 x 271	
Permissible mounting position The contactors are designed for operation on a vertical mounting surface.								
Mechanical endurance		Operating cycles	10 million					
Electrical endurance			For contact endurance of the main contacts, see page 3/21.					
Rated insulation voltage U_i (pollution degree 3)		V	1 000					
Rated impulse withstand voltage U_{imp}		kV	8					
Protective separation between the coil and the main contacts acc. to IEC 60947-1, Appendix N		V	690					
Mirror contacts A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.			Yes, acc. to IEC 60947-4-1, Appendix F					
Permissible ambient temperature								
• During operation		°C	-25 ... +60					
• During storage		°C	-55 ... +80					
Degree of protection acc. to IEC 60529								
• On front			IP00 (IP20 with box terminal/cover)					
• Connecting terminal			IP00 (for higher degree of protection, use additional terminal covers)					
Touch protection acc. to IEC 60529			Finger-safe for vertical touching from the front with cover					
Shock resistance								
• Rectangular pulse		*g*/ms	8.5/5 and 4.2/10					
• Sine pulse		*g*/ms	13.4/5 and 6.5/10					
Electromagnetic compatibility (EMC)			See page 3/16					
Short-circuit protection								
Main circuit								
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1								
• Type of coordination "1"		A	355		500		630	
• Type of coordination "2"		A	315		400		500	
• Weld-free		A	80	160	250			315
Auxiliary circuit								
Short-circuit test								
• With fuse links of operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current I_k = 1 kA acc. to IEC 60947-5-1		A	10					
• With miniature circuit breakers with C characteristic with short-circuit current I_k = 400 A		A	10					
Short-circuit protection for contactors with overload relays			See "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188					

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SIRIUS 3RT contactors, 3-pole up to 250 kW

			Contactors		
Type			3RT105.	3RT106.	3RT107.
Size			S6	S10	S12
Control					
Operating range of the solenoid operating mechanism	AC/DC		0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$		
Power consumption of the solenoid operating mechanism (with cold coil and rated range $U_{s\,min}$ ... $U_{s\,max}$)					
• Conventional operating mechanism					
- AC operation	Closing at $U_{s\,min}$	VA/p.f.	250/0.9	490/0.9	700/0.9
	Closing at $U_{s\,max}$	VA/p.f.	300/0.9	590/0.9	830/0.9
	Closed at $U_{s\,min}$	VA/p.f.	4.8/0.8	5.6/0.9	7.6/0.9
	Closed at $U_{s\,max}$	VA/p.f.	5.8/0.8	6.7/0.9	9.2/0.9
- DC operation	Closing at $U_{s\,min}$	W	300	540	770
	Closing at $U_{s\,max}$	W	360	650	920
	Closed at $U_{s\,min}$	W	4.3	6.1	8.5
	Closed at $U_{s\,max}$	W	5.2	7.4	10
• Solid-state operating mechanism					
- AC operation	Closing at $U_{s\,min}$	VA/p.f.	190/0.8	400/0.8	560/0.8
	Closing at $U_{s\,max}$	VA/p.f.	280/0.8	530/0.8	750/0.8
	Closed at $U_{s\,min}$	VA/p.f.	3.5/0.6	5.5/0.5	5.6/0.5
	Closed at $U_{s\,max}$	VA/p.f.	4.8/0.6	8.5/0.4	9/0.4
- DC operation	Closing at $U_{s\,min}$	W	250	440	600
	Closing at $U_{s\,max}$	W	320	580	800
	Closed at $U_{s\,min}$	W	2.1	2.8	3
	Closed at $U_{s\,max}$	W	2.8	3.4	3.6
PLC control input acc. to IEC 60947-1					
• Conventional operating mechanism 3RT10..-.A			Type 2		
• Solid-state operating mechanism					
- 3RT10..-.N/-.P			Type 2		
- 3RT10..-.S			Type 1		
• Rated voltage		V DC	24		
• Operating range		V DC	17 ... 30		
• Power consumption		mA	≤ 30		
• Recovery time after mains failure, typical (applicable only for fail-safe version 3RT10..-.S)		s	2		
Operating times for rated range $U_{s\,min}$ ... $U_{s\,max}$ (Total break time = Opening delay + Arcing time)					
• Conventional operating mechanism (3RT10..-.A)	Closing delay	ms	25 ... 50	35 ... 50	50 ... 70
	Opening delay	ms	40 ... 60	50 ... 80	70 ... 100
• Solid-state operating mechanism					
- Actuated via A1/A2 (3RT10..-.N/-.P)	Closing delay	ms	100 ... 120	110 ... 130	125 ... 150
	Opening delay	ms	80 ... 100		
- Actuated via PLC input (3RT10..-.N/-.P)	Closing delay	ms	40 ... 60	50 ... 65	65 ... 80
	Opening delay	ms	80 ... 100		
- Actuated via F-PLC input (3RT10..-.S)	Closing delay	ms	60 ... 75		
	Opening delay	ms	115 ... 130		
• Arcing time		ms	10 ... 15		

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		Contactors							
Type		3RT1054	3RT1055	3RT1056	3RT1064	3RT1065	3RT1066	3RT1075	3RT1076
Size		S6			S10			S12	
Rated data of the main contacts									
Load rating with AC									
Utilization category AC-1 Switching resistive loads									
• Rated operational currents I_e									
- At 40 °C up to 690 V	A	160	185	215	275	330		430	610
- At 60 °C up to 690 V	A	140	160	185	250	300		400	550
- At 60 °C up to 1 000 V	A	80	90	100		150		200	
• Rated power for AC loads[1] with p.f. = 0.95 (at 60 °C)									
- At 230 V	kW	53	60	70	94	113		151	208
- At 400 V	kW	92	105	121	164	197		263	362
- At 500 V	kW	115	131	152	205	246		329	452
- At 690 V	kW	159	181	210	283	340		454	624
- At 1 000 V	kW	131	148	165	164	246		329	
• Minimum conductor cross-section for loads with I_e									
- At 40 °C	mm^2	70	95		150	185		2 x 150	2 x 185
- At 60 °C	mm^2	50	70	95	120	185		240	2 x 185
Utilization categories AC-2 and AC-3									
• Rated operational currents I_e									
- Up to 500 V	A	115	150	185	225	265	300	400	500
- At 690 V	A	115	150	170	225	265	280	400	450
- At 1 000 V	A	53	65		68	95		180	
• Rated power for slipring or squirrel-cage motors At 50 and 60 Hz									
- At 230 V	kW	37	50	61	73	85	97	132	164
- At 400 V	kW	64	84	104	128	151	171	231	291
- At 500 V	kW	81	105	132	160	189	215	291	363
- At 690 V	kW	113	146	167	223	265	280	400	453
- At 1 000 V	kW	75	90			132		250	
Thermal load capacity, 10 s current	A	1 100	1 300	1 480	1 800	2 400		3 200	4 000
Power loss per main conducting path At I_e/AC-3/500 V	W	7	9	13	17	18	22	35	55
Utilization category AC-4 (for $I_a = 6 \times I_e$)									
Maximum values:									
• Rated operational current I_e									
- Up to 400 V	A	97	132	160	195	230	280	350	430
• Rated power for squirrel-cage motors with 50 Hz and 60 Hz									
- At 400 V	kW	55	75	90	110	132	160	200	250
The following applies to a contact endurance of about 200 000 operating cycles:									
• Rated operational currents I_e									
- Up to 500 V	A	54	68	81	96	117	125	150	175
- Up to 690 V	A	48	57	65	85	105	115	135	150
• Rated power for squirrel-cage motors with 50 Hz and 60 Hz									
- At 230 V	kW	16	20	25	30	37	40	48	56
- At 400 V	kW	29	38	45	54	66	71	85	98
- At 500 V	kW	37	47	57	67	82	87	105	123
- At 690 V	kW	48	55	65	82	102	112	133	148

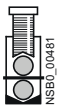
[1] Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

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			Contactors						
Type			3RT1054	3RT1055, 3RT1056	3RT1064	3RT1065	3RT1066	3RT1075	3RT1076
Size			S6		S10			S12	
Rated data of the main contacts (continued)									
Load rating with DC									
Utilization category DC-1, switching resistive loads (*L/R* ≤ 1 ms)									
• Rated operational currents I_e (at 60 °C)									
- 1 conducting path	Up to 24 V	A	160		200	300		400	
	60 V	A	160		200	300		330	
	110 V	A	18			33			
	220 V	A	3.4			3.8			
	440 V	A	0.8			0.9			
	600 V	A	0.5			0.6			
- 2 conducting paths in series	Up to 24 V	A	160		200	300		400	
	60 V	A	160		200	300		400	
	110 V	A	160		200	300		400	
	220 V	A	20			300		400	
	440 V	A	3.2			4			
	600 V	A	1.6			2			
- 3 conducting paths in series	Up to 24 V	A	160		200	300		400	
	60 V	A	160		200	300		400	
	110 V	A	160		200	300		400	
	220 V	A	160		200	300		400	
	440 V	A	11.5			11			
	600 V	A	4			5.2			
Utilization category DC-3/DC-5, shunt-wound and series-wound motors (*L/R* ≤ 15 ms)									
• Rated operational currents I_e (at 60 °C)									
- 1 conducting path	Up to 24 V	A	160		200	300		400	
	60 V	A	7.5			11			
	110 V	A	2.5			3			
	220 V	A	0.6						
	440 V	A	0.17			0.18			
	600 V	A	0.12			0.125			
- 2 conducting paths in series	Up to 24 V	A	160		200	300		400	
	60 V	A	160		200	300		400	
	110 V	A	160		200	300		400	
	220 V	A	2.5						
	440 V	A	0.65						
	600 V	A	0.37						
- 3 conducting paths in series	Up to 24 V	A	160		200	300		400	
	60 V	A	160		200	300		400	
	110 V	A	160		200	300		400	
	220 V	A	160		200	300		400	
	440 V	A	1.4						
	600 V	A	0.75						
Switching frequency									
Switching frequency *z* in operating cycles/hour									
Contactors without overload relays									
• No-load switching frequency									
- Conventional operating mechanism	3RT10..-.A	h^{-1}	2 000						
- Solid-state operating mechanism	3RT10..-.N/-.P	h^{-1}	1 000						
	3RT10..-.S	h^{-1}	1 000					500	
• Switching frequency *z* during rated operation[1]									
- Conventional operating mechanism 3RT10..-.A and solid-sate operating mechanism 3RT10..-.N/-.P	I_e/AC-1 at 400 V	h^{-1}	800		750	800	750	700	500
	I_e/AC-2 at 400 V	h^{-1}	400	300	250			200	170
	I_e/AC-3 at 400 V	h^{-1}	1 000	750	500				420
	I_e/AC-4 at 400 V	h^{-1}	130						
- Solid-state operating mechanism 3RT10..-.S	I_e/AC-1 at 400 V	h^{-1}	750		500			200	
	I_e/AC-2 at 400 V	h^{-1}	400	300	250			200	170
	I_e/AC-3 at 400 V	h^{-1}	750		500			200	
	I_e/AC-4 at 400 V	h^{-1}	130						
Contactors with mounted overload relay									
• Mean value		h^{-1}	60						

[1] Dependence of the switching frequency *z'* on the operational current *I'* and operational voltage *U'*: $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

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		Contactors			
Type		**3RT105.**		**3RT106.**	**3RT107.**
Size		**S6**		**S10**	**S12**
Conductor cross-sections					
Main conductors (1 or 2 conductors can be connected)		**Screw terminals**			
With mounted box terminals	Type	3RT1955-4G (55 kW)	3RT1956-4G	3RT1966-4G	
• Terminal screws		M10 (hexagon socket, A/F 4)		M12 (hexagon socket, A/F 5)	
- Tightening torque	Nm lb.in	10 ... 12 90 ... 110		20 ... 22 180 ... 195	
Front clamping point connected					
 NSB0_00479					
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	16 ... 70	16 ... 120	70 ... 240	
• Finely stranded without end sleeve	mm^2	16 ... 70	16 ... 120	70 ... 240	
• Stranded	mm^2	16 ... 70	16 ... 120	95 ... 300	
• AWG cables, solid or stranded	AWG	6 ... 2/0	6 ... 250 kcmil	3/0 ... 600 kcmil	
• Ribbon cable conductors (number x width x thickness)	mm	Min. 3 x 9 x 0.8, max. 6 x 15.5 x 0.8	Min. 3 x 9 x 0.8, max. 10 x 15.5 x 0.8	Min. 6 x 9 x 0.8, max. 20 x 24 x 0.5	
Rear clamping point connected					
 NSB0_00480					
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	16 ... 70	16 ... 120	120 ... 185	
• Finely stranded without end sleeve	mm^2	16 ... 70	16 ... 120	120 ... 185	
• Stranded	mm^2	16 ... 70	16 ... 120	120 ... 240	
• AWG cables, solid or stranded	AWG	6 ... 2/0	6 ... 250 kcmil	250 ... 500 kcmil	
• Ribbon cable conductors (number x width x thickness)	mm	Min. 3 x 9 x 0.8, max. 6 x 15.5 x 0.8	Min. 3 x 9 x 0.8, max. 10 x 15.5 x 0.8	Min. 6 x 9 x 0.8, max. 20 x 24 x 0.5	
Both clamping points connected (minimum cross-section 16 mm^2)					
 NSB0_00481					
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	Max. 1 x 50, 1 x 70	Max. 1 x 95, 1 x 120	Min. 2 x 50, max. 2 x 185	
• Finely stranded without end sleeve	mm^2	Max. 1 x 50, 1 x 70	Max. 1 x 95, 1 x 120	Min. 2 x 50, max. 2 x 185	
• Stranded	mm^2	Max. 1 x 50, 1 x 70	Max. 1 x 95, 1 x 120	Min. 2 x 70, max. 2 x 240	
• AWG cables, solid or stranded	AWG	Max. 2 x 1/0	Max. 2 x 3/0	Min. 2 x 2/0, max. 2 x 500 kcmil	
• Ribbon cable conductors (number x width x thickness)	mm	Max. 2 x (6 x 15.5 x 0.8)	Max. 2 x (10 x 15.5 x 0.8)	Max. 2 x (20 x 24 x 0.5)	
Busbar connections					
Connecting bar (max. width)	mm	17		25	
Cable lug connection					
• Finely stranded with cable lug[1)2)]	mm^2	16 ... 95		50 ... 240	
• Stranded with cable lug[1)2)]	mm^2	25 ... 120		70 ... 240	
• AWG cables, solid or stranded	AWG	4 ... 250 kcmil		2/0 ... 500 kcmil	
• Terminal screws		M8 x 25 (A/F 13)		M10 x 30 (A/F 17)	
- Tightening torque	Nm lb.in	10 ... 14 90 ... 124		14 ... 24 124 ... 210	
Auxiliary conductors (1 or 2 conductors can be connected)					
• Solid	mm^2	2 x (0.5 ... 1.5)[3)]; 2 x (0.75 ... 2.5)[3)]; max. 2 x (0.75 ... 4)[3)]			
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)[3)]; 2 x (0.75 ... 2.5)[3)]			
• AWG cables, solid or stranded	AWG	2 x (18 ... 14)			
• Terminal screws		M3 (Pozidriv size 2)			
- Tightening torque	Nm lb.in	0.8 ... 1.2 7 ... 10.3			
Auxiliary conductors[4)] (1 or 2 conductors can be connected)		**Spring-type terminals**			
• Operating devices		3.0 x 0.5; 3.5 x 0.5			
• Solid	mm^2	2 x (0.25 ... 2.5)			
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.25 ... 1.5)			
• Finely stranded without end sleeve	mm^2	2 x (0.25 ... 2.5)			
• AWG cables, solid or stranded	AWG	2 x (24 ... 14)			

1) 3RT105.: When using cable lugs according to EN 46235, use the 3RT1956-4EA1 terminal cover for conductor cross-sections from 95 mm^2 to keep to the phase clearance, see page 3/112.

2) 3RT106. and 3RT107.: When using cable lugs according to DIN 46234, the 3RT1966-4EA1 terminal cover must be used for conductor cross-sections of 240 mm^2 and more and when using cable lugs in accordance with DIN 46235 for conductor cross-sections of 185 mm^2 and more to keep to the phase clearance, see page 3/112.

3) If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

4) Max. external diameter of the conductor insulation: 3.6 mm. An "insulation stop" must be used for conductor cross-sections ≤ 1 mm^2; see page 3/115.

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SIRIUS 3RT contactors, 3-pole up to 250 kW

Data for North America

Type			Contactors						
			3RT2015	3RT2016	3RT2017	3RT2018			
Size			S00						
cULus rated data									
Rated operational voltage		V AC	600						
Uninterrupted current, at 40 °C, open and enclosed		A	20						
Maximum horsepower ratings (from cULus and cULus approved values)									
• Rated power for three-phase motors at 60 Hz	At 200 V	hp	1.5	2	3				
	230 V	hp	2	3		5			
	460 V	hp	3	5	7.5	10			
	575 V	hp	5	7.5	10				
Short-circuit protection (contactor)	At 600 V	kA	5						
• Class J fuse (values for RK5 fuses available on request)		A	60						
• Circuit breakers in accordance with UL 489 ("Inverse Time Breakers")		A	50						
• Combination motor controllers, type E acc. to UL 508 and UL 60947-4-1			3RV2.1 or 3RV2.2						

Type			Contactors							
			3RT2023	3RT2024	3RT2025	3RT2026	3RT2326-.....-4AA0		3RT2027	3RT2028
Size			S0							
cULus rated data										
Rated operational voltage		V AC	600							
Uninterrupted current, at 40 °C, open and enclosed		A	30						42	
Maximum horsepower ratings (from cULus and cULus approved values)										
• Rated power for three-phase motors at 60 Hz	At 200 V	hp	2	3		5	3		10	
	230 V	hp	3		5	7.5	5		10	
	460 V	hp	5	7.5	10	15	10		20	25
	575 V	hp	7.5	10	15	20	15		25	
Short-circuit protection (contactor)	At 600 V	kA	5							
• Class J fuse (values for RK5 fuses available on request)		A	125						150	
• Circuit breakers in accordance with UL 489 ("Inverse Time Breakers")		A	70						100	
• Combination motor controllers, type E acc. to UL 508 and UL 60947-4-1	At 480 V	Type	3RV202							
	At 600 V	Type	3RV202							

Type			Contactors						
			3RT2035	3RT2036, 3RT2336-.....-4AA0	3RT2037	3RT2038	3RT2045	3RT2046	3RT2047
Size			S2				S3		
cULus rated data									
Rated operational voltage		V AC	600						
Uninterrupted current, at 40 °C, open and enclosed		A	55	60	80	90	62	77	99
Maximum horsepower ratings (from cULus and cULus approved values)									
• Rated power for three-phase motors at 60 Hz	At 200/208 V	hp	10	15	20		25	30	
	230/240 V	hp	15		20	25	30		40
	460/480 V	hp	30	40	50		60	75	
	575/600 V	hp	40	50		60	60	75	100
Short-circuit protection (contactor)	At 600 V	kA	5	10			10		
• RK5 fuse		A	150	200	250		300	350	
• Combination motor controllers, type E acc. to UL 508 and UL 60947-4-1		Type	3RV203				3RV204		

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			Contactors							
Type			**3RT1054**	**3RT1055**	**3RT1056**	**3RT1064**	**3RT1065**	**3RT1066**	**3RT1075**	**3RT1076**
Size			**S6**			**S10**			**S12**	
CSA and UL rated data										
Rated operational voltage		V AC	600							
Uninterrupted current, at 40 °C, open and enclosed		A	140	195		250	330		400	540
Maximum horsepower ratings (from CSA and UL approved values)										
• Rated power for three-phase motors at 60 Hz	At 200 V	hp	40	50	60		75	100	125	150
	230 V	hp	50	60	75		100	125	150	200
	460 V	hp	100	125	150		200	250	300	400
	575 V	hp	125	150	200		250	300	400	500
Short-circuit protection			More information, see Certificate of Compliance for the individual devices, https://support.industry.siemens.com/cs/ww/en/ps/16134/cert. For the dimensioning of load feeders, see Configuration Manual "Configuring SIRIUS Innovations for UL", https://support.industry.siemens.com/cs/ww/en/view/53433538.							

		Contactors				
Type		**3RT201**	**3RT202 to 3RT204**		**3RT105 to 3RT107**	
Size		**S00**	**S0 to S3**		**S6 to S12**	
		Integrated or mountable auxiliary switch block	Integrated	Mountable auxiliary switch block	Mountable auxiliary switch block	
CSA and UL rated data of the auxiliary contacts						
Rated voltage	V AC	600				
Switching capacity		A 600, Q 600	A 600, P 600	A 600, Q 600	A 600, Q 600	
• Uninterrupted current at 240 V AC	A	10				

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Selection and ordering data

AC operation

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



3RT201..-1A...



3RT201..-2A...



3RT201..-1AP04-3MA0



3RT201..-2AP04-3MA0

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50/60 Hz	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C										
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No.	Price per PU		Article No.	Price per PU
400 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC	d			d		
For screw fixing and snap-on mounting onto TH 35 standard mounting rail												
Size S00												
7	**3**	18	**10**	1	--	24	▶	**3RT2015-1AB01**	▶		**3RT2015-2AB01**	▶
						110	▶	**3RT2015-1AF01**	▶		**3RT2015-2AF01**	▶
						230	▶	**3RT2015-1AP01**	▶		**3RT2015-2AP01**	▶
			01	--	1	24	▶	**3RT2015-1AB02**	▶		**3RT2015-2AB02**	▶
						110	▶	**3RT2015-1AF02**	▶		**3RT2015-2AF02**	▶
						230	▶	**3RT2015-1AP02**	▶		**3RT2015-2AP02**	▶
9	**4**	22	**10**	1	--	24	▶	**3RT2016-1AB01**	▶		**3RT2016-2AB01**	▶
						110	▶	**3RT2016-1AF01**	▶		**3RT2016-2AF01**	▶
						230	▶	**3RT2016-1AP01**	▶		**3RT2016-2AP01**	▶
			01	--	1	24	▶	**3RT2016-1AB02**	▶		**3RT2016-2AB02**	▶
						110	▶	**3RT2016-1AF02**	▶		**3RT2016-2AF02**	▶
						230	▶	**3RT2016-1AP02**	▶		**3RT2016-2AP02**	▶
12	**5.5**	22	**10**	1	--	24	▶	**3RT2017-1AB01**	▶		**3RT2017-2AB01**	▶
						110	▶	**3RT2017-1AF01**	▶		**3RT2017-2AF01**	▶
						230	▶	**3RT2017-1AP01**	▶		**3RT2017-2AP01**	▶
			01	--	1	24	▶	**3RT2017-1AB02**	▶		**3RT2017-2AB02**	▶
						110	▶	**3RT2017-1AF02**	▶		**3RT2017-2AF02**	▶
						230	▶	**3RT2017-1AP02**	▶		**3RT2017-2AP02**	▶
16	**7.5**	22	**10**	1	--	24	▶	**3RT2018-1AB01**	▶		**3RT2018-2AB01**	▶
						110	▶	**3RT2018-1AF01**	▶		**3RT2018-2AF01**	▶
						230	▶	**3RT2018-1AP01**	▶		**3RT2018-2AP01**	▶
			01	--	1	24	▶	**3RT2018-1AB02**	▶		**3RT2018-2AB02**	▶
						110	▶	**3RT2018-1AF02**	▶		**3RT2018-2AF02**	▶
						230	▶	**3RT2018-1AP02**	▶		**3RT2018-2AP02**	▶
With permanently mounted auxiliary switch block (SUVA-certified safety contactor)												
7	**3**	18	**22**	2	2	230	2	**3RT2015-1AP04-3MA0**		5	**3RT2015-2AP04-3MA0**	
9	**4**	22	**22**	2	2	230	2	**3RT2016-1AP04-3MA0**		5	**3RT2016-2AP04-3MA0**	
12	**5.5**	22	**22**	2	2	230	2	**3RT2017-1AP04-3MA0**		5	**3RT2017-2AP04-3MA0**	
16	**7.5**	22	**22**	2	2	230	▶	**3RT2018-1AP04-3MA0**		5	**3RT2018-2AP04-3MA0**	
With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and varistor plugged into the front												
7	**3**	18	**22**	2	2	230	5	**3RT2015-1CP04-3MA0**		5	**3RT2015-2CP04-3MA0**	
9	**4**	22	**22**	2	2	230	5	**3RT2016-1CP04-3MA0**		5	**3RT2016-2CP04-3MA0**	
12	**5.5**	22	**22**	2	2	230	5	**3RT2017-1CP04-3MA0**		5	**3RT2017-2CP04-3MA0**	
16	**7.5**	22	**22**	2	2	230	5	**3RT2018-1CP04-3MA0**		5	**3RT2018-2CP04-3MA0**	

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

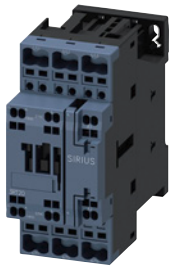
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AC operation

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



3RT202.-1A.00



3RT202.-2A.00

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V								
A	**kW**	A		NO	NC	V AC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S0										
9	**4**	40	**11**	1	1	24	▶	**3RT2023-1AB00**	2	**3RT2023-2AB00**
						110	▶	**3RT2023-1AF00**	2	**3RT2023-2AF00**
						230	▶	**3RT2023-1AP00**	▶	**3RT2023-2AP00**
12	**5.5**	40	**11**	1	1	24	▶	**3RT2024-1AB00**	2	**3RT2024-2AB00**
						110	▶	**3RT2024-1AF00**	2	**3RT2024-2AF00**
						230	▶	**3RT2024-1AP00**	▶	**3RT2024-2AP00**
17	**7.5**	40	**11**	1	1	24	▶	**3RT2025-1AB00**	2	**3RT2025-2AB00**
						110	▶	**3RT2025-1AF00**	2	**3RT2025-2AF00**
						230	▶	**3RT2025-1AP00**	▶	**3RT2025-2AP00**
25	**11**	40	**11**	1	1	24	▶	**3RT2026-1AB00**	2	**3RT2026-2AB00**
						110	▶	**3RT2026-1AF00**	2	**3RT2026-2AF00**
						230	▶	**3RT2026-1AP00**	▶	**3RT2026-2AP00**
32	**15**	50	**11**	1	1	24	▶	**3RT2027-1AB00**	2	**3RT2027-2AB00**
						110	▶	**3RT2027-1AF00**	2	**3RT2027-2AF00**
						230	▶	**3RT2027-1AP00**	▶	**3RT2027-2AP00**
38	**18.5**	50	**11**	1	1	24	▶	**3RT2028-1AB00**	2	**3RT2028-2AB00**
						110	▶	**3RT2028-1AF00**	2	**3RT2028-2AF00**
						230	▶	**3RT2028-1AP00**	2	**3RT2028-2AP00**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

AC operation

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



3RT202.-1A.04



3RT202.-2A.04



3RT202.-1CL24-3MA0



3RT202.-2CL24-3MA0

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V		NO	NC	V AC	d		d	
A	**kW**	A								
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S0										
With removable mounted auxiliary switch block										
9	**4**	40	**22**	2	2	24	5	**3RT2023-1AB04**	5	**3RT2023-2AB04**
						230	▶	**3RT2023-1AP04**	2	**3RT2023-2AP04**
12	**5.5**	40	**22**	2	2	24	5	**3RT2024-1AB04**	5	**3RT2024-2AB04**
						110	5	**3RT2024-1AF04**	5	**3RT2024-2AF04**
						230	▶	**3RT2024-1AP04**	2	**3RT2024-2AP04**
17	**7.5**	40	**22**	2	2	24	5	**3RT2025-1AB04**	5	**3RT2025-2AB04**
						110	5	**3RT2025-1AF04**	5	**3RT2025-2AF04**
						230	▶	**3RT2025-1AP04**	2	**3RT2025-2AP04**
25	**11**	40	**22**	2	2	24	5	**3RT2026-1AB04**	5	**3RT2026-2AB04**
						110	5	**3RT2026-1AF04**	5	**3RT2026-2AF04**
						230	▶	**3RT2026-1AP04**	2	**3RT2026-2AP04**
32	**15**	50	**22**	2	2	24	5	**3RT2027-1AB04**	5	**3RT2027-2AB04**
						110	5	**3RT2027-1AF04**	5	**3RT2027-2AF04**
						230	▶	**3RT2027-1AP04**	2	**3RT2027-2AP04**
38	**18.5**	50	**22**	2	2	24	5	**3RT2028-1AB04**	5	**3RT2028-2AB04**
						110	5	**3RT2028-1AF04**	5	**3RT2028-2AF04**
						230	▶	**3RT2028-1AP04**	2	**3RT2028-2AP04**
With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and varistor permanently plugged into the front										
9	**4**	40	**22**	2	2	230	5	**3RT2023-1CL24-3MA0**	5	**3RT2023-2CL24-3MA0**
12	**5.5**	40	**22**	2	2	230	2	**3RT2024-1CL24-3MA0**	5	**3RT2024-2CL24-3MA0**
17	**7.5**	40	**22**	2	2	230	5	**3RT2025-1CL24-3MA0**	5	**3RT2025-2CL24-3MA0**
25	**11**	40	**22**	2	2	230	5	**3RT2026-1CL24-3MA0**	5	**3RT2026-2CL24-3MA0**
32	**15**	50	**22**	2	2	230	5	**3RT2027-1CL24-3MA0**	5	**3RT2027-2CL24-3MA0**
38	**18.5**	50	**22**	2	2	230	5	**3RT2028-1CL24-3MA0**	5	**3RT2028-2CL24-3MA0**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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AC operation

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


3RT203.-1A.00


3RT203.-3A.00


3RT203.-1A.04


3RT203.-1CL24-3MA0


3RT203.-3CL24-3MA0

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. / Price per PU		Article No. / Price per PU
400 V	**400 V**	690 V		NO	NC	V AC	d		d	
A	**kW**	A								
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S2										
40	**18.5**	60	**11**	1	1	24	▶	**3RT2035-1AB00**	2	**3RT2035-3AB00**
						110	▶	**3RT2035-1AF00**	5	**3RT2035-3AF00**
						230	▶	**3RT2035-1AP00**	▶	**3RT2035-3AP00**
50	**22**	70	**11**	1	1	24	▶	**3RT2036-1AB00**	5	**3RT2036-3AB00**
						110	▶	**3RT2036-1AF00**	5	**3RT2036-3AF00**
						230	▶	**3RT2036-1AP00**	▶	**3RT2036-3AP00**
65	**30**	80	**11**	1	1	24	▶	**3RT2037-1AB00**	5	**3RT2037-3AB00**
						110	▶	**3RT2037-1AF00**	5	**3RT2037-3AF00**
						230	▶	**3RT2037-1AP00**	▶	**3RT2037-3AP00**
80	**37**	90	**11**	1	1	24	▶	**3RT2038-1AB00**	5	**3RT2038-3AB00**
						110	▶	**3RT2038-1AF00**	5	**3RT2038-3AF00**
						230	▶	**3RT2038-1AP00**	▶	**3RT2038-3AP00**
With removable mounted auxiliary switch block										
40	**18.5**	60	**22**	2	2	24	▶	**3RT2035-1AB04**		--
						110	▶	**3RT2035-1AF04**		--
						230	▶	**3RT2035-1AP04**		--
50	**22**	70	**22**	2	2	24	▶	**3RT2036-1AB04**		--
						110	▶	**3RT2036-1AF04**		--
						230	▶	**3RT2036-1AP04**		--
65	**30**	80	**22**	2	2	24	▶	**3RT2037-1AB04**		--
						110	▶	**3RT2037-1AF04**		--
						230	▶	**3RT2037-1AP04**		--
80	**37**	90	**22**	2	2	24	5	**3RT2038-1AB04**		--
						110	▶	**3RT2038-1AF04**		--
						230	▶	**3RT2038-1AP04**		--
With permanently mounted auxiliary switch block and varistor permanently plugged into the front										
40	**18.5**	60	**22**	2	2	230	5	**3RT2035-1CL24-3MA0**	5	**3RT2035-3CL24-3MA0**
50	**22**	70	**22**	2	2	230	5	**3RT2036-1CL24-3MA0**	5	**3RT2036-3CL24-3MA0**
65	**30**	80	**22**	2	2	230	5	**3RT2037-1CL24-3MA0**	5	**3RT2037-3CL24-3MA0**
80	**37**	90	**22**	2	2	230	5	**3RT2038-1CL24-3MA0**	5	**3RT2038-3CL24-3MA0**

Other voltages according to page 3/69 on request.
For accessories and spare parts, see pages 3/71 to 3/119.

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

AC operation

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



3RT204.-1A.00



3RT204.-1A.04



3RT204.-1CL24-3MA0



3RT204.-3A.00

Rated data			Auxiliary contacts			Rated control supply voltage U_s at 50 Hz	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V		NO	NC	V AC	d		d	
A	**kW**	A								
For screw and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails										
Size S3										
80	**37**	125	**11**	1	1	24	1	**3RT2045-1AB00**	5	**3RT2045-3AB00**
						110	1	**3RT2045-1AF00**	5	**3RT2045-3AF00**
						230	1	**3RT2045-1AP00**	1	**3RT2045-3AP00**
95	**45**	130	**11**	1	1	24	1	**3RT2046-1AB00**	5	**3RT2046-3AB00**
						110	1	**3RT2046-1AF00**	5	**3RT2046-3AF00**
						230	1	**3RT2046-1AP00**	1	**3RT2046-3AP00**
110	**55**	130	**11**	1	1	24	X	**3RT2047-1AB00**	X	**3RT2047-3AB00**
						110	X	**3RT2047-1AF00**	X	**3RT2047-3AF00**
						230	X	**3RT2047-1AP00**	X	**3RT2047-3AP00**
With removable mounted auxiliary switch block										
80	**37**	125	**22**	2	2	24	5	**3RT2045-1AB04**		**--**
						110	1	**3RT2045-1AF04**		**--**
						230	1	**3RT2045-1AP04**		**--**
95	**45**	130	**22**	2	2	24	5	**3RT2046-1AB04**		**--**
						110	1	**3RT2046-1AF04**		**--**
						230	1	**3RT2046-1AP04**		**--**
110	**55**	130	**22**	2	2	24	X	**3RT2047-1AB04**		**--**
						110	X	**3RT2047-1AF04**		**--**
						230	X	**3RT2047-1AP04**		**--**
With permanently mounted auxiliary switch block and varistor permanently plugged into the front										
80	**37**	125	**22**	2	2	230	5	**3RT2045-1CL24-3MA0**		**--**
95	**45**	130	**22**	2	2	230	5	**3RT2046-1CL24-3MA0**		**--**
110	**55**	130	**22**	2	2	230	5	**3RT2047-1CL24-3MA0**		**--**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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DC operation

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



3RT201.-1B...



3RT201.-2B...

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC			Article No. / Price per PU		Article No. / Price per PU
A	**kW**	A		NO	NC	V DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S00										
7	**3**	18	**10**	1	--	24 220	▶ 2	**3RT2015-1BB41** **3RT2015-1BM41**	▶ 5	**3RT2015-2BB41** **3RT2015-2BM41**
			01	--	1	24 220	▶ 5	**3RT2015-1BB42** **3RT2015-1BM42**	▶ 5	**3RT2015-2BB42** **3RT2015-2BM42**
9	**4**	22	**10**	1	--	24 220	▶ 5	**3RT2016-1BB41** **3RT2016-1BM41**	▶ 5	**3RT2016-2BB41** **3RT2016-2BM41**
			01	--	1	24 220	▶ 5	**3RT2016-1BB42** **3RT2016-1BM42**	▶ 5	**3RT2016-2BB42** **3RT2016-2BM42**
12	**5.5**	22	**10**	1	--	24 220	▶ 5	**3RT2017-1BB41** **3RT2017-1BM41**	▶ 5	**3RT2017-2BB41** **3RT2017-2BM41**
			01	--	1	24 220	▶ 5	**3RT2017-1BB42** **3RT2017-1BM42**	▶ 5	**3RT2017-2BB42** **3RT2017-2BM42**
16	**7.5**	22	**10**	1	--	24 220	▶ 5	**3RT2018-1BB41** **3RT2018-1BM41**	▶ 5	**3RT2018-2BB41** **3RT2018-2BM41**
			01	--	1	24 220	▶ 5	**3RT2018-1BB42** **3RT2018-1BM42**	▶ 5	**3RT2018-2BB42** **3RT2018-2BM42**
With integrated coil circuit (diode)[1)]										
7	**3**	18	**10**	1	--	24	▶	**3RT2015-1FB41**	▶	**3RT2015-2FB41**
			01	--	1	24	▶	**3RT2015-1FB42**	▶	**3RT2015-2FB42**
9	**4**	22	**10**	1	--	24	▶	**3RT2016-1FB41**	▶	**3RT2016-2FB41**
			01	--	1	24	▶	**3RT2016-1FB42**	▶	**3RT2016-2FB42**
12	**5.5**	22	**10**	1	--	24	▶	**3RT2017-1FB41**	▶	**3RT2017-2FB41**
			01	--	1	24	▶	**3RT2017-1FB42**	▶	**3RT2017-2FB42**
16	**7.5**	22	**10**	1	--	24	▶	**3RT2018-1FB41**	▶	**3RT2018-2FB41**
			01	--	1	24	▶	**3RT2018-1FB42**	▶	**3RT2018-2FB42**

1) When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes.
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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Illustrations are approximate

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

DC operation

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


3RT201.-1BB44-3MA0


3RT201.-2BB44-3MA0


3RT201.-1BB4.-0CC0


3RT201.-2BB4.-0CC0

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C										
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No.	Price per PU		Article No.	Price per PU
400 V	**400 V**	690 V		NO	NC							
A	**kW**	A				V DC	d			d		
For screw fixing and snap-on mounting onto TH 35 standard mounting rail												
Size S00												
With permanently mounted auxiliary switch block (SUVA-certified safety contactor)												
7	**3**	18	**22**	2	2	24	▶	**3RT2015-1BB44-3MA0**		2	**3RT2015-2BB44-3MA0**	
9	**4**	22	**22**	2	2	24	▶	**3RT2016-1BB44-3MA0**		2	**3RT2016-2BB44-3MA0**	
12	**5.5**	22	**22**	2	2	24	2	**3RT2017-1BB44-3MA0**		2	**3RT2017-2BB44-3MA0**	
16	**7.5**	22	**22**	2	2	24	2	**3RT2018-1BB44-3MA0**		2	**3RT2018-2BB44-3MA0**	
With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and integrated coil circuit (diode)[1)]												
7	**3**	18	**22**	2	2	24	2	**3RT2015-1FB44-3MA0**		2	**3RT2015-2FB44-3MA0**	
9	**4**	22	**22**	2	2	24	2	**3RT2016-1FB44-3MA0**		2	**3RT2016-2FB44-3MA0**	
12	**5.5**	22	**22**	2	2	24	2	**3RT2017-1FB44-3MA0**		5	**3RT2017-2FB44-3MA0**	
16	**7.5**	22	**22**	2	2	24	2	**3RT2018-1FB44-3MA0**		5	**3RT2018-2FB44-3MA0**	
With voltage tap-off (only available with 24 V DC coils)												
7	**3**	18	**10**	1	--	24	▶	**3RT2015-1BB41-0CC0**		▶	**3RT2015-2BB41-0CC0**	
			01	--	1	24	▶	**3RT2015-1BB42-0CC0**		2	**3RT2015-2BB42-0CC0**	
9	**4**	22	**10**	1	--	24	▶	**3RT2016-1BB41-0CC0**		2	**3RT2016-2BB41-0CC0**	
			01	--	1	24	2	**3RT2016-1BB42-0CC0**		2	**3RT2016-2BB42-0CC0**	
12	**5.5**	22	**10**	1	--	24	2	**3RT2017-1BB41-0CC0**		▶	**3RT2017-2BB41-0CC0**	
			01	--	1	24	5	**3RT2017-1BB42-0CC0**		▶	**3RT2017-2BB42-0CC0**	
16	**7.5**	22	**10**	1	--	24	2	**3RT2018-1BB41-0CC0**		▶	**3RT2018-2BB41-0CC0**	
			01	--	1	24	2	**3RT2018-1BB42-0CC0**		2	**3RT2018-2BB42-0CC0**	

[1)] When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes. For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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DC operation for direct control from the PLC ⎓

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC/F-PLC outputs
- Cannot be extended with auxiliary switch blocks

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



3RT201.-1.B4.



3RT201.-2.B4.

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V		NO	NC					
A	**kW**	A				V DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S00										
Diode, varistor or RC element, attachable										
(no auxiliary switch blocks can be mounted)										
Operating range **0.7 ... 1.25 x U_s**, power consumption of the solenoid coils **2.8 W** at 24 V										
7	**3**	18	**10**	1	--	24	5	**3RT2015-1HB41**	5	**3RT2015-2HB41**
			01	--	1	24	5	**3RT2015-1HB42**	5	**3RT2015-2HB42**
9	**4**	22	**10**	1	--	24	5	**3RT2016-1HB41**	5	**3RT2016-2HB41**
			01	--	1	24	2	**3RT2016-1HB42**	5	**3RT2016-2HB42**
12	**5.5**[1]	22	**10**	1	--	24	5	**3RT2017-1HB41**	5	**3RT2017-2HB41**
			01	--	1	24	▶	**3RT2017-1HB42**	5	**3RT2017-2HB42**
Operating range **0.85 ... 1.85 x U_s**, power consumption of the solenoid coils **1.6 W** at 24 V										
7	**3**	18	**10**	1	--	24	5	**3RT2015-1MB41-0KT0**	5	**3RT2015-2MB41-0KT0**
			01	--	1	24	5	**3RT2015-1MB42-0KT0**	5	**3RT2015-2MB42-0KT0**
9	**4**	22	**10**	1	--	24	5	**3RT2016-1MB41-0KT0**	5	**3RT2016-2MB41-0KT0**
			01	--	1	24	5	**3RT2016-1MB42-0KT0**	5	**3RT2016-2MB42-0KT0**
12	**5.5**[1]	22	**10**	1	--	24	5	**3RT2017-1MB41-0KT0**	5	**3RT2017-2MB41-0KT0**
			01	--	1	24	5	**3RT2017-1MB42-0KT0**	5	**3RT2017-2MB42-0KT0**
With integrated coil circuit (diode)[1]										
(no auxiliary switch blocks can be mounted)										
Operating range **0.7 ... 1.25 x U_s**, power consumption of the solenoid coils **2.8 W** at 24 V										
7	**3**	18	**10**	1	--	24	2	**3RT2015-1JB41**	2	**3RT2015-2JB41**
			01	--	1	24	2	**3RT2015-1JB42**	5	**3RT2015-2JB42**
9	**4**	22	**10**	1	--	24	▶	**3RT2016-1JB41**	5	**3RT2016-2JB41**
			01	--	1	24	2	**3RT2016-1JB42**	5	**3RT2016-2JB42**
12	**5.5**[1]	22	**10**	1	--	24	5	**3RT2017-1JB41**	5	**3RT2017-2JB41**
			01	--	1	24	5	**3RT2017-1JB42**	5	**3RT2017-2JB42**
Operating range **0.85 ... 1.85 x U_s**, power consumption of the solenoid coils **1.6 W** at 24 V										
7	**3**	18	**10**	1	--	24	5	**3RT2015-1VB41**	5	**3RT2015-2VB41**
			01	--	1	24	5	**3RT2015-1VB42**	5	**3RT2015-2VB42**
9	**4**	22	**10**	1	--	24	5	**3RT2016-1VB41**	5	**3RT2016-2VB41**
			01	--	1	24	5	**3RT2016-1VB42**	5	**3RT2016-2VB42**
12	**5.5**[1]	22	**10**	1	--	24	5	**3RT2017-1VB41**	5	**3RT2017-2VB41**
			01	--	1	24	5	**3RT2017-1VB42**	5	**3RT2017-2VB42**

[1] When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes. In the case of 5.5 kW coupling contactors of size S00, use 5.5 kW coupling contactors of size S0, see page 3/61.
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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Illustrations are approximate

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

DC operation for direct control from the PLC ⎓

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC/F-PLC outputs
- Cannot be extended with auxiliary switch blocks

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



3RT201.-1.B4.



3RT201.-2.B4.

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V		NO	NC					
A	**kW**	A				V DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S00										
With integrated coil circuit (suppressor diode)[1)]										
(no auxiliary switch blocks can be mounted)										
Operating range **0.7 ... 1.25 x U_s**, power consumption of the solenoid coils **2.8 W** at 24 V										
7	**3**	18	**10**	1	--	24	2	**3RT2015-1KB41**	2	**3RT2015-2KB41**
			01	--	1	24	2	**3RT2015-1KB42**	▶	**3RT2015-2KB42**
9	**4**	22	**10**	1	--	24	2	**3RT2016-1KB41**	2	**3RT2016-2KB41**
			01	--	1	24	2	**3RT2016-1KB42**	2	**3RT2016-2KB42**
12	**5.5[1)]**	22	**10**	1	--	24	5	**3RT2017-1KB41**	▶	**3RT2017-2KB41**
			01	--	1	24	5	**3RT2017-1KB42**	▶	**3RT2017-2KB42**
Operating range **0.85 ... 1.85 x U_s**, power consumption of the solenoid coils **1.6 W** at 24 V										
7	**3**	18	**10**	1	--	24	5	**3RT2015-1SB41**	5	**3RT2015-2SB41**
			01	--	1	24	5	**3RT2015-1SB42**	5	**3RT2015-2SB42**
9	**4**	22	**10**	1	--	24	5	**3RT2016-1SB41**	5	**3RT2016-2SB41**
			01	--	1	24	5	**3RT2016-1SB42**	5	**3RT2016-2SB42**
12	**5.5[1)]**	22	**10**	1	--	24	5	**3RT2017-1SB41**	5	**3RT2017-2SB41**
			01	--	1	24	5	**3RT2017-1SB42**	5	**3RT2017-2SB42**

1) When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes. In the case of 5.5 kW coupling contactors of size S00, use 5.5 kW coupling contactors of size S0, see page 3/61.
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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Illustrations are approximate

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DC operation

Suitable for solid-state PLC/F-PLC outputs

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



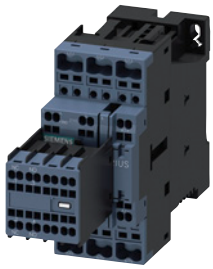
3RT202.-1B.40



3RT202.-2B.40



3RT202.-1B.44



3RT202.-2B.44

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V		NO	NC					
A	**kW**	A		NO	NC	V DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S0										
9	**4**	40	**11**	1	1	24	▶	**3RT2023-1BB40**	▶	**3RT2023-2BB40**
12	**5.5**	40	**11**	1	1	24	▶	**3RT2024-1BB40**	▶	**3RT2024-2BB40**
						220	5	**3RT2024-1BM40**	5	**3RT2024-2BM40**
17	**7.5**	40	**11**	1	1	24	▶	**3RT2025-1BB40**	▶	**3RT2025-2BB40**
						220	5	**3RT2025-1BM40**	5	**3RT2025-2BM40**
25	**11**	40	**11**	1	1	24	▶	**3RT2026-1BB40**	▶	**3RT2026-2BB40**
						220	5	**3RT2026-1BM40**	5	**3RT2026-2BM40**
32	**15**	50	**11**	1	1	24	▶	**3RT2027-1BB40**	▶	**3RT2027-2BB40**
						220	5	**3RT2027-1BM40**	5	**3RT2027-2BM40**
38	**18.5**	50	**11**	1	1	24	▶	**3RT2028-1BB40**	▶	**3RT2028-2BB40**
						220	5	**3RT2028-1BM40**	5	**3RT2028-2BM40**
With coil circuit plugged into front (diode assembly)										
9	**4**	40	**11**	1	1	24	2	**3RT2023-1FB40**	▶	**3RT2023-2FB40**
12	**5.5**	40	**11**	1	1	24	▶	**3RT2024-1FB40**	▶	**3RT2024-2FB40**
17	**7.5**	40	**11**	1	1	24	▶	**3RT2025-1FB40**	▶	**3RT2025-2FB40**
25	**11**	40	**11**	1	1	24	▶	**3RT2026-1FB40**	▶	**3RT2026-2FB40**
32	**15**	50	**11**	1	1	24	▶	**3RT2027-1FB40**	▶	**3RT2027-2FB40**
38	**18.5**	50	**11**	1	1	24	▶	**3RT2028-1FB40**	▶	**3RT2028-2FB40**
With removable mounted auxiliary switch block										
9	**4**	40	**22**	2	2	24	▶	**3RT2023-1BB44**	▶	**3RT2023-2BB44**
12	**5.5**	40	**22**	2	2	24	▶	**3RT2024-1BB44**	▶	**3RT2024-2BB44**
17	**7.5**	40	**22**	2	2	24	▶	**3RT2025-1BB44**	▶	**3RT2025-2BB44**
25	**11**	40	**22**	2	2	24	▶	**3RT2026-1BB44**	▶	**3RT2026-2BB44**
32	**15**	50	**22**	2	2	24	▶	**3RT2027-1BB44**	▶	**3RT2027-2BB44**
38	**18.5**	50	**22**	2	2	24	▶	**3RT2028-1BB44**	▶	**3RT2028-2BB44**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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Illustrations are approximate

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

DC operation

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



3RT202.-1.B44-3MA0



3RT202.-2.B44-3MA0



3RT202.-1BB40-0CC0



3RT202.-2BB40-0CC0

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No. Price per PU		Article No. Price per PU
400 V	**400 V**	690 V		NO	NC					
A	**kW**	A				V DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S0										
With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and coil circuit permanently plugged into the front (varistor)										
12	**5.5**	40	**22**	2	2	24	2	**3RT2024-1DB44-3MA0**	5	**3RT2024-2DB44-3MA0**
17	**7.5**	40	**22**	2	2	24	5	**3RT2025-1DB44-3MA0**	5	**3RT2025-2DB44-3MA0**
25	**11**	40	**22**	2	2	24	5	**3RT2026-1DB44-3MA0**	5	**3RT2026-2DB44-3MA0**
32	**15**	50	**22**	2	2	24	5	**3RT2027-1DB44-3MA0**	5	**3RT2027-2DB44-3MA0**
With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and coil circuit permanently plugged into the front (diode assembly)										
9	**4**	40	**22**	2	2	24	2	**3RT2023-1FB44-3MA0**	5	**3RT2023-2FB44-3MA0**
12	**5.5**	40	**22**	2	2	24	5	**3RT2024-1FB44-3MA0**	5	**3RT2024-2FB44-3MA0**
17	**7.5**	40	**22**	2	2	24	5	**3RT2025-1FB44-3MA0**	5	**3RT2025-2FB44-3MA0**
25	**11**	40	**22**	2	2	24	5	**3RT2026-1FB44-3MA0**	5	**3RT2026-2FB44-3MA0**
32	**15**	50	**22**	2	2	24	5	**3RT2027-1FB44-3MA0**	5	**3RT2027-2FB44-3MA0**
38	**18.5**	50	**22**	2	2	24	5	**3RT2028-1FB44-3MA0**	5	**3RT2028-2FB44-3MA0**
With voltage tap-off										
9	**4**	40	**11**	1	1	24	2	**3RT2023-1BB40-0CC0**	2	**3RT2023-2BB40-0CC0**
12	**5.5**	40	**11**	1	1	24	2	**3RT2024-1BB40-0CC0**	2	**3RT2024-2BB40-0CC0**
17	**7.5**	40	**11**	1	1	24	2	**3RT2025-1BB40-0CC0**	2	**3RT2025-2BB40-0CC0**
25	**11**	40	**11**	1	1	24	2	**3RT2026-1BB40-0CC0**	2	**3RT2026-2BB40-0CC0**
32	**15**	50	**11**	1	1	24	2	**3RT2027-1BB40-0CC0**	2	**3RT2027-2BB40-0CC0**
38	**18.5**	50	**11**	1	1	24	2	**3RT2028-1BB40-0CC0**	2	**3RT2028-2BB40-0CC0**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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DC operation for direct control from the PLC ⎓

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC/F-PLC outputs
- Cannot be extended with auxiliary switch blocks

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



3RT202.-1KB40



3RT202.-2KB40

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC			Article No. / Price per PU		Article No. / Price per PU
A	**kW**	A		NO	NC	V DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S0										
With integrated coil circuit (varistor)										
(no auxiliary switch blocks can be mounted)										
Operating range **0.7 ... 1.25 x U_s**, power consumption of the solenoid coils **4.5 W** at 24 V										
9	**4**	40	**11**	1	1	24	▶	**3RT2023-1KB40**	▶	**3RT2023-2KB40**
12	**5.5**	40	**11**	1	1	24	▶	**3RT2024-1KB40**	5	**3RT2024-2KB40**
17	**7.5**	40	**11**	1	1	24	▶	**3RT2025-1KB40**	2	**3RT2025-2KB40**
25	**11**	40	**11**	1	1	24	▶	**3RT2026-1KB40**	2	**3RT2026-2KB40**
32	**15**	50	**11**	1	1	24	▶	**3RT2027-1KB40**	5	**3RT2027-2KB40**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

DC operation for direct control from the PLC ⎓

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC/F-PLC outputs with 2 A

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



3RT203.-1KB40



3RT203.-3KB40



3RT204.-1KB40



3RT204.-3KB40

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**	
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C									
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No.	Price per PU	Article No.	Price per PU
400 V	**400 V**	690 V		NO	NC						
A	**kW**	A				V DC	d		d		
For screw fixing and snap-on mounting onto TH 35 standard mounting rail											
Size S2											
With integrated coil circuit (varistor)											
Operating range **0.8 ... 1.2 x U_s**, power consumption of the solenoid coils **23 W** at 24 V											
40	**18.5**	60	**11**	1	1	24	▶	**3RT2035-1KB40**	X	**3RT2035-3KB40**	
50	**22**	70	**11**	1	1	24	▶	**3RT2036-1KB40**	X	**3RT2036-3KB40**	
65	**30**	80	**11**	1	1	24	▶	**3RT2037-1KB40**	X	**3RT2037-3KB40**	
80	**37**	90	**11**	1	1	24	▶	**3RT2038-1KB40**	5	**3RT2038-3KB40**	
For screw and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails											
Size S3											
With integrated coil circuit (varistor)											
Operating range **0.8 ... 1.2 x U_s**, power consumption of the solenoid coils **25 W** at 24 V											
80	**37**	125	**11**	1	1	24	1	**3RT2045-1KB40**	1	**3RT2045-3KB40**	
95	**45**	130	**11**	1	1	24	1	**3RT2046-1KB40**	1	**3RT2046-3KB40**	

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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AC/DC operation (50/60 Hz AC or DC)

- Extended operating range of the solenoid coil 0.7 to 1.3 x U_s
- Reduced power consumption when closing and in the closed state

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



3RT202.-1N.30



3RT202.-2N.30

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C								
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and **400 V**	Operational current I_e up to 690 V	Ident. No.	Version NO	Version NC			Article No. / Price per PU		Article No. / Price per PU
A	**kW**	A		NO	NC	V AC/DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail										
Size S0										
With integrated coil circuit (varistor)										
12	**5.5**	40	**11**	1	1	21 ... 28	▶	**3RT2024-1NB30**	5	**3RT2024-2NB30**
						95 ... 130	▶	**3RT2024-1NF30**	5	**3RT2024-2NF30**
						200 ... 280	▶	**3RT2024-1NP30**	▶	**3RT2024-2NP30**
17	**7.5**	40	**11**	1	1	21 ... 28	▶	**3RT2025-1NB30**	5	**3RT2025-2NB30**
						95 ... 130	▶	**3RT2025-1NF30**	5	**3RT2025-2NF30**
						200 ... 280	▶	**3RT2025-1NP30**	▶	**3RT2025-2NP30**
25	**11**	40	**11**	1	1	21 ... 28	▶	**3RT2026-1NB30**	▶	**3RT2026-2NB30**
						95 ... 130	▶	**3RT2026-1NF30**	▶	**3RT2026-2NF30**
						200 ... 280	▶	**3RT2026-1NP30**	▶	**3RT2026-2NP30**
32	**15**	50	**11**	1	1	21 ... 28	▶	**3RT2027-1NB30**	▶	**3RT2027-2NB30**
						95 ... 130	▶	**3RT2027-1NF30**	5	**3RT2027-2NF30**
						200 ... 280	▶	**3RT2027-1NP30**	▶	**3RT2027-2NP30**
38	**18.5**	50	**11**	1	1	21 ... 28	5	**3RT2028-1NB30**	5	**3RT2028-2NB30**
						95 ... 130	5	**3RT2028-1NF30**	5	**3RT2028-2NF30**
						200 ... 280	▶	**3RT2028-1NP30**	▶	**3RT2028-2NP30**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

AC/DC operation (50/60 Hz AC or DC)

- Extended operating range of the solenoid coil 0.8 to 1.1 x U_s
- Reduced power consumption when closing and in the closed state

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


3RT203.-1N.30


3RT203.-3N.30


3RT203.-1N.34


3RT203.-1NB34-3MA0


3RT203. -3NB34-3MA0

Rated data			Auxiliary contacts		Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C							
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V	Ident. No.	Version			Article No. / Price per PU		Article No. / Price per PU
A	kW	A		NO NC	V AC/DC	d		d	
For screw fixing and snap-on mounting onto TH 35 standard mounting rail									
Size S2									
With integrated coil circuit (varistor)									
40	**18.5**	60	**11**	1 1	20 ... 33	▶	**3RT2035-1NB30**	▶	**3RT2035-3NB30**
					83 ... 155	5	**3RT2035-1NF30**	5	**3RT2035-3NF30**
					175 ... 280	5	**3RT2035-1NP30**	5	**3RT2035-3NP30**
50	**22**	70	**11**	1 1	20 ... 33	▶	**3RT2036-1NB30**	▶	**3RT2036-3NB30**
					83 ... 155	5	**3RT2036-1NF30**	5	**3RT2036-3NF30**
					175 ... 280	5	**3RT2036-1NP30**	5	**3RT2036-3NP30**
65	**30**	80	**11**	1 1	20 ... 33	▶	**3RT2037-1NB30**	▶	**3RT2037-3NB30**
					83 ... 155	5	**3RT2037-1NF30**	5	**3RT2037-3NF30**
					175 ... 280	5	**3RT2037-1NP30**	5	**3RT2037-3NP30**
80	**37**	90	**11**	1 1	20 ... 33	▶	**3RT2038-1NB30**	▶	**3RT2038-3NB30**
					83 ... 155	5	**3RT2038-1NF30**	5	**3RT2038-3NF30**
					175 ... 280	5	**3RT2038-1NP30**	2	**3RT2038-3NP30**
With removable mounted auxiliary switch block and integrated coil circuit (varistor)									
40	**18.5**	60	**22**	2 2	20 ... 33	▶	**3RT2035-1NB34**		--
					83 ... 155	5	**3RT2035-1NF34**		--
					175 ... 280	5	**3RT2035-1NP34**		--
50	**22**	70	**22**	2 2	20 ... 33	▶	**3RT2036-1NB34**		--
					83 ... 155	5	**3RT2036-1NF34**		--
					175 ... 280	5	**3RT2036-1NP34**		--
65	**30**	80	**22**	2 2	20 ... 33	▶	**3RT2037-1NB34**		--
					83 ... 155	5	**3RT2037-1NF34**		--
					175 ... 280	5	**3RT2037-1NP34**		--
80	**37**	90	**22**	2 2	20 ... 33	▶	**3RT2038-1NB34**		--
					83 ... 155	5	**3RT2038-1NF34**		--
					175 ... 280	5	**3RT2038-1NP34**		--
With permanently mounted auxiliary switch block and integrated coil circuit (varistor)									
40	**18.5**	60	**22**	2 2	20 ... 33	5	**3RT2035-1NB34-3MA0**	5	**3RT2035-3NB34-3MA0**
50	**22**	70	**22**	2 2	20 ... 33	2	**3RT2036-1NB34-3MA0**	5	**3RT2036-3NB34-3MA0**
65	**30**	80	**22**	2 2	20 ... 33	▶	**3RT2037-1NB34-3MA0**	5	**3RT2037-3NB34-3MA0**
80	**37**	90	**22**	2 2	20 ... 33	▶	**3RT2038-1NB34-3MA0**	2	**3RT2038-3NB34-3MA0**
With voltage tap-off and integrated coil circuit (varistor)									
40	**18.5**	60	**11**	1 1	20 ... 33	2	**3RT2035-1NB30-0CC0**	2	**3RT2035-3NB30-0CC0**
50	**22**	70	**11**	1 1	20 ... 33	2	**3RT2036-1NB30-0CC0**	2	**3RT2036-3NB30-0CC0**
65	**30**	80	**11**	1 1	20 ... 33	2	**3RT2037-1NB30-0CC0**	2	**3RT2037-3NB30-0CC0**
80	**37**	90	**11**	1 1	20 ... 33	2	**3RT2038-1NB30-0CC0**	2	**3RT2038-3NB30-0CC0**

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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AC/DC operation (50/60 Hz AC or DC)

- Extended operating range of the solenoid coil 0.8 to 1.1 x U_s
- Reduced power consumption when closing and in the closed state

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



3RT204.-1N.30



3RT204.-3N.30



3RT204.-1N.34



3RT204.-1NB34-3MA0



3RT204.-3NB34-3MA0

Rated data			Auxiliary contacts			Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u: 60 °C		AC-1, t_u: 40 °C										
Operational current I_e up to	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to	Ident. No.	Version				Article No.	Price per PU		Article No.	Price per PU
400 V	**400 V**	690 V										
A	**kW**	A		NO	NC	V AC/DC	d			d		
For screw and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails												
Size S3												
With integrated coil circuit (varistor)												
80	**37**	125	**11**	1	1	20 ... 33	1	**3RT2045-1NB30**		1	**3RT2045-3NB30**	
						83 ... 155	5	**3RT2045-1NF30**		5	**3RT2045-3NF30**	
						175 ... 280	5	**3RT2045-1NP30**		5	**3RT2045-3NP30**	
95	**45**	130	**11**	1	1	20 ... 33	1	**3RT2046-1NB30**		1	**3RT2046-3NB30**	
						83 ... 155	5	**3RT2046-1NF30**		5	**3RT2046-3NF30**	
						175 ... 280	5	**3RT2046-1NP30**		5	**3RT2046-3NP30**	
110	**55**	130	**11**	1	1	20 ... 33	1	**3RT2047-1NB30**		1	**3RT2047-3NB30**	
						83 ... 155	5	**3RT2047-1NF30**		5	**3RT2047-3NF30**	
						175 ... 280	5	**3RT2047-1NP30**		5	**3RT2047-3NP30**	
With removable mounted auxiliary switch block and integrated coil circuit (varistor)												
80	**37**	125	**22**	2	2	20 ... 33	5	**3RT2045-1NB34**			**--**	
						83 ... 155	5	**3RT2045-1NF34**			**--**	
						175 ... 280	5	**3RT2045-1NP34**			**--**	
95	**45**	130	**22**	2	2	20 ... 33	5	**3RT2046-1NB34**			**--**	
						83 ... 155	5	**3RT2046-1NF34**			**--**	
						175 ... 280	5	**3RT2046-1NP34**			**--**	
110	**55**	130	**22**	2	2	20 ... 33	5	**3RT2047-1NB34**			**--**	
						83 ... 155	5	**3RT2047-1NF34**			**--**	
						175 ... 280	5	**3RT2047-1NP34**			**--**	
With permanently mounted auxiliary switch block and integrated coil circuit (varistor)												
80	**37**	125	**22**	2	2	20 ... 33	5	**3RT2045-1NB34-3MA0**		5	**3RT2045-3NB34-3MA0**	
95	**45**	130	**22**	2	2	20 ... 33	5	**3RT2046-1NB34-3MA0**		5	**3RT2046-3NB34-3MA0**	
110	**55**	130	**22**	2	2	20 ... 33	5	**3RT2047-1NB34-3MA0**		5	**3RT2047-3NB34-3MA0**	
With voltage tap-off and integrated coil circuit (varistor)												
80	**37**	125	**11**	1	1	20 ... 33	5	**3RT2045-1NB30-0CC0**		5	**3RT2045-3NB30-0CC0**	
95	**45**	130	**11**	1	1	20 ... 33	5	**3RT2046-1NB30-0CC0**		5	**3RT2046-3NB30-0CC0**	
110	**55**	130	**11**	1	1	20 ... 33	5	**3RT2047-1NB30-0CC0**		5	**3RT2047-3NB30-0CC0**	

Other voltages according to page 3/69 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

AC/DC operation (50/60 Hz AC or DC)

- Operating mechanism with integrated coil circuit (varistor)
- For screw fixing
- Auxiliary and control conductors: Screw or spring-type terminals
- Main conductors: Busbar connections

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



3RT105.-6A.36



3RT106.-6A.36



3RT107.-6A.36



3RT107.-2A.36

Size	Rated data AC-2 and AC-3, t_u: 60 °C				AC-1, t_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
	Operational current I_e up to	Ratings of three-phase motors at 50 Hz and			Operational current I_e up to	Version				Article No.	Price per PU		Article No.	Price per PU
	500 V	**400 V**	500 V	690 V	690 V									
	A	**kW**	kW	kW	A	NO	NC	V AC/DC	d			d		
Conventional operating mechanisms														
S6	115	**55**	75	110	160	2	2	110 ... 127	▶	**3RT1054-6AF36**		5	**3RT1054-2AF36**	
								220 ... 240	▶	**3RT1054-6AP36**		5	**3RT1054-2AP36**	
	150	**75**	90	132	185	2	2	110 ... 127	▶	**3RT1055-6AF36**		5	**3RT1055-2AF36**	
								220 ... 240	▶	**3RT1055-6AP36**		5	**3RT1055-2AP36**	
	185	**90**[1]	110	160	215	2	2	110 ... 127	▶	**3RT1056-6AF36**		5	**3RT1056-2AF36**	
								220 ... 240	▶	**3RT1056-6AP36**		5	**3RT1056-2AP36**	
S10	225	**110**	160	200	275	2	2	110 ... 127	▶	**3RT1064-6AF36**		5	**3RT1064-2AF36**	
								220 ... 240	▶	**3RT1064-6AP36**		5	**3RT1064-2AP36**	
	265	**132**	160	250	330	2	2	110 ... 127	▶	**3RT1065-6AF36**		5	**3RT1065-2AF36**	
								220 ... 240	▶	**3RT1065-6AP36**		5	**3RT1065-2AP36**	
	300	**160**[1]	200	250	330	2	2	110 ... 127	▶	**3RT1066-6AF36**		5	**3RT1066-2AF36**	
								220 ... 240	▶	**3RT1066-6AP36**		5	**3RT1066-2AP36**	
S12	400	**200**	250	400	430	2	2	110 ... 127	▶	**3RT1075-6AF36**		5	**3RT1075-2AF36**	
								220 ... 240	▶	**3RT1075-6AP36**		5	**3RT1075-2AP36**	
	500	**250**[1]	355	400	610	2	2	110 ... 127	▶	**3RT1076-6AF36**		5	**3RT1076-2AF36**	
								220 ... 240	▶	**3RT1076-6AP36**		5	**3RT1076-2AP36**	

[1] When using 3RT10.6-.**A**... contactors with IE3/IE4 motors from 8.5 times the starting current, use the versions with solid-state operating mechanism 3RT10.6-.**N**..., see page 3/68.
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/70 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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NEW IE3/IE4 ready SIRIUS 3RT contactors, 3-pole up to 250 kW

AC/DC operation (50/60 Hz AC or DC)

- Operating mechanism with fail-safe control input for safety-related applications to SIL CL 3
- 24 V DC control signal input, e.g. for control via the fail-safe output module of a controller (F-PLC) or safety relay
- Attainable Safety Integrity Level (SIL):
  - With one contactor: SIL CL 2 acc. to IEC 62061 or PL c acc. to ISO 13849-1
  - With two contactors in series: SIL CL 3 acc. to IEC 62061 or PL e acc. to ISO 13849-1
- Version with removable lateral auxiliary switches or permanently mounted auxiliary switches and additional approval according to SUVA (on request)
- For screw fixing
- Auxiliary and control conductors: Screw or spring-type terminals
- Main conductors: Busbar connections

For more information on safety systems, see from page 11/1 onwards.


3RT105.-6S.36


3RT106.-6S.36


3RT107.-6S.36


3RT105.-6S.36-3PA0


3RT107.-6S.36-3PA0

Size	Rated data according to IEC 60947-4-1 AC-3, t_u: 60 °C		Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG
	Operational current I_e up to 500 V	Ratings of three-phase motors at 50 Hz and **400 V**	Version				Article No.	Price per PU			
	A	**kW**	NO	NC	V AC/DC	d					
Solid-state operating mechanism											
With two removable laterally mounted auxiliary switches											
S6	115	**55**	2	2	96 ... 127	5	**3RT1054-6SF36**		1	1 unit	41B
					200 ... 270	5	**3RT1054-6SP36**		1	1 unit	41B
	150	**75**	2	2	96 ... 127	5	**3RT1055-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1055-6SP36**		1	1 unit	41B
	185	**90**	2	2	96 ... 127	5	**3RT1056-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1056-6SP36**		1	1 unit	41B
S10	225	**110**	2	2	96 ... 127	5	**3RT1064-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1064-6SP36**		1	1 unit	41B
	265	**132**	2	2	96 ... 127	5	**3RT1065-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1065-6SP36**		1	1 unit	41B
	300	**160**	2	2	96 ... 127	5	**3RT1066-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1066-6SP36**		1	1 unit	41B
S12	400	**200**	2	2	96 ... 127	5	**3RT1075-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1075-6SP36**		1	1 unit	41B
	500	**250**	2	2	96 ... 127	5	**3RT1076-6SF36**		1	1 unit	41B
					200 ... 277	5	**3RT1076-6SP36**		1	1 unit	41B
With two permanently laterally mounted auxiliary switches											
S6	115	**55**	2	2	96 ... 127	5	**3RT1054-6SF36-3PA0**		1	1 unit	41B
					200 ... 270	5	**3RT1054-6SP36-3PA0**		1	1 unit	41B
	150	**75**	2	2	96 ... 127	5	**3RT1055-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1055-6SP36-3PA0**		1	1 unit	41B
	185	**90**	2	2	96 ... 127	5	**3RT1056-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1056-6SP36-3PA0**		1	1 unit	41B
S10	225	**110**	2	2	96 ... 127	5	**3RT1064-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1064-6SP36-3PA0**		1	1 unit	41B
	265	**132**	2	2	96 ... 127	5	**3RT1065-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1065-6SP36-3PA0**		1	1 unit	41B
	300	**160**	2	2	96 ... 127	5	**3RT1066-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1066-6SP36-3PA0**		1	1 unit	41B
S12	400	**200**	2	2	96 ... 127	5	**3RT1075-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1075-6SP36-3PA0**		1	1 unit	41B
	500	**250**	2	2	96 ... 127	5	**3RT1076-6SF36-3PA0**		1	1 unit	41B
					200 ... 277	5	**3RT1076-6SP36-3PA0**		1	1 unit	41B

For accessories and spare parts, see pages 3/71 to 3/119.

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

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SIRIUS 3RT contactors, 3-pole up to 250 kW *IE3/IE4* ready

AC/DC operation (50/60 Hz AC or DC)

- Operating mechanism with integrated coil circuit (varistor)
- For screw fixing
- Auxiliary and control conductors: Screw or spring-type terminals
- Main conductors: Busbar connections

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


3RT105. -6N.36


3RT105. -2N.36


3RT107. -6N.36


3RT107. -6P.35


3RT107. -2N.36

Size	Rated data AC-2 and AC-3, t_u: 60 °C Operational current I_e up to 500 V	Ratings of three-phase motors at 50 Hz and 400 V	500 V	690 V	AC-1, t_u: 40 °C Operational current I_e up to 690 V	Auxiliary contacts, lateral Version NO	NC	Rated control supply voltage U_s V AC/DC	SD d	Screw terminals Article No.	Price per PU	SD d	Spring-type terminals Article No.	Price per PU
	A	**kW**	kW	kW	A									
Solid-state operating mechanism														
With 24 V DC control signal input e.g. for control by PLC														
S6	115	**55**	75	110	160	2	2	96 ... 127	5	**3RT1054-6NF36**		5	**3RT1054-2NF36**	
								200 ... 277	5	**3RT1054-6NP36**		5	**3RT1054-2NP36**	
	150	**75**	90	132	185	2	2	96 ... 127	2	**3RT1055-6NF36**		5	**3RT1055-2NF36**	
								200 ... 277	▶	**3RT1055-6NP36**		5	**3RT1055-2NP36**	
	185	**90**	110	160	215	2	2	96 ... 127	2	**3RT1056-6NF36**		5	**3RT1056-2NF36**	
								200 ... 277	▶	**3RT1056-6NP36**		5	**3RT1056-2NP36**	
S10	225	**110**	160	200	275	2	2	96 ... 127	2	**3RT1064-6NF36**		5	**3RT1064-2NF36**	
								200 ... 277	2	**3RT1064-6NP36**		5	**3RT1064-2NP36**	
	265	**132**	160	250	330	2	2	96 ... 127	2	**3RT1065-6NF36**		5	**3RT1065-2NF36**	
								200 ... 277	2	**3RT1065-6NP36**		5	**3RT1065-2NP36**	
	300	**160**	200	250	330	2	2	96 ... 127	5	**3RT1066-6NF36**		5	**3RT1066-2NF36**	
								200 ... 277	2	**3RT1066-6NP36**		5	**3RT1066-2NP36**	
S12	400	**200**	250	400	430	2	2	96 ... 127	2	**3RT1075-6NF36**		5	**3RT1075-2NF36**	
								200 ... 277	2	**3RT1075-6NP36**		5	**3RT1075-2NP36**	
	500	**250**	355	400	610	2	2	96 ... 127	2	**3RT1076-6NF36**		5	**3RT1076-2NF36**	
								200 ... 277	2	**3RT1076-6NP36**		5	**3RT1076-2NP36**	
For 24 V DC control signal input · with indication of remaining lifetime (RLT) e.g. for control by PLC														
S6	115	**55**	75	110	160	1	1	96 ... 127	5	**3RT1054-6PF35**			**--**	
								200 ... 277	5	**3RT1054-6PP35**			**--**	
	150	**75**	90	132	185	1	1	96 ... 127	5	**3RT1055-6PF35**			**--**	
								200 ... 277	5	**3RT1055-6PP35**			**--**	
	185	**90**	110	160	215	1	1	96 ... 127	5	**3RT1056-6PF35**			**--**	
								200 ... 277	5	**3RT1056-6PP35**			**--**	
S10	225	**110**	160	200	275	1	1	96 ... 127	5	**3RT1064-6PF35**			**--**	
								200 ... 277	5	**3RT1064-6PP35**			**--**	
	265	**132**	160	250	330	1	1	96 ... 127	5	**3RT1065-6PF35**			**--**	
								200 ... 277	5	**3RT1065-6PP35**			**--**	
	300	**160**	200	250	330	1	1	96 ... 127	5	**3RT1066-6PF35**			**--**	
								200 ... 277	5	**3RT1066-6PP35**			**--**	
S12	400	**200**	250	400	430	1	1	96 ... 127	5	**3RT1075-6PF35**			**--**	
								200 ... 277	5	**3RT1075-6PP35**			**--**	
	500	**250**	355	400	610	1	1	96 ... 127	5	**3RT1076-6PF35**			**--**	
								200 ... 277	5	**3RT1076-6PP35**			**--**	

Other voltages according to page 3/70 on request.

For accessories and spare parts, see pages 3/71 to 3/119.

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

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Options

Rated control supply voltages for 3RT20 contactors, possible on request (change of the 10th and 11th digits of the article number)

Delivery time on request

Rated control supply voltage U_S	Contactor type	3RT201, 3RH2	3RT202	3RT203	3RT204
	Size	S00	S0	S2	S3
Sizes S00 to S3					
AC operation[1]					
Solenoid coils for 50 Hz (exception: Size S00: 50 and 60 Hz[2])					
24 V AC		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
230 V AC		P0	P0	P0	P0
240 V AC		U0	U0	U0	U0
400 V AC		V0	V0	V0	V0
Solenoid coils for 50 and 60 Hz[2]					
24 V AC		B0	C2	C2	C2
42 V AC		D0	D2	D2	D2
48 V AC		H0	H2	H2	H2
110 V AC		F0	G2	G2	G2
220 V AC		N2	N2	N2	N2
230 V AC		P0	L2	L2	L2
Solenoid coils (for USA and Canada[3]**)**					
50 Hz	**60 Hz**				
110 V AC	120 V AC	K6	K6	K6	K6
220 V AC	240 V AC	P6	P6	P6	P6
Solenoid coils (for Japan)					
50/60 Hz[4]	**60 Hz**[5]				
100 V AC	110 V AC	G6	G6	G6	G6
200 V AC	220 V AC	N6	N6	N6	N6
400 V AC	440 V AC	R6	R6	R6	R6
DC operation[1]					
12 V DC		A4	A4	--	--
24 V DC		B4	B4	--	--
42 V DC		D4	D4	--	--
48 V DC		W4	W4	--	--
60 V DC		E4	E4	--	--
110 V DC		F4	F4	--	--
125 V DC		G4	G4	--	--
220 V DC		M4	M4	--	--
230 V DC		P4	P4	--	--

Examples

AC operation	3RT2023-1A**P0**0	Contactor with screw terminals; with solenoid coil for 50 Hz for rated control supply voltage 230 V AC.
	3RT2023-1A**G2**0	Contactor with screw terminals; with solenoid coil for 50/60 Hz for rated control supply voltage 110 V AC.
DC operation	3RT2025-2B**B4**0	Contactor with spring-type terminals; for rated control supply voltage 24 V DC.
	3RT2025-2B**G4**0	Contactor with spring-type terminals; for rated control supply voltage 125 V DC.

1) For deviating coil voltages and operating ranges of sizes S00 and S0, a SITOP 24 V DC power supply with wide-range input can be used for the coil control, see page 15/1 onwards.

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
- Size S0:
  at 50 Hz: 08 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.

Rated control supply voltage	Contactor type	3RT202.-.N	Rated control supply voltage	Contactor type	3RT203.-.N	3RT204.-.N
$U_{S\,min}$ ... $U_{S\,max}$[1]	Size	S0	$U_{S\,min}$ ... $U_{S\,max}$[1]	Size	S2	S3
Sizes S00 to S3						
AC/DC operation (50/60 Hz AC or DC)						
21 ... 28 V AC/DC		B3	20 ... 33 V AC/DC		B3	B3
95 ... 130 V AC/DC		F3	48 ... 80 V AC/DC		E3	E3
200 ... 280 V AC/DC[2]		P3	83 ... 155 V AC/DC		F3	F3
			175 ... 280 V AC/DC		P3	P3

1) Coil operating range
- Size S0: 0.7 x $U_{S\,min}$ to 1.3 x $U_{S\,max}$
- Sizes S2 and S3: 0.8 x $U_{S\,min}$ to 1.1 x $U_{S\,max}$.

2) The following applies to S0 and $U_{S\,max}$ = 280 V: Upper limit = 1.1 x $U_{S\,max}$.

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SIRIUS 3RT contactors, 3-pole up to 250 kW

Rated control supply voltages for 3RT1 contactors, possible on request (change of the 10th and 11th digits of the article number)

Delivery time on request

Rated control supply voltage	Contactor type	3RT1.5.-.A, 3RT1.6.-.A, 3RT1.7.-.A	Rated control supply voltage	Contactor type	3RT1.5.-.N, 3RT1.6.-.N, 3RT1.7.-.N	3RT1.5.-.P, 3RT1.5.-.S, 3RT1.6.-.P, 3RT1.6.-.S, 3RT1.7.-.P, 3RT1.7.-.S
$U_{s\,min}$ ... $U_{s\,max}$	Sizes	S6 to S12	$U_{s\,min}$ ... $U_{s\,max}$	Sizes	S6 to S12	
Sizes S6 to S12						
AC/DC operation (50/60 Hz AC or DC)						
Conventional operating mechanisms[1]			**Solid-state operating mechanisms[2]**			
23 ... 26 V AC/DC		B3	21 ... 27.3 V AC/DC		B3	--
42 ... 48 V AC/DC		D3	96 ... 127 V AC/DC		F3	F3
110 ... 127 V AC/DC		F3	200 ... 277 V AC/DC		P3	P3
200 ... 220 V AC/DC		M3				
220 ... 240 V AC/DC		P3				
240 ... 277 V AC/DC		U3				
380 ... 420 V AC/DC		V3				
440 ... 480 V AC/DC		R3				
500 ... 550 V AC/DC		S3				
575 ... 600 V AC/DC		T3				

1) Operating range: 0.8 x $U_{s\,min}$ to 1.1 × $U_{s\,max}$.
2) Operating range: 0.7 x $U_{s\,min}$ to 1.25 × $U_{s\,max}$.

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Overview

Extensive accessories and spare parts are available for SIRIUS 3RT power contactors and SIRIUS 3RH2 contactor relays.

These components are easily fitted to the contactors without the use of any tools according to requirements.

Overview graphics with mountable accessories:

- 3RT2 contactors, see pages 3/7 to 3/10
- 3RT1 contactors, see pages 3/11 to 3/13
- 3RH2 contactor relays, see page 5/4

More information

TIA Selection Tool Cloud (TST Cloud),
see https://mall.industry.siemens.com/spice/TSTWeb/?kmat=Contactor

Version	For contactors 3RT2, sizes S00 to S3; 3RH2, size S00	3RT1, sizes S6 to S12	Selection and ordering data Page
Accessories for 3RT contactors and 3RH2 contactor relays			
Auxiliary switch blocks			
Instantaneous	3RH29.1	3RH19.1	3/83 ... 3/95
Delayed			
• Pneumatic time-delay auxiliary switch blocks	3RT2926-2P..1	--	3/96
• Solid-state time-delay auxiliary switch blocks	3RA2813, 3RA2814, 3RA2815	3RT1926-2E/-2F/-2G	3/96, 3/97
Surge suppressors			
• Without LED	3RT29.6-1B/-1C/-1D/-1E	3RT1956-1C	3/98, 3/99
• With LED	3RT29.6-1J/-1L/-1M	--	3/99
Modules for contactor control			
Coupling links for control by PLC	3RH29.4-.GP11	--	3/100
3RA28 function modules			
• For direct on-line starting: ON delay or OFF-delay	3RA2811, 3RA2812, 3RA2831, 3RA2832	--	3/101
• For star-delta (wye-delta) starting	3RA2816	--	3/101
3RA27 function modules for IO-Link or AS-Interface			
• For direct-on-line, reversing or star-delta (wye-delta) starting	3RA271.-.A/.B/.C	--	3/102, 3/103
Mechanical latching blocks	3RT2926-3A.31	--	3/104
OFF-delay devices for contactors with AC/DC and DC operation	3RT2916-2B.01	--	3/104
Link modules			
Link modules from motor starter protector to contactor	3RA.9.1	--	7/53
Safety main current connectors for two contactors	3RA29.6-1A	--	3/105
Assembly kits			
• For reversing contactor assemblies	3RA29.3-2AA.	3RA19.3-2A	3/105
• For contactor assemblies for star-delta (wye-delta) starting	3RA29..-2BB., 3RA29.3-2C	3RA1953-3G, 3RA19.3-2./-3.	3/106, 3/107
Single wiring modules	3RA.9.3-3.A.	3RA19.3-3.	3/108
Star jumpers (links for paralleling), 3-pole	3RT.9.6-4BA3.	3RT19.6-4BA31	3/108
Mechanical interlock kits for two contactors	3RA29.2-2H	--	3/109
Mechanical interlocks for contactor assemblies	3RA2934-2B	3RA1954-2.	3/109
Mechanical connectors for contactor assemblies	3RA29.2-2.	3RA1932-2D	3/109
Terminal modules/adapters			
Links for paralleling for main circuits	3RT.9.6-4BB.1	--	3/110
Single-phase infeed terminals	3RA2943-3L	--	3/110
Three-phase infeed terminals	3RA2913-3K, 3RV29.5-5A.	--	3/110
• With increased clearances and creepage distances	3RV2935-5E	--	3/110
Three-phase busbars	3RV1915-1AB	--	3/110
Box terminal blocks	--	3RT19..-4G	3/110
• Box terminal for auxiliary conductor connection	--	3TX7500-0A	3/110
Solder pin adapters for contactor assembly on printed circuit boards	3RT1916-4KA.	--	3/111
Coil connection modules for connections from top or from below	3RT2926-4R.1.	--	3/111
Motor feeder connector	3RT1900-4RE01	--	3/111
Covers			
Terminal covers	3RT29.6-4EA.	3RT19.6-4EA., 3TX65.6-3B	3/112
Sealable covers	3RT2916-4MA10	3RT1926-4MA10	3/112

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General data

Version	For contactors 3RT2, sizes S00 to S3; 3RH2, size S00	 3RT1, sizes S6 to S12	Selection and ordering data Page
Accessories for 3RT contactors and 3RH2 contactor relays (continued)			
Miscellaneous accessories			
Base plates			
• For reversing contactor assemblies	--	3RT19.2-2A	3/113
• For contactor assemblies for star-delta (wye-delta) starting	3RA29.2-2F	3RA19.2-2.	3/113
Adapters for screw fixing	3RT1926-4P	--	3/113
EMC suppression modules	3RT2916-1P..	--	3/113
Additional load modules	3RT2916-1GA00	--	3/114
LED modules for displaying contactor operation	3RT2926-1QT00	3RT1926-1QT00	3/114
Control kit for manual operation	3RT29.6-4MC00	--	3/114
Insulation stop for securely holding back the conductor insulation for conductors up to 1 mm^2	3RT2916-4JA02	3RT1916-4JA02	3/115
Tools for opening spring-type terminals	3RA2908-1A	3RA2908-1A	3/115
Blank labels	3RT2900-1SB.0	3RT1900-1S..0	3/115
Spare Parts for 3RT2 Contactors			
Solenoid coils	3RT29..-5...1	--	3/116, 3/117
Withdrawable coils	--	3RT19..-5....	3/118
Contacts with fixing parts	3RT29..-6.	3RT19..-6.	3/119
Arc chambers	--	3RT19..-7.	3/119

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Overview

Auxiliary switches

The auxiliary switches can be designed as positively driven contacts in 3RH contactor relays or also as mirror contacts in the case of 3RT power contactors.

For more information on positively driven operation and mirror contacts, see Manuals → "More information", page 3/78, and in the selection and ordering data from page 3/83 onwards.

Solid-state time-delay auxiliary switch blocks for mounting on 3RT2 contactors and 3RH2 contactor relays

See pages 3/78 and 3/96

The 3RA28 solid-state time-delay auxiliary switches which can be mounted onto the contactor are designed for applications in the range from 24 to 240 V AC/DC (wide voltage range). Both the electrical and mechanical connection are made by simple snapping on and locking.

The time-delay auxiliary switch is supplied with power directly by two plug-in contacts through the coil terminals of the contactor, in parallel with A./A2.

A protection circuit (varistor) is integrated in each module.

A sealable cover is available to protect against careless adjustment of the set times.

Note:

Mounting more auxiliary switches to the contactor is not permitted.

Surge suppressors

- Without LED (also for spring-type terminals)
  Sizes S00 to S3, see page 3/98
- With LED (also for spring-type terminals)
  Sizes S00 to S3, see page 3/99

All 3RT2 contactors and 3RH2 contactor relays can be retrofitted with RC elements or varistors for damping opening surges in the coil. Diodes or diode assemblies (comprising noise suppression diodes and Zener diodes for short break times) can be used.

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.

Varistors, RC elements or diode assemblies can be plugged onto the front of size S0 to S3 contactors.

Coupling contactors are supplied either without overvoltage damping or with a suppressor diode, 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 attenuated against voltage peaks (suppression diode 6x to 10x; diode assemblies 2x to 6x; varistor +2 to 5 ms).

Coupling links for control by PLC

See pages 3/80 and 3/100

- Operation with 24 V DC
- Operating range 17 to 30 V
- Low power consumption of 0.5 W
- An LED indicates the switching state.

The 3RH2924-1GP11 coupling link has an integrated surge suppressor (varistor) for the contactor coil being switched and is mounted onto the size S0 contactor coil via a coil connection module.

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3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays

See pages 3/81 and 3/101

Simply by being plugged in place, the SIRIUS function modules enable different functionalities required for the assembly of starters to be realized in the feeder. The function modules and wiring kits thus help to reduce the wiring work within the feeder practically to zero.

SIRIUS function modules for direct-on-line starting

The electronic timing relays which can be mounted onto the contactor are available in these versions:

- Sizes S00 and S0 for applications in the range from 24 to 240 V AC/DC (wide voltage range)
- Sizes S2 and S3 for applications in either the range from 24 to 90 V AC/DC or 90 to 240 V AC/DC

Both the electrical and mechanical connection are made by simple snapping on and locking.

A protection circuit (varistor) is integrated in each module.

The electronic timing relay with semiconductor output uses two contact legs to actuate the contactor underneath by means of a semiconductor after the set time *t* has elapsed.

The switching state feedback is performed by a mechanical switching state indicator (plunger). In addition, the auxiliary switches in the contactors are freely accessible and can be used for feedbacks to the control system or for signal lamps.

A sealable cover is available to protect against careless adjustment of the set times.

The snap-on function modules for direct-on-line starting are used above all for realizing timing functions independently of the control system.

With the OFF-delay variant of the timing relay it is possible for example for the fan motor for cooling a main drive to be switched off with a delay so that sufficient cooling after operation is guaranteed; the programmer of the control system does not need to worry about such technical details of the plant.

The ON-delay timing relays enable for example the time-delayed starting of several drives so that the summation starting current does not rise too high, which could result in voltage failure.

The use of snap-on function modules for direct-on-line starting results in the following advantages:

- Reduction of control current wiring
- Prevention of wiring errors
- Reduction of testing costs
- Implementation of timing functions independently of the control system
- Less space required in the control cabinet compared to a separate timing relay
- No additive protection circuit required (varistor integrated)

Assembly of reversing starters

We offer ready-made wiring kits for the assembly of reversing starters. Use of these wiring kits offers further advantages; see page 3/156.

SIRIUS function modules for star-delta (wye-delta) starting

Both interlocking and timing functions are required for the assembly of star-delta (wye-delta) starters. With the function modules for star-delta (wye-delta) starting and the matching link modules for the main circuit, these starters can be assembled easily and with absolutely no errors.

The entire sequence in the control circuit is integrated in the snap-on modules. This covers:

- An adjustable star time *t* from 0.5 to 60 s
- A non-adjustable dead interval of 50 ms
- Electrical contacting of the contactors by means of coil pick-off (contact legs)
- Feedback of the switching state at the contactor using a mechanical switch position indicator (plunger)
- Electrical interlocking between the contactors

These modules do not require their own terminals and can therefore be used for contactors with both screw and spring-type terminals in all the sizes S00 to S3. To start the star-delta (wye-delta) starter, only the first of the three contactors (line contactor) is actuated, like in the case of a direct-on-line starter. All other functions then take place inside the individual modules.

This also offers advantages if the timing function was previously implemented in a controller, as it again results in a significant reduction in the number of PLC outputs, the programming work and the wiring outlay.

The kits for the main circuit include the mechanical interlock, the star jumper, the wiring modules at the top and at the bottom, and the required connectors or connecting clips.

A protection circuit (varistor) is integrated in the basic module.

The *function modules for star-delta (wye-delta) starting* are mostly used where current-limiting measures for starting a drive are required and a high level of availability is essential at the same time. This technology has been used with success for several decades and has the additional advantage of requiring relatively little know-how. Through the use of function modules, the assembly work with simple standard components is even easier and absolutely error-free.

The use of *function modules for star-delta (wye-delta) starting* results in the following advantages:

- Operation solely through the line contactor A1/A2 – no further control current wiring needed
- Prevention of wiring errors
- Reduction of testing costs
- Integrated electrical interlocking saves costs and prevents errors
- Less space needed in the control cabinet compared to using a separate timing relay
- Adjustable starting in star mode from 0.5 to 60 s
- Independent of the contactor's control supply voltage (24 to 240 V AC/DC)
- Varistor integrated – no additive protection circuit required
- Mechanically coded assembly enables easy configuration and reliable wiring
- Fewer versions – one module kit for screw and spring-type connection and for all the contactor sizes S00 to S3
- Mechanical interlocking (with wiring kit for the main circuit)

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SIRIUS 3RA27 function modules for IO-Link or AS-Interface for mounting on 3RT2 contactors

See pages 3/82 and 3/102

The SIRIUS 3RA27 function modules enable the assembly of starters and contactor assemblies for direct-on-line, reversing and star-delta (wye-delta) starting without any additional, complicated wiring of the individual components. They include the key control functions required for the particular feeder, e.g. timing and interlocking, and can be connected to the control system via either IO-Link or AS-Interface.

The electrical and mechanical connection to the contactor is established by snapping on and locking. An additive protection circuit for the individual contactors can be dispensed with completely because a varistor is integrated in the modules. Feedback from the contactor contacts is performed with Hall sensors which provide reliable feedback concerning the switching state even under extremely dusty conditions.

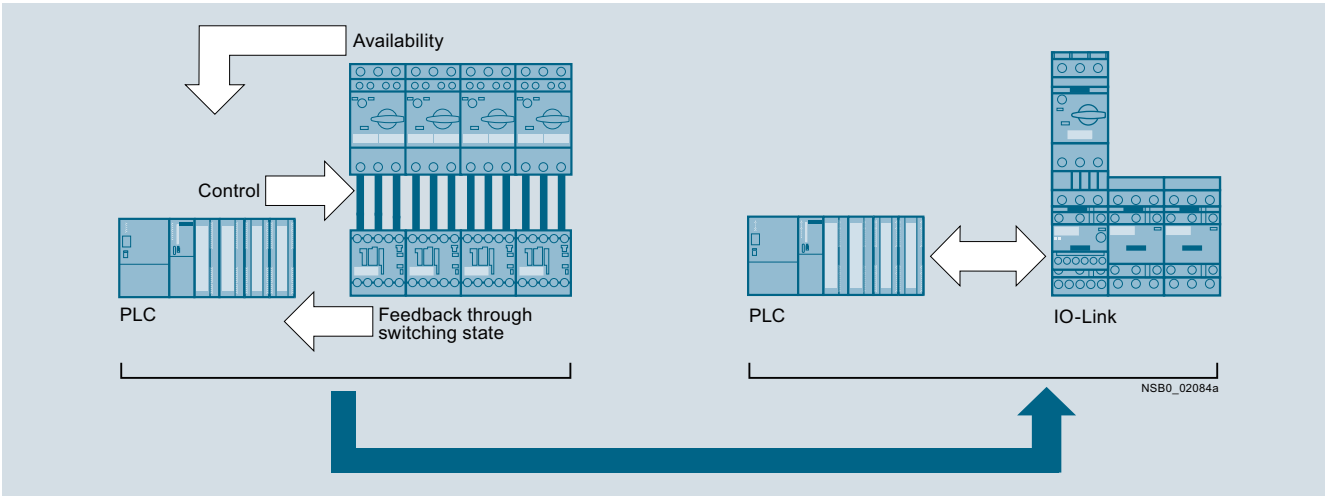
The starters are connected to the higher-level control system through IO-Link, with the possibility of connecting up to four starters as a group to one port of the IO-Link master,

or optionally via AS-Interface, Specification V2.1 or higher, in A/B technology. As a result, up to 62 starters can be connected to one master and the address is entered in the normal manner with an addressing unit.

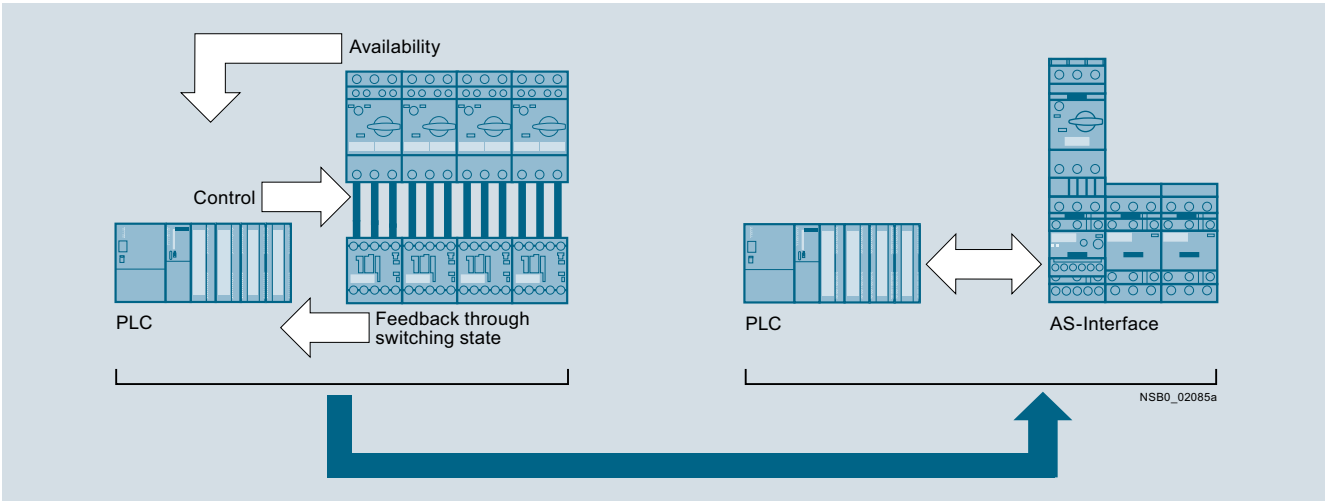
Through this type of connection to the control system, a maximum of wiring is saved. In the case of AS-Interface, the wiring amounts to the control supply voltage and the two individual wires for AS-Interface.

The following essential signals are thus transmitted:

- Availability of the feeder in response to an indirect inquiry from the motor starter protector/circuit breaker
- Starter control
- Feedback concerning the switching state of the starter



Signal transmission through IO-Link



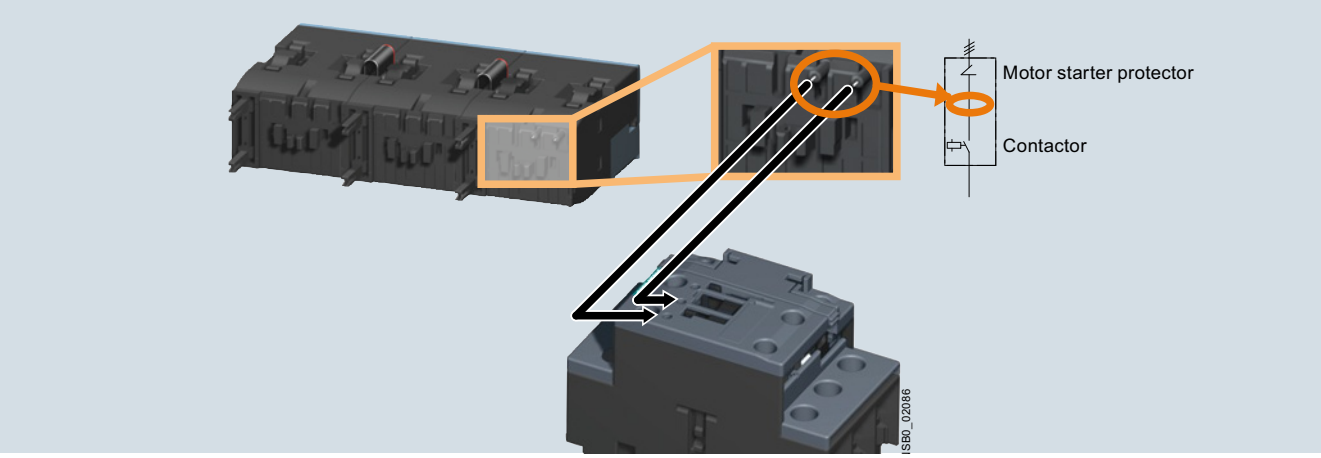
Signal transmission through AS-Interface

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Accessories

The inquiry from the motor starter protector/circuit breaker does not take place through additive wiring between the auxiliary switch and the module but by means of a voltage inquiry at the contactor input.

This requires special versions of the contactors with voltage tap-off (see pages 3/56, 3/60, 3/64 and 3/65).



Availability signal through voltage tap-off

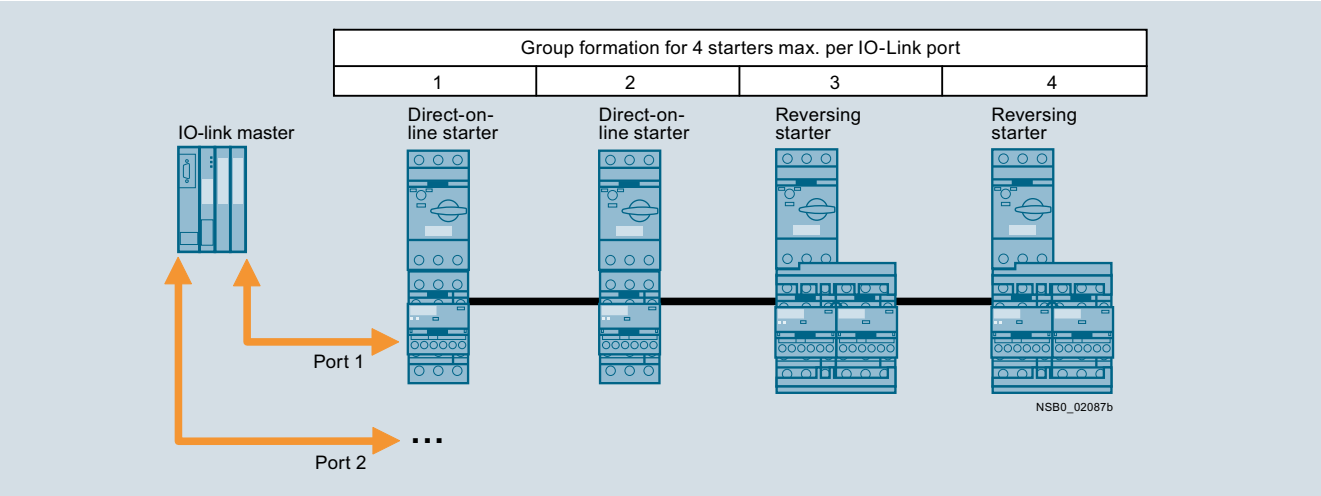
The following benefits result from the use of SIRIUS 3RA27 function modules:

- Reduction of control current wiring. In the case of IO-Link to no more than three cables for four feeders.
- Elimination of testing costs and wiring errors
- Reduction of configuration work
- Parameter server functionality
- Integration in TIA means unambiguous IO-Link diagnostics if a fault occurs
- Dispensing with IO modules saves space in the control cabinet
- All essential timing and interlocking functions for reversing duty and star-delta (wye-delta) starting are integrated
- No additive protection circuit required

For more information on IO-Link and AS-Interface, see "Industrial Communication", from page 2/1 onwards.

SIRIUS 3RA2711 function modules for IO-Link for mounting on 3RT2 contactors

By grouping up to four starters, it is possible to connect up to 16 starters to one master of the ET 200SP or S7-1200. In this case all the signals of the individual controls are made available directly in the process image of the input through only three individual wires per starter group. If the same potential is present at the ET 200SP or S7-1200 master and at the switching devices, the wiring can be reduced further by connecting the supply voltage of the contactor coils to the communication wires via jumpers.



Group formation with IO-Link

In case of a malfunction, the corresponding error signals are also sent directly to the PLC in acyclic mode. This is in addition to transmission of the switching signals and status signals.

Possible error signals:

- Switching element defective
- No main voltage (motor starter protector tripped)
- No control supply voltage
- Limit position on the right / on the left
- Manual mode
- Process image fault

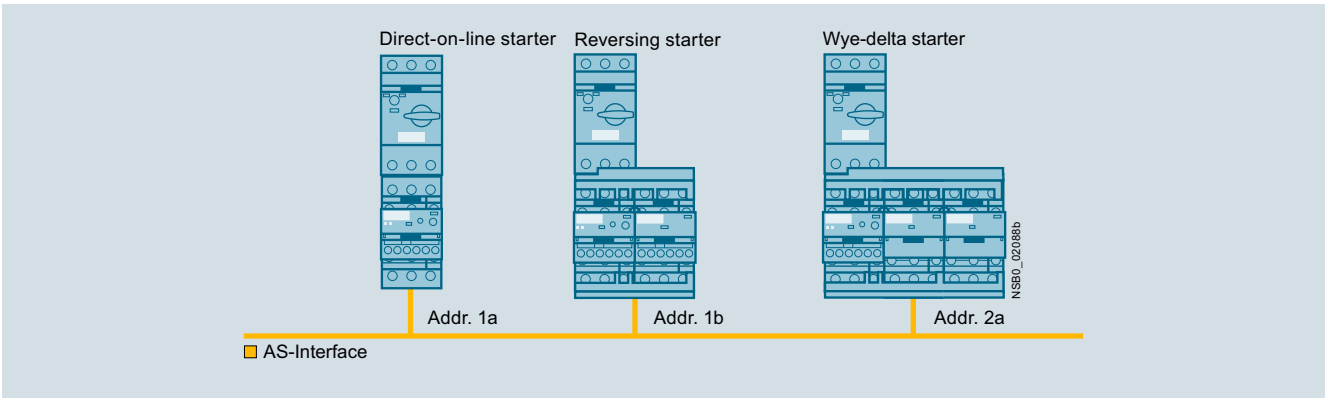
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This easy integration of the starters in the TIA world does not limit the flexibility in the field in the least. For example, all function modules have special terminals in order to enable direct local disconnection. These terminals can be connected for example to a position switch. The input interrupts the voltage supply to the contactor coil directly, i.e. without going through the PLC. These terminals are jumpered in the as-delivered state.

Local manual operation of the complete starter group is also straightforward using a hand-held device. The latter is easily connected to the last starter and can be built into the front panel of the control cabinet if required. This offers significant advantages particularly for commissioning.

SIRIUS function modules with IO-Link are used above all in machines and plants in which there are several motor feeders in one control cabinet. Using IO-Link, the connection of these feeders to the automation level is easy, quick and error-free. And with IO modules no longer needed, the width of the PLC is far smaller.

SIRIUS 3RA2712 function modules for AS-Interface for mounting on 3RT2 contactors



Topology with AS-Interface

This easy integration of the starters in the TIA world does not limit the flexibility in the field in the least. For example, all function modules have special terminals in order to enable direct local disconnection. These terminals can be connected for example to a position switch. The input interrupts the voltage supply to the contactor coil directly, i.e. without going through the PLC. These terminals are jumpered in the as-delivered state.

SIRIUS function modules with AS-Interface are recommended above all in machines and plants requiring easy connection of several different sensors and actuators both inside and outside the control cabinet to the higher-level control system. And with IO modules no longer needed, the width of the PLC is far smaller.

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3

Technical specifications

More information

TIA Selection Tool Cloud (TST Cloud), see https://mall.industry.siemens.com/spice/TSTWeb/?kmat=Contactor

Technical specifications

- For SIRIUS 3RT2 contactors and SIRIUS 3RH2 contactor relays, see https://support.industry.siemens.com/cs/ww/en/ps/16208/td
- For SIRIUS 3RT1 contactors, see https://support.industry.siemens.com/cs/ww/en/ps/16209/td

FAQs

- For SIRIUS 3RT2 contactors and SIRIUS 3RH2 contactor relays, see https://support.industry.siemens.com/cs/ww/en/ps/16208/faq
- For SIRIUS 3RT1 contactors, see https://support.industry.siemens.com/cs/ww/en/ps/16209/faq

Manuals, see

- System Manual "SIRIUS Modular System – System Overview", https://support.industry.siemens.com/cs/WW/en/view/60311318
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557
- "SIRIUS manual - SIRIUS 3RA28 Function Modules for mounting on 3RT2 contactors", https://support.industry.siemens.com/cs/ww/en/view/60279150
- Manual "SIRIUS 3RA2711 Function Modules for IO-Link", https://support.industry.siemens.com/cs/ww/en/view/39319600
- Manual "SIRIUS 3RA2712 function modules for AS-Interface", https://support.industry.siemens.com/cs/ww/en/view/39318922

Solid-state time-delay auxiliary switch blocks for mounting on 3RT201 to 3RT204 (sizes S00 to S3) and 3RH2 contactor relays (size S00)

Type			3RA2813	3RA2814	3RA2815
Function			ON-delay	OFF-delay with control signal	OFF-delay without control signal
General data					
Dimensions (basic unit with mounted solid-state time-delay auxiliary switch block)			See 3RT2 contactors (pages 3/22, 3/28, 3/33, 3/38) and 3RH2 contactor relays (page 5/7)		
Rated insulation voltage U_i Pollution degree 3, overvoltage category III		V AC	300		
Rated impulse withstand voltage U_{imp}		kV AC	4		
Permissible ambient temperature					
• During operation		°C	-25 ... +60		
• During storage		°C	-40 ... +80		
Degree of protection acc. to IEC 60529			IP20		
Shock resistance Half-sine acc. to IEC 60068-2-27		*g*/ms	15/11		
Vibration resistance acc. to IEC 60068-2-6		Hz/mm	10 ... 55/0.35		
Electromagnetic compatibility (EMC)			IEC 61000-6-2, IEC 61000-6-4, IEC 61812-1, IEC 60947-4-1		
Overvoltage protection			Varistor integrated		
Permissible mounting position			Any (for the mounting position of 3RT2 contactors, see pages 3/22, 3/28, 3/33, 3/38; for the mounting position of 3RH2 contactor relays, see page 5/6)		
Control					
Operating range of excitation			0.85 ... 1.1 x U_s, 0.95 ... 1.05 times the rated frequency		
Rated power		W	1		
• Power consumption at 230 V AC, 50 Hz		VA	2		
Recovery time		ms	150		--
Minimum ON period		ms	--	35	200
Setting accuracy, typ., with reference to upper limit of scale			± 15%		
Repeat accuracy, max.			± 1%		
Load side					
Rated operational currents I_e					
• AC-15 at 24 ... 250 V, 50 Hz		A	3		
• DC-13	- At 24 V	A	1		
	- At 125 V	A	0.2		
	- At 250 V	A	0.1		
Mechanical endurance		Operating cycles	10 x 10^6		
Electrical endurance at AC-15, 250 V, 3 A		Operating cycles	100 000		
Switching frequency for load					
• With I_e at 230 V AC		h^{-1}	2 500		
• With 3RT2 contactor at 230 V AC		h^{-1}	2 500		
Residual current, max.		mA	--		
Voltage drop, max., with conducting output		VA	--		
Short-circuit protection					
• Fuse links, operational class gG: DIAZED, type 5SB		A	4		

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Type		3RA2813	3RA2814	3RA2815
Function		ON-delay	OFF-delay with control signal	OFF-delay without control signal
Conductor cross-sections				
Connection type (1 or 2 conductors can be connected)		Screw terminals		
• Solid	mm^2	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)		
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)		
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)		
• Terminal screws		M3 (for standard screwdriver size 2 or Pozidriv 2)		
• Tightening torque	Nm	0.8 ... 1.2		
Connection type (1 or 2 conductors can be connected)		Spring-type terminals		
• Solid	mm^2	2 x (0.25 ... 1.5)		
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.25 ... 1.5)		
• Finely stranded without end sleeve	mm^2	2 x (0.25 ... 1.5)		
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)		
• Operating devices	mm	3.0 x 0.5		

Solid-state time-delay auxiliary switch blocks, for snapping onto 3RT1 contactors

Type		3RT1926-2E, 3RT1926-2F, 3RT1926-2G
Sizes		S6 to S12
General data		
Dimensions (W x H x D)	mm	45 x 26 x 50
Rated insulation voltage U_i Pollution degree 3, Overvoltage category III acc. to IEC 60664-1	V AC	250
Permissible ambient temperature		
• During operation	°C	-25 ... +60
• During storage	°C	-40 ... +80
Degree of protection acc. to IEC 60529		
Terminals		IP20
Shock resistance Half-sine acc. to IEC 60068-2-27	*g*/ms	15/11
Vibration resistance acc. to IEC 60068-2-6	Hz/mm	10 ... 55/0.35
Electromagnetic compatibility (EMC)		IEC 61812-1
Permissible mounting position		Any (see 3RT1 contactors, page 3/43)
Control		
Operating range of excitation		0.85 ... 1.1 x U_s, 0.95 ... 1.05 times the rated frequency
Rated power	W	2
Power consumption at 230 V AC, 50 Hz	VA	4
Recovery time	ms	150
Minimum ON period	ms	200 (with OFF-delay)
Setting accuracy, typ. with reference to upper limit of scale	%	± 15
Repeat accuracy, max.	%	± 1

Type		3RT1926-2E, 3RT1926-2F, 3RT1926-2G
Sizes		S6 to S12
Load side		
Rated operational currents I_e		
• AC-15, 230 V, 50 Hz	A	3
• DC-13, 24 V	A	1
• DC-13, 110 V	A	0.2
• DC-13, 230 V	A	0.1
Short-circuit protection		
Fuse links, operational class gG: DIAZED, type 5SB	A	4
Mechanical endurance	Operating cycles	10×10^6
Switching frequency for load		
• With I_e at 230 V AC	h^{-1}	2 500
• With 3RT2016 contactor at 230 V AC	h^{-1}	5 500
Conductor cross-sections		
Connection type (1 or 2 conductors can be connected)		Screw terminals
• Solid	mm^2	2 x (0.5 ... 1.5), 2 x (0.75 ... 4)
• Finely stranded with end sleeve	mm^2	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (18 ... 14)
• Terminal screws		M3
• Tightening torque	Nm	0.8 ... 1.2

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Accessories

Coupling links for control by PLC

Type		3RH2924-1GP11	3RH2914-.GP11
Mounting on contactors of size		S0	S00 to S3
General data			
Standards		IEC 60947	
Rated insulation voltage U_i (pollution degree 3)	V	300	
Protective separation between coil and contacts acc. to IEC 60947-1, Appendix N	V AC	Up to 300	
Degree of protection acc. to IEC 60529			
• Connections		IP20	
Permissible ambient temperature			
• During operation	°C	-25 ... +60	
• During storage	°C	-40 ... +80	
Control side			
Rated control supply voltage U_s	V DC	24	
Operating range	V DC	17 ... 30	
Power consumption at U_s	W	0.5	
Nominal current input	mA	20	
Release voltage	V	≥ 4	
Function display		Yellow LED	
Protection circuit		Varistors	
Load side			
Mechanical endurance	Operating cycles	20 million	10 million
Electrical endurance at I_e	Operating cycles	0.1 million	
Switching frequency	h^{-1}	5 000 operating cycles/h	
Make-time	ms	Approx. 7	
Break-time	ms	Approx. 4	
Bounce time	ms	Approx. 2	
Contact material		$AgSnO_2$	
Switching voltage	V AC/DC	24 ... 250	
Rated operational current I_e			
• AC-15/AC-14 at 230 V	A	3	
• DC-13 at 230 V	A	0.1	
Permissible residual current of the electronics (with 0 signal)	mA	2.5	
Conductor cross-sections			
Connection type (1 or 2 conductors can be connected)		**Screw terminals**	
• Solid	mm^2	2 x (0.5 ... 2.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	2 x (0.5 ... 1.5)	
• Terminal screws		M3	
Connection type (1 or 2 conductors can be connected)		**Spring-type terminals**	
• Solid	mm^2	--	2 x (0.25 ... 1.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm^2	--	2 x (0.25 ... 1.5)
• Finely stranded without end sleeve	mm^2	--	2 x (0.25 ... 1.5)
• AWG cables, solid or stranded	AWG	--	2 x (24 ... 16)
• Operating devices	mm	--	3.0 x 0.5

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3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays

Type			**3RA2811**	**3RA2831**	**3RA2812**	**3RA2832**	**3RA2816**
Mounting on contactors of size			**S00, S0**	**S2, S3**	**S00, S0**	**S2, S3**	**S00 to S3**
Function			**For direct-on-line starting**				**For star-delta (wye-delta) starting**
			ON-delay		**OFF-delay with control signal**		
General data							
Dimensions (basic unit with mounted function module)			See 3RT2 contactors (pages 3/22, 3/28, 3/33, 3/38) and 3RH2 contactor relays (page 5/7)				
Rated insulation voltage U_i Pollution degree 3 Overvoltage category III		V AC	300				
Rated impulse withstand voltage U_{imp}		kV AC	4				
Overvoltage protection			Varistor integrated				
Recovery time		ms	50				150
Minimum ON period		ms	--		35		--
Setting accuracy With reference to upper limit of scale	Typ.		± 15%				
Repeat accuracy	Max.		± 1%				
Degree of protection acc. to IEC 60529			IP20				
Permissible ambient temperature							
• During operation		°C	-25 ... +60				
• During storage		°C	-40 ... +80				
Shock resistance Half-sine acc. to IEC 60068-2-27		*g*/ms	15/11				
Vibration resistance acc. to IEC 60068-2-6		Hz/mm	10 ... 55/0.35				
Electromagnetic compatibility (EMC)			IEC 61000-6-2, IEC 61000-6-4, IEC 61812-1, IEC 60947-4-1				
Permissible mounting position			Any (for the mounting position of 3RT2 contactors, see pages 3/22, 3/28, 3/33, 3/38; for the mounting position of 3RH2 contactor relays, see page 5/6)				
Control side							
Operating range of excitation			0.85 ... 1.1 x U_s, 0.95 ... 1.05 times the rated frequency				
Rated power		W	1				
• Power consumption at 230 V AC, 50 Hz		VA	1				2
Load side							
Mechanical endurance		Operating cycles	100 x 10^6				10 x 10^6
Electrical endurance							
• With 3RT2028 contactor		Operating cycles	100 000				--
• At AC-15, 250 V, 3 A		Operating cycles	--				100 000
Switching frequency for load							
• With I_e at 230 V AC		h^{-1}	2 500				--
• With 3RT2 contactor at 230 V AC		h^{-1}	2 500				--
Residual current	Max.	mA	5	--			--
Voltage drop With conducting output	Max.	VA	3.5	--			--
DIAZED fuse protection	Operational class gG	A	--				4
Conductor cross-sections							
Connection type (1 or 2 conductors can be connected)			**Screw terminals**				
• Solid		mm^2	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)				--
• Finely stranded with end sleeve (DIN 46228-1)		mm^2	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)				--
• AWG cables, solid or stranded		AWG	2 x (20 ... 14)				--
• Terminal screws			M3 (for standard screwdriver size 2 or Pozidriv 2)				--
• Tightening torque		Nm	0.8 ... 1.2				--
Connection type (1 or 2 conductors can be connected)			**Spring-type terminals**				
• Operating devices		mm	3.0 x 0.5				--
• Solid		mm^2	2 x (0.25 ... 1.5)				--
• Finely stranded with end sleeve (DIN 46228-1)		mm^2	2 x (0.25 ... 1.5)				--
• Finely stranded without end sleeve		mm^2	2 x (0.25 ... 1.5)				--
• AWG cables, solid or stranded		AWG	2 x (24 ... 16)				--

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Accessories

3RA27 function modules for IO-Link for mounting on 3RT2 contactors

Type			**3RA2711**
General data			
Dimensions			See 3RT2 contactors: pages 3/22, 3/28, 3/33 and 3/38
Suitable for IO-Link masters acc. to specification			1.1
Permissible ambient temperature			
• During operation	Acc. to IEC 60947-1	°C	-25 ... +60
• During storage	Acc. to IEC 60721-3-1	°C	-40 ... +80
• During transport	Acc. to IEC 60721-3-2	°C	-40 ... +80
Degree of protection			IP20
Operating voltage U_{Hi}		V DC	24 ± 20%
Max. length of the cables for the input Y1-Y2	Acc. to EN 50295	m	30
Electromagnetic compatibility (EMC)			IEC 61000-6-2, IEC 61000-6-4, IEC 60947-4-1
Conductor cross-sections			
Connection type (1 or 2 conductors can be connected)			**Screw terminals**
• Solid		mm^2	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)		mm^2	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)
• AWG cables, solid or stranded		AWG	2 x (20 ... 14)
• Terminal screws			M3 (for standard screwdriver Ø 6 mm or Pozidriv 2)
• Tightening torque of the terminal screws		Nm	0.8 ... 1.2
Connection type (1 or 2 conductors can be connected)			**Spring-type terminals**
• Operating devices		mm	3.0 x 0.5
• Solid		mm^2	2 x (0.25 ... 1.5)
• Finely stranded with end sleeve (DIN 46228-1)		mm^2	2 x (0.25 ... 1.5)
• Finely stranded without end sleeve		mm^2	2 x (0.25 ... 1.5)
• AWG cables, solid or stranded		AWG	2 x (24 ... 16)

3RA27 function modules for AS-Interface for mounting on 3RT2 contactors

Type			**3RA2712**
General data			
Dimensions			See 3RT2 contactors: pages 3/22, 3/28, 3/33 and 3/38
Slave type			A/B slave
Suitable for AS-i masters acc. to specification			2.1 or higher
AS-i slave profile IO.ID.ID2			7.A.E
ID1 code (factory setting)			7
Permissible ambient temperature			
• During operation	Acc. to IEC 60947-1	°C	-25 ... +60
• During storage	Acc. to IEC 60721-3-1	°C	-40 ... +80
• During transport	Acc. to IEC 60721-3-2	°C	-40 ... +80
Degree of protection			IP20
Operational voltage			
• AS-Interface		V	26.5 ... 31.6
• AUX PWR 24 V DC		V	24 ± 20%
Current consumption, max.			
• AS-Interface		mA	30
• AUX PWR			
- Maximum pick-up/hold current	Size S00	mA	200/200
	Size S0	mA	300/300
	Size S2	mA	1 300/50
	Size S3	mA	4 000/70
Max. length of the cables for the input Y1-Y2	Acc. to EN 50295	m	30
Electromagnetic compatibility (EMC)			IEC 61000-6-2, IEC 61000-6-4, IEC 60947-4-1
Conductor cross-sections			
Connection type (1 or 2 conductors can be connected)			**Screw terminals**
• Solid		mm^2	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)		mm^2	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)
• AWG cables, solid or stranded		AWG	2 x (20 ... 14)
• Terminal screws			M3 (for standard screwdriver Ø 6 mm or Pozidriv 2)
• Tightening torque of the terminal screws		Nm	0.8 ... 1.2
Connection type (1 or 2 conductors can be connected)			**Spring-type terminals**
• Operating devices		mm	3.0 x 0.5
• Solid		mm^2	2 x (0.25 ... 1.5)
• Finely stranded with end sleeve (DIN 46228-1)		mm^2	2 x (0.25 ... 1.5)
• Finely stranded without end sleeve		mm^2	2 x (0.25 ... 1.5)
• AWG cables, solid or stranded		AWG	2 x (24 ... 16)

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Selection and ordering data

Auxiliary switch: Terminal designations and identification numbers for auxiliary contacts

Terminal designations

The terminal designations are 2-digit, e.g. 13, 14, 21, 22:

- Tens digit: Sequence digit
  - Related terminals have the same sequence digit
- Units digit: Function digit
  - 1-2 for normally closed contacts (NC)
  - 3-4 for normally open contacts (NO)

Identification numbers

The identification number indicates the number and type of the auxiliary contacts, e.g. 40, 31, 22, 13:

- 1st digit: number of normally open contacts (NO)
- 2nd digit: number of normally closed contacts (NC)

Examples:

- 31 = 3 NO + 1 NC
- 40 = 4 NO

Selection aid for mountable auxiliary switch blocks for power contactors and contactor relays

The auxiliary switch blocks of the 3RH29 series for mounting on the front and side can be used for 3RT2 power contactors as well as for 3RH2 contactor relays.

The possible combinations of basic unit and mounted auxiliary switch block can be found in the tables, see the following pages.

Where the columns and lines intersect (blue and green in the example) you will find the identification number for the combination of basic unit (column) and auxiliary switch block (line).

Additional auxiliary switch blocks			3-pole contactors		
Article number	Auxiliary contacts		3RT201	3RT201	3RT202 to 3RT204
	Version		S00	S00	S0 to S3
	NO	NC	10	01	11
			13 / 14	21 / 22	13 / 21 / 14 / 22
			2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.
			According to EN 50012[1)]		
Auxiliary switch blocks without NO contacts					
3RH2911-□HA01	--	1	**11**	02	**12**
3RH2911-□HA02	--	2	**12**	03	**13**
3RH2911-□HA03	--	3	**13**	04	14
3RH2911-□FA04	--	4	14	--	--
Auxiliary switch blocks with 1 NO contact					
3RH2911-□HA10	1	--	20	11	**21**

1 For screw terminals
2 For spring-type terminals

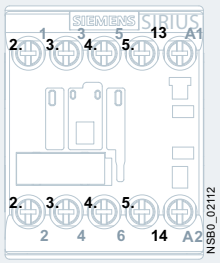
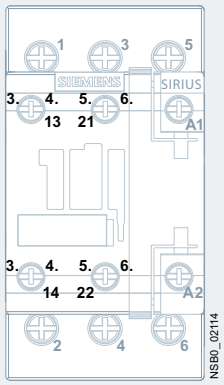
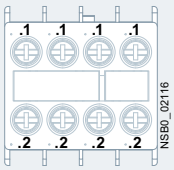
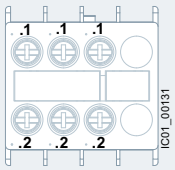
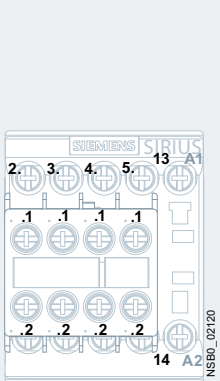
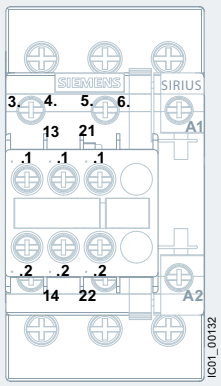
1) Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

Example 1

Basic unit: 3-pole 3RT2017 motor contactor with 1 NO
Required: 1 NO + 4 NC (Ident. No. 14)
Result: 3RH2911-.FA04 auxiliary switch block

Example 2

Basic unit: 3-pole 3RT2023 motor contactor with 1 NO + 1 NC
Required: 1 NO + 4 NC (Ident. No. 14)
Result: Auxiliary switch block 3RH2911-.HA03

	Example 1	*Example 2*
Type	**3RT20 motor contactor, S00 with 1 NO**	**3RT20 motor contactor, S0 with 1 NO + 1 NC**
		
Sequence digit	2. 3. 4. 5.	3. 4. 5. 6.
Type	**Auxiliary switch blocks with 4 NC, 3RH2911-.FA04**	**Auxiliary switch blocks with 3 NC, 3RH2911-.HA03**
		
Funtion digit	.1 .1 .1 .1 .2 .2 .2 .2	.1 .1 .1 .2 .2 .2
Combination	**3RT20 motor contactor, S00 with aux. switch block**	**3RT20 motor contactor, S0 with aux. switch block**
		
Terminal designation	13 21 31 41 51 14 22 32 42 52	13 21 31 41 51 14 22 32 42 52
Result	**Ident. No. 14**	**Ident. No. 14**

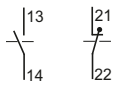
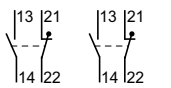
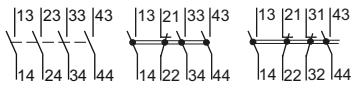
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Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks			3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts		S00		S0 to S3	S00		S0 to S3		S00		
	Version		3RT201		3RT202, 3RT203, 3RT204, 3RT244	3RT231	3RT251	3RT232, 3RT233, 3RT234	3RT252, 3RT253, 3RT254	3RH21, 3RH24		
	NO	NC	10	01	11	--	--	11	11	40E	31E	22E
			13 14	21 22	13 21 14 22			13 21 14 22	13 21 14 22	13 23 33 43 14 24 34 44	13 21 33 43 14 22 34 44	13 21 31 43 14 22 32 44
			2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8	5. 6. 7. 8.	5. 6. 7. 8.
			According to EN 50012[1]			According to EN 50012[1]				According to EN 50011[1]		
Auxiliary switch blocks, front												
Without NO contact												
3RH2911-☐HA01	--	1	**11**	02	**12**	01	01	**12**	**12**	**41X**	**32X**	**23X**
3RH2911-☐HA02	--	2	**12**	03	**13**	02	02	**13**	--	**42E**	**33X**	24
3RH2911-☐HA03	--	3	**13**	04	14	03	--	--	--	43	34	--
3RH2911-☐FA04	--	4	14	--	--	--	--	--	--	**44E**	--	--
With 1 NO contact												
3RH2911-☐HA10	1	--	20	11	**21**	**10**	**10**	**21**	**21**	**50E**	**41E**	**32E**
3RH2911-☐HA11	1	1	**21**	12	**22**	11	11	**22**	**22**	**51X**	**42X**	**33X**
3RH2911-☐HA12	1	2	**22**	13	**23**	12	12	**23**	--	52	43	34
3RH2911-☐HA13	1	3	**23**	14	24	13	--	--	--	**53X**	**44X**	--
With 2 NO contacts												
3RH2911-☐HA20	2	--	30	21	**31**	20	20	**31**	**31**	**60E**	**51X**	**42X**
3RH2911-☐HA21	2	1	**31**	22	**32**	21	21	**32**	**32**	61	52	43
3RH2911-☐HA22	2	2	**32**	23	33	22	22	33	--	**62X**	53	**44X**
3RH2911-☐FA22	2	2	32	23	33	**22**	**22**	33	--	**62X**	53	**44X**
With 3 NO contacts												
3RH2911-☐HA30	3	--	40	31	**41**	30	30	**41**	**41**	70	61	52
3RH2911-☐HA31	3	1	**41**	32	42	31	31	42	42	**71X**	**62X**	**53X**
With 4 NO contacts												
3RH2911-☐FA40	4	--	50	41	51	40	40	51	51	**80E**	**71X**	**62X**

[1] Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

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Additional auxiliary switch blocks			3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts		S00		S0 to S3	S00		S0 to S3		S00		
	Version		3RT201		3RT202, 3RT203, 3RT204, 3RT244	3RT231	3RT251	3RT232, 3RT233, 3RT234	3RT252, 3RT253, 3RT254	3RH21, 3RH24		
	NO	NC	S00		S0 to S3	S00		S0 to S3		40E	31E	22E
												
			2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8	5. 6. 7. 8.	5. 6. 7. 8.
			According to EN 50005			According to EN 50005				According to EN 50005		
Auxiliary switch blocks, front (continued)												
***With make-before-break*[1)]**												
3RH2911-□FB11	1	1	21	12	22	11	11	22	22	51	42	33
3RH2911-□FB22	2	2	32	23	33	22	22	33	--	62	53	44
3RH2911-□FC22	2	2	32	23	33	22	22	33	--	62	53	44
Complete inscription with terminals from top or bottom												
3RH2911-1AA10	1	--	20	11	21	10	10	21	21	50	41	32
3RH2911-1BA10	1	--	20	11	21	10	10	21	21	50	41	32
3RH2911-1AA01	--	1	11	02	12	01	01	12	12	41	32	23
3RH2911-1BA01	--	1	11	02	12	01	01	12	12	41	32	23
3RH2911-1LA11	1	1	21	12	22	11	11	22	22	51	42	33
3RH2911-1MA11	1	1	21	12	22	11	11	22	22	51	42	33
3RH2911-1LA20	2	--	30	21	31	20	20	31	31	60	51	42
3RH2911-1MA20	2	--	30	21	31	20	20	31	31	60	51	42

[1)] Contacts with make-before-break have no mirror contact function.

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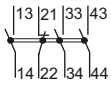
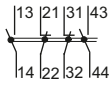
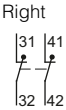
Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks			3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts		S00		S0 to S3	S00		S0 to S3		S00		
	Version		3RT201		3RT202, 3RT203, 3RT204, 3RT244	3RT231	3RT251	3RT232, 3RT233, 3RT234	3RT252, 3RT253, 3RT254	3RH21, 3RH24		
	NO	NC	10	01	11	--	--	11	11	40E	31E	22E
			13 21 14 22		13 21 14 22			13 21 14 22	13 21 14 22	13 23 33 43 14 24 34 44	13 21 33 43 14 22 34 44	13 21 31 43 14 22 32 44
			2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8	5. 6. 7. 8.	5. 6. 7. 8.
			According to EN 50005			According to EN 50005				According to EN 50011[1]		
Auxiliary switch blocks, front (continued)												
With complete inscription (for contactor relays)[2]												
3RH2911-□GA40	4	--	53 63 73 83 54 64 74 84			--	--	--	--	**80E**	--	--
3RH2911-□GA31	3	1	53 61 73 83 54 62 74 84			--	--	--	--	**71E**	--	--
3RH2911-□GA22	2	2	53 61 71 83 54 62 72 84			--	--	--	--	**62E**	--	--
3RH2911-□GA13	1	3	53 61 71 81 54 62 72 82			--	--	--	--	**53E**	--	--
3RH2911-□GA04	--	4	51 61 71 81 52 62 72 82			--	--	--	--	**44E**	--	--
Complete inscription												
3RH2911-□XA40 -0MA0	4	--	53 63 73 83 54 64 74 84			50	41	51	40	40	51	51	**80E**	**71X**	**62X**
3RH2911-□XA31 -0MA0	3	1	53 61 73 83 54 62 74 84			41	32	42	31	31	42	42	**71E**	**62X**	53
3RH2911-□XA22 -0MA0	2	2	53 61 71 83 54 62 72 84			32	23	33	22	22	33	--	**62E**	53	**44X**
3RH2911-□XA04 -0MA0	--	4	51 61 71 81 52 62 72 82			14	--	--	--	--	--	--	**44E**	--	--
Solid-state compatible												
3RH2911-□NF02	--	2	.1 .1 .2 .2			12	03	13	02	02	13	--	42	33	24
3RH2911-□NF11	1	1	.3 .1 .4 .2			21	12	22	11	11	22	22	51	42	33
3RH2911-□NF20	2	--	.3 .3 .4 .4			30	21	31	20	20	31	31	60	51	42

[1] Combinations according to EN 50011 and IEC 60947-5-1 are in **bold** print.
All combinations comply with EN 50005.

[2] Selection and ordering data, see page 3/91.

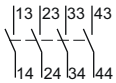
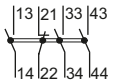
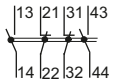
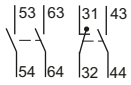
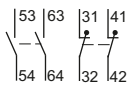
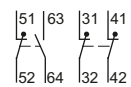
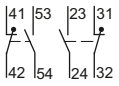
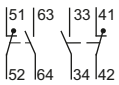
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Additional auxiliary switch blocks			3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts		S00		S0 to S3	S00		S0 to S3		S00		
	Version		3RT201		3RT202, 3RT203, 3RT204, 3RT244	3RT231	3RT251	3RT232, 3RT233, 3RT234	3RT252, 3RT253, 3RT254	3RH21		
	NO	NC	10	01	11	--	--	11	11	40E	31E	22E
												
			2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8	5. 6. 7. 8.	5. 6. 7. 8.
			According to EN 50012[1]			According to EN 50012[1]				According to EN 50011[1]		
Lateral auxiliary switch blocks												
For size S00			Left	Right								
3RH2911-□DA02	--	2			**12**	--	--	02	02	--	--	--	--
3RH2911-□DA02	--	4			14	--	--	--	--	--	--	--	--
3RH2911-□DA11	1	1			**21**	--	--	11	11	--	--	--	--
3RH2911-□DA11	2	2			32	--	--	22	22	--	--	--	--
3RH2911-□DA20	2	--			30	--	--	20	20	--	--	--	--
3RH2911-□DA20	4	--			50	--	--	40	40	--	--	--	--
3RH2911-□DA20 + **3RH2911-□DA11**	2 1	-- 1			**41**	--	--	31	31	--	--	--	--
3RH2911-□DA20 + **3RH2911-□DA02**	2 --	-- 2			**32**	--	--	22	22	--	--	--	--
3RH2911-□DA11 + **3RH2911-□DA02**	1 --	1 2			**23**	--	--	13	--	--	--	--	--
For sizes S00 to S3			Left	Right									
3RH2921-□DA02	--	2			12	03	**13**	02	02	**13**	--	--	--	--
3RH2921-□DA02	--	4			14	--	--	--	--	--	--	--	--	--
3RH2921-□DA11	1	1			21	12	**22**	11	11	**22**	**22**	--	--	--
3RH2921-□DA11	2	2			32	23	33	22	22	33	--	--	--	--
3RH2921-□DA20	2	--			30	21	**31**	20	20	**31**	**31**	--	--	--
3RH2921-□DA20	4	--			50	41	51	40	40	51	51	--	--	--

[1] Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

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Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks			3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts		S00		S0 to S3	S00		S0 to S3		S00		
	Version		3RT201		3RT202, 3RT203, 3RT204, 3RT244	3RT231	3RT251	3RT232, 3RT233, 3RT234	3RT252, 3RT253, 3RT254	3RH21		
	NO	NC	10	01	11	--	--	11	11	40E	31E	22E
												
			2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8	5. 6. 7. 8.	5. 6. 7. 8.
			According to EN 50012[1]			According to EN 50012[1]				According to EN 50011[1]		
Lateral auxiliary switch blocks (continued)												
For sizes S00 to S3			Left Right									
3RH2921-☐DA20 + **3RH2921-☐DA11**	2	--				41	32	42	31	31	42	42	--	--	--
	1	1													
3RH2921-☐DA20 + **3RH2921-☐DA02**	2	--				32	23	33	22	22	33	--	--	--	--
	--	2													
3RH2921-☐DA11 + **3RH2921-☐DA02**	1	1				23	14	24	13	--	--	--	--	--	--
	--	2													
For contactor relays[2]			Left												
3RH2921-☐DA02	--	2				--	--	--	--	--	--	--	**42Z**	**33X**	24
3RH2921-☐DA11	1	1				--	--	--	--	--	--	--	**51X**	**42X**	**33X**
3RH2921-☐DA20	2	--				--	--	--	--	--	--	--	**60Z**	**51X**	**42X**
Solid-state compatible															
For size S00			Left Right												
3RH2911-2DE11	1	1				21	--	--	11	11	--	--	--	--	--
3RH2911-2DE11	2	2				32	--	--	22	22	--	--	--	--	--
For sizes S00 to S3			Left Right												
3RH2921-☐DE11	1	1				21	12	22	11	11	22	22	--	--	--
3RH2921-☐DE11	2	2				32	23	33	22	22	33	--	--	--	--
For contactor relays[2]			Left												
3RH2921-2DE11	1	1				--	--	--	--	--	--	--	**51X**	**42X**	**33X**

[1] Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

[2] Without positively driven operation.

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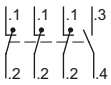
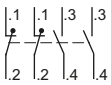
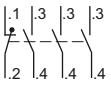
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH2911-1HA22



3RH2911-2HA22

For contactors/ contactor relays[1]	Auxiliary contacts Version			SD	Screw terminals		SD	Spring-type terminals	
					Article No.	Price per PU		Article No.	Price per PU
Type	NO	NC		d			d		
Auxiliary switch blocks for snapping onto the front									
Sizes S00 to S3									
3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	--	1			3RH2911-1HA01			3RH2911-2HA01	
3RH21, 3RH24	--	2			3RH2911-1HA02			3RH2911-2HA02	
	--	3		5	3RH2911-1HA03		5	3RH2911-2HA03	
	1	--			3RH2911-1HA10			3RH2911-2HA10	
	1	1			3RH2911-1HA11			3RH2911-2HA11	
	1	2			3RH2911-1HA12			3RH2911-2HA12	
	1	3			3RH2911-1HA13			3RH2911-2HA13	
	2	--			3RH2911-1HA20			3RH2911-2HA20	
	2	1			3RH2911-1HA21			3RH2911-2HA21	
	2	2			3RH2911-1HA22			3RH2911-2HA22	
	3	--		5	3RH2911-1HA30		5	3RH2911-2HA30	
	3	1			3RH2911-1HA31			3RH2911-2HA31	

[1] For detailed information on use, see page 3/84.

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Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

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


3RH2911-1FC22


3RH2911-2FC22


3RH2911-1AA01


3RH2911-1BA01


3RH2911-1LA11


3RH2911-1MA11

For contactors/ contactor relays[1]	Connections Position	Auxiliary contacts Version NO	NC	NO	NC	SD	Screw terminals Article No.	Price per PU	SD	Spring-type terminals Article No.	Price per PU
Type						d			d		
Auxiliary switch blocks for snapping onto the front											
Sizes S00 to S3											
3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	--	4	--	--	--	▶	**3RH2911-1FA40**		▶	**3RH2911-2FA40**	
3RH21, 3RH24	--	2	2	--	--	▶	**3RH2911-1FA22**		▶	**3RH2911-2FA22**	
	--	--	4	--	--	▶	**3RH2911-1FA04**		▶	**3RH2911-2FA04**	
	--	--	--	1	1	▶	**3RH2911-1FB11**		▶	**3RH2911-2FB11**	
	--	1	1	1	1	▶	**3RH2911-1FB22**		▶	**3RH2911-2FB22**	
	--	--	--	2	2	▶	**3RH2911-1FC22**		▶	**3RH2911-2FC22**	
1- and 2-pole auxiliary switch blocks, cable entry from top or bottom											
3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	Top	1	--	--	--	▶	**3RH2911-1AA10**			**--**	
	Bottom	1	--	--	--	▶	**3RH2911-1BA10**			**--**	
3RH21, 3RH24	Top	--	1	--	--	▶	**3RH2911-1AA01**			**--**	
	Bottom	--	1	--	--	▶	**3RH2911-1BA01**			**--**	
	Top	1	1	--	--	▶	**3RH2911-1LA11**			**--**	
	Bottom	1	1	--	--	▶	**3RH2911-1MA11**			**--**	
	Top	2	--	--	--	▶	**3RH2911-1LA20**			**--**	
	Bottom	2	--	--	--	▶	**3RH2911-1MA20**			**--**	

[1] For detailed information on use, see pages 3/84 and 3/85.

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

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Auxiliary switch blocks, instantaneous

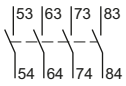
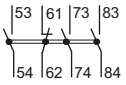
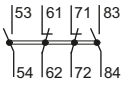
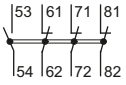
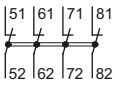
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH2911-1GA22



3RH2911-2GA22

For contactor relays[1]	Contactor relay with auxiliary switch block Ident. No.	Auxiliary contacts Version NO	NC		SD	Screw terminals Article No.	Price per PU	SD	Spring-type terminals Article No.	Price per PU
Type					d			d		
Auxiliary switch blocks for snapping onto the front										
Size S00										
Blocks for the assembly of contactor relays with 8 contacts										
3RH2140, 3RH2440, Ident. No. 40E	**80E**	4	--		▶	**3RH2911-1GA40**		▶	**3RH2911-2GA40**	
	71E	3	1		▶	**3RH2911-1GA31**		▶	**3RH2911-2GA31**	
	62E	2	2		▶	**3RH2911-1GA22**		▶	**3RH2911-2GA22**	
	53E	1	3		▶	**3RH2911-1GA13**		▶	**3RH2911-2GA13**	
	44E	--	4		▶	**3RH2911-1GA04**		▶	**3RH2911-2GA04**	

[1] For detailed information on use, see page 3/86.

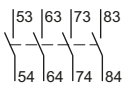
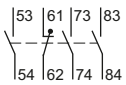
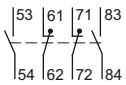
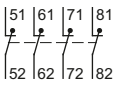
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH2911-1XA22-0MA0



3RH2911-2XA22-0MA0

For contactors/ contactor relays[1]	Auxiliary contacts Version NO	NC		SD	Screw terminals Article No.	Price per PU	SD	Spring-type terminals Article No.	Price per PU
Type				d			d		
Auxiliary switch blocks for snapping onto the front									
Sizes S00 to S3									
3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	4	--		▶	**3RH2911-1XA40-0MA0**		▶	**3RH2911-2XA40-0MA0**	
3RH21, 3RH24	3	1		▶	**3RH2911-1XA31-0MA0**		▶	**3RH2911-2XA31-0MA0**	
	2	2		▶	**3RH2911-1XA22-0MA0**		▶	**3RH2911-2XA22-0MA0**	
	--	4		▶	**3RH2911-1XA04-0MA0**		5	**3RH2911-2XA04-0MA0**	

[1] For detailed information on use, see page 3/86.

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

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Auxiliary switch blocks, instantaneous

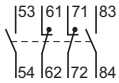
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B


3RH1921-1CA10


3RH1921-1CD10


3RH1921-2CA10


3RH1921-2CA01

For contactors	Auxiliary contacts						SD	Screw terminals		SD	Spring-type terminals	
	Ident. No.	Version						Article No.	Price per PU		Article No.	Price per PU
Type		NO	NC	NO	NC		d			d		
Auxiliary switch blocks for snapping onto the front												
Sizes S6 to S12												
	4-pole auxiliary switch blocks											
	• According to EN 50012											
3RT1.5 ... 3RT1.7	**22**	2	2	--	--		5	**3RH1921-1XA22-0MA0**		20	**3RH1921-2XA22-0MA0**	
	1-pole auxiliary switch blocks											
	• According to EN 50005 and EN 50012											
3RT1.5 ... 3RT1.7	**10**	1	--	--	--		►	**3RH1921-1CA10**		►	**3RH1921-2CA10**	
	01	--	1	--	--		►	**3RH1921-1CA01**		►	**3RH1921-2CA01**	
	10	--	--	1	--		►	**3RH1921-1CD10**			**--**	
	01	--	--	--	1		►	**3RH1921-1CD01**			**--**	

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

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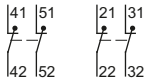
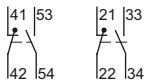
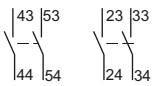
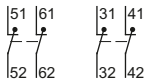
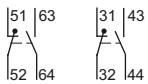
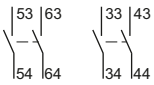
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH2911-1DA02



3RH2911-2DA02

For contactors[1]	Auxiliary contacts Version			SD	Screw terminals		SD	Spring-type terminals	
					Article No.	Price per PU		Article No.	Price per PU
Type	NO	NC		d			d		
Laterally mountable auxiliary switch blocks, mounting on the right and/or on the left, 2-pole									
Size S00			Left Right						
3RT2.1	--	2		2	**3RH2911-1DA02**		2	**3RH2911-2DA02**	
	1	1		2	**3RH2911-1DA11**		2	**3RH2911-2DA11**	
	2	--		2	**3RH2911-1DA20**		2	**3RH2911-2DA20**	
Sizes S0 to S3			Left Right						
3RT2.2[2], 3RT2.3[3], 3RT2.4[3]	--	2		2	**3RH2921-1DA02**		2	**3RH2921-2DA02**	
	1	1		2	**3RH2921-1DA11**		2	**3RH2921-2DA11**	
	2	--		2	**3RH2921-1DA20**		2	**3RH2921-2DA20**	

[1] For detailed information on use, see pages 3/87 and 3/88.

[2] With 3RT232. and 3RT252. contactors, mountable only on the right.

[3] 3RH2921-1DA.. lateral auxiliary switch blocks can only be mounted on 3RT26 capacitor contactors of sizes S2 and S3.

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

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Auxiliary switch blocks, instantaneous

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

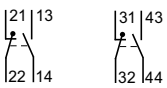
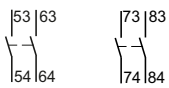
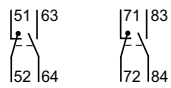
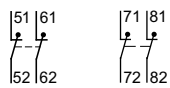
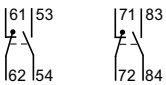
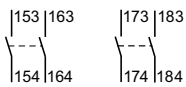
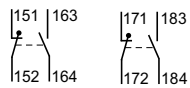
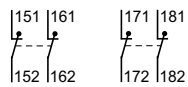

3RH1921-1DA11


3RH1921-1JA11


3RH1921-1EA02


3RH1921-1KA02


3RH1921-2DA11

For contactors	Auxiliary contacts Version			SD	Screw terminals		SD	Spring-type terminals	
					Article No.	Price per PU		Article No.	Price per PU
Type	NO	NC		d			d		
Lateral auxiliary switch blocks, mounting on left or right, 2-pole									
Sizes S6 to S12			Left / Right						
	1st auxiliary switch block								
	• According to EN 50012								
3RT1.5 ... 3RT1.7	1	1		▶	**3RH1921-1DA11**		▶	**3RH1921-2DA11**	
	• According to EN 50005								
3RT1.5 ... 3RT1.7	2	--		▶	**3RH1921-1EA20**		▶	**3RH1921-2EA20**	
	1	1		▶	**3RH1921-1EA11**			**--**	
	--	2		▶	**3RH1921-1EA02**		▶	**3RH1921-2EA02**	
	2nd auxiliary switch block								
	• According to EN 50012								
3RT1.5 ... 3RT1.7	1	1		▶	**3RH1921-1JA11**		▶	**3RH1921-2JA11**	
	• According to EN 50005								
3RT1.5 ... 3RT1.7	2	--		▶	**3RH1921-1KA20**		20	**3RH1921-2KA20**	
	1	1		▶	**3RH1921-1KA11**			**--**	
	--	2		▶	**3RH1921-1KA02**		20	**3RH1921-2KA02**	

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

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Auxiliary switch blocks, instantaneous

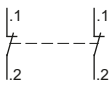
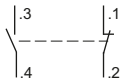
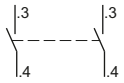
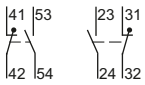
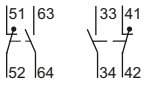
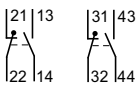
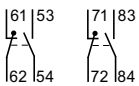
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B


3RH2911-1NF..


3RH2911-2NF..


3RH2911-2DE11


3RH1921-2JE11

For contactors/ contactor relays[1]	Contacts Version		SD	Screw terminals		SD	Spring-type terminals	
				Article No.	Price per PU		Article No.	Price per PU
Type	NO	NC	d			d		
Solid-state compatible auxiliary switch blocks, 2-pole								
• For operation in dusty atmospheres • For solid-state circuits with rated operational currents I_e/AC-14 and DC-13 from 1 ... 300 mA at 3 ... 60 V • Hard gold-plated contacts • Laterally mountable auxiliary switches and auxiliary switches for snapping onto the front for 3RT2 contactors, sizes S0 to S3, are designed as mirror contacts according to IEC 60947-4-1, Appendix F.								
Auxiliary switch blocks for snapping onto the front								
Sizes S00 to S3								
3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	--	2		2	**3RH2911-1NF02**		2	**3RH2911-2NF02**
3RH21, 3RH24	1	1		▶	**3RH2911-1NF11**		▶	**3RH2911-2NF11**
	2	--		▶	**3RH2911-1NF20**		▶	**3RH2911-2NF20**
Lateral auxiliary switch blocks, mounting on the right and/or on the left, acc. to EN 50012								
Size S00			Left Right					
	Auxiliary switch block							
3RT2.1	1	1			--		2	**3RH2911-2DE11**
Sizes S0 to S3			Left Right					
	Auxiliary switch block							
3RT2.2, 3RT2.3, 3RT2.4	1	1			--		2	**3RH2921-2DE11**
Sizes S6 to S12			Left Right					
	1st auxiliary switch block							
3RT1.5 ... 3RT1.7	1	1			--		▶	**3RH1921-2DE11**
	2nd auxiliary switch block							
3RT1.5 ... 3RT1.7	1	1			--		▶	**3RH1921-2JE11**

[1] For detailed information on use, see pages 3/86 and 3/88.

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Auxiliary switch blocks, delayed

Selection and ordering data

For contactors	Time setting range *t*	SD	Screw terminals		PU (UNIT, SET, M)	PS*	PG
Type	s	d	Article No.	Price per PU			
Pneumatic time-delay auxiliary switch blocks for mounting on 3RT2 contactors							
Size S0							
Auxiliary contacts 1 NO and 1 NC[1]							
ON-delay							
3RT202	0.1 … 30	10	**3RT2926-2PA01**		1	1 unit	41B
	0.1 ... 30[2]	10	**3RT2926-2PA01-0MT0**		1	1 unit	41B
	1 ... 60	10	**3RT2926-2PA11**		1	1 unit	41B
	1 ... 60[2]	10	**3RT2926-2PA11-0MT0**		1	1 unit	41B
OFF-delay							
3RT202	0.1 … 30	10	**3RT2926-2PR01**		1	1 unit	41B
	0.1 ... 30[2]	10	**3RT2926-2PR01-0MT0**		1	1 unit	41B
	1 ... 60	10	**3RT2926-2PR11**		1	1 unit	41B
	1 ... 60[2]	10	**3RT2926-2PR11-0MT0**		1	1 unit	41B



3RT2926-2P. . .

1) In addition to these, no other auxiliary contacts are permitted.
2) Certificate for furnaces according to EN 50156-1 on request.

Technical specifications, see Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557.

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



3RA2813-1FW10



3RA2813-2AW10

For contactors	Rated control supply voltage U_s[1]	Time setting range *t*	Output / auxiliary contacts	SD	Screw terminals		SD	Spring-type terminals	
Type	V	s		d	Article No.	Price per PU	d	Article No.	Price per PU
Solid-state time-delay auxiliary switch blocks[2] for mounting onto 3RT2 contactors and 3RH2 contactor relays									
Sizes S00 to S3									
	The electrical connection between the solid-state time-delay auxiliary switch and the contactor or contactor relay underneath is established automatically when it is snapped on and locked.								
	ON-delay (varistor integrated)								
3RT2[3][4], 3RH21[3], 3RH24	24 ... 240 AC/DC	0.05 ...100 (1, 10, 100 selectable)	1 CO	2	**3RA2813-1AW10**		2	**3RA2813-2AW10**	
			1 NO + 1 NC	2	**3RA2813-1FW10**		2	**3RA2813-2FW10**	
	OFF-delay with control signal (varistor integrated)								
3RT2[3][4], 3RH21[3], 3RH24	24 ... 240 AC/DC	0.05 ...100 (1, 10, 100 selectable)	1 CO	2	**3RA2814-1AW10**		2	**3RA2814-2AW10**	
			1 NO + 1 NC	2	**3RA2814-1FW10**		2	**3RA2814-2FW10**	
	OFF-delay without control signal[5] (varistor integrated)								
3RT2[3][4], 3RH21[3], 3RH24	24 ... 240 AC/DC	0.05 ...100 (1, 10, 100 selectable)	1 CO	2	**3RA2815-1AW10**		2	**3RA2815-2AW10**	
			1 NO + 1 NC	2	**3RA2815-1FW10**		2	**3RA2815-2FW10**	

1) AC voltage values apply for 50 Hz and 60 Hz.
2) The solid-state time-delay auxiliary switch blocks are also available as 3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays; see page 3/101.
3) Cannot be fitted onto coupling relays and coupling contactor relays.
4) From product version E04 onwards, 3RA281. solid-state time-delayed auxiliary switch blocks can be used for 3RT2.4 contactors.
5) Setting of output contacts in as-supplied state not defined (bistable relay). Application of the control supply voltage once results in contact change-over to the correct setting.

Technical specifications, see page 3/78.

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

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3RT1926-2. . . .

For contactors	Auxiliary contacts	Rated control supply voltage U_s [1]	Time setting range *t*	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
Type		V	s	d	Article No. / Price per PU			
Solid-state time-delay auxiliary switch blocks for mounting on 3RT1 contactors								
Sizes S6 to S12								
	ON-delay[2]							
3RT10, 3RT14	1 NO + 1 NC	24 AC/DC	0.05 ... 1	10	**3RT1926-2EJ11**	1	1 unit	41H
			0.5 ... 10	▶	**3RT1926-2EJ21**	1	1 unit	41H
			5 ... 100	2	**3RT1926-2EJ31**	1	1 unit	41H
		100 ... 127 AC	0.05 ... 1	15	**3RT1926-2EC11**	1	1 unit	41H
			0.5 ... 10	▶	**3RT1926-2EC21**	1	1 unit	41H
			5 ... 100	10	**3RT1926-2EC31**	1	1 unit	41H
		200 ... 240 AC	0.05 ... 1	5	**3RT1926-2ED11**	1	1 unit	41H
			0.5 ... 10	▶	**3RT1926-2ED21**	1	1 unit	41H
			5 ... 100	5	**3RT1926-2ED31**	1	1 unit	41H
	OFF-delay without control signal[2][3]							
3RT10, 3RT14	1 NO + 1 NC	24 AC/DC	0.05 ... 1	▶	**3RT1926-2FJ11**	1	1 unit	41H
			0.5 ... 10	▶	**3RT1926-2FJ21**	1	1 unit	41H
			5 ... 100	▶	**3RT1926-2FJ31**	1	1 unit	41H
		100 ... 127 AC/DC	0.05 ... 1	5	**3RT1926-2FK11**	1	1 unit	41H
			0.5 ... 10	▶	**3RT1926-2FK21**	1	1 unit	41H
			5 ... 100	5	**3RT1926-2FK31**	1	1 unit	41H
		200 ... 240 AC/DC	0.05 ... 1	5	**3RT1926-2FL11**	1	1 unit	41H
			0.5 ... 10	2	**3RT1926-2FL21**	1	1 unit	41H
			5 ... 100	2	**3RT1926-2FL31**	1	1 unit	41H
	Star-delta (wye-delta) starting (varistor integrated)[2]							
3RT10, 3RT14	1 NO delayed + 1 NO instantaneous, dead time 50 ms	24 AC/DC	1.5 … 30	▶	**3RT1926-2GJ51**	1	1 unit	41H
		100 ... 127 AC	1.5 … 30	▶	**3RT1926-2GC51**	1	1 unit	41H
		200 ... 240 AC	1.5 … 30	▶	**3RT1926-2GD51**	1	1 unit	41H

1) The AC voltages are valid for 50 and 60 Hz.

2) Connecting terminals A1 and A2 for the control supply voltage of the solid-state time-delay auxiliary switch must be connected to the associated contactor by means of connecting cables.

3) Setting of output contacts in as-supplied state not defined (bistable relay). Application of the control supply voltage once results in contact changeover to the correct setting.

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Surge suppressors

Selection and ordering data

For contactors Type	Version	Rated control supply voltage U_s [1] AC operation V AC	DC operation V DC	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Surge suppressors without LED (also for spring-type terminals)									
Size S00									
	For plugging onto the front side of the contactors (with and without auxiliary switch blocks)								
3RT2.1, 3RH2	**Varistors**	24 ... 48	24 ... 70	▶	**3RT2916-1BB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT2916-1BC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT2916-1BD00**		1	1 unit	41B
		240 ... 400	--	▶	**3RT2916-1BE00**		1	1 unit	41B
		400 ... 600	--	2	**3RT2916-1BF00**		1	1 unit	41B
3RT2.1, 3RH2	**RC elements**	24 ... 48	24 ... 70	▶	**3RT2916-1CB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT2916-1CC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT2916-1CD00**		1	1 unit	41B
		240 ... 400	--	2	**3RT2916-1CE00**		1	1 unit	41B
		400 ... 600	--	2	**3RT2916-1CF00**		1	1 unit	41B
3RT2.1, 3RH2	**Noise suppression diodes**	--	12 ... 250	▶	**3RT2916-1DG00**		1	1 unit	41B
3RT2.1, 3RH2	**Diode assemblies** (diode and Zener diode) for DC operation		12 ... 250	▶	**3RT2916-1EH00**		1	1 unit	41B
	--								
Size S0									
	For plugging onto the front side of the contactors (before installing the auxiliary switch block)								
3RT2.2	**Varistors** [2]	24 ... 48	24 ... 70	▶	**3RT2926-1BB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT2926-1BC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT2926-1BD00**		1	1 unit	41B
		240 ... 400	--	▶	**3RT2926-1BE00**		1	1 unit	41B
		400 ... 600	--	2	**3RT2926-1BF00**		1	1 unit	41B
3RT2.2	**RC elements**	24 ... 48	24 ... 70	▶	**3RT2926-1CB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT2926-1CC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT2926-1CD00**		1	1 unit	41B
		240 ... 400	--	2	**3RT2926-1CE00**		1	1 unit	41B
		400 ... 600	--	2	**3RT2926-1CF00**		1	1 unit	41B
3RT2.2	**Diode assemblies** for DC operation	--	24	▶	**3RT2926-1ER00**		1	1 unit	41B
		--	30 ... 250	▶	**3RT2926-1ES00**		1	1 unit	41B
Sizes S2 and S3									
	For plugging onto the front side of the contactors (before installing the auxiliary switch block)								
3RT2.3, 3RT2.4	**Varistors** [2][3]	24 ... 48	--	▶	**3RT2936-1BB00**		1	1 unit	41B
		48 ... 127	--	▶	**3RT2936-1BC00**		1	1 unit	41B
		127 ... 240	--	▶	**3RT2936-1BD00**		1	1 unit	41B
		240 ... 400	--	5	**3RT2936-1BE00**		1	1 unit	41B
		400 ... 600	--	5	**3RT2936-1BF00**		1	1 unit	41B
3RT2.3	**RC elements**	24 ... 48	24 ... 70	▶	**3RT2936-1CB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT2936-1CC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT2936-1CD00**		1	1 unit	41B
		240 ... 400	--	5	**3RT2936-1CE00**		1	1 unit	41B
		400 ... 600	--	5	**3RT2936-1CF00**		1	1 unit	41B
3RT2.4	**RC elements**	24 ... 48	24 ... 70	▶	**3RT2946-1CB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT2946-1CC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT2946-1CD00**		1	1 unit	41B
		240 ... 400	--	▶	**3RT2946-1CE00**		1	1 unit	41B
		400 ... 600	--	5	**3RT2946-1CF00**		1	1 unit	41B
3RT2.3, 3RT2.4	**Diode assemblies** [3] for DC operation	--	24	▶	**3RT2936-1ER00**		1	1 unit	41B
		--	30 ... 250	▶	**3RT2936-1ES00**		1	1 unit	41B


3RT2916-1B.00


3RT2926-1E.00



3RT2936-1BF00

[1] Can be used for AC operation for 50/60 Hz. Other voltages on request.

[2] The varistor is already integrated on the AC/DC contactors.

[3] As from product version E03, 3RT2936-1B/-1E surge suppressors can be used for 3RT2.4 contactors.

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

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Surge suppressors without LED

Sizes S6 to S12


3RT1956-1C.00

For connecting to withdrawable coil for contactors with
• Conventional operating mechanisms 3RT1...-.A...
• Solid-state operating mechanisms 3RT1...-.N...

For contactors Type	Version	Rated control supply voltage U_s[1] AC operation V AC	DC operation V DC	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
					Screw terminals				
3RT1.5 ... 3RT1.7	**RC elements**	24 ... 48	24 ... 70	▶	**3RT1956-1CB00**		1	1 unit	41B
		48 ... 127	70 ... 150	▶	**3RT1956-1CC00**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT1956-1CD00**		1	1 unit	41B
		240 ... 400	--	▶	**3RT1956-1CE00**		1	1 unit	41B
		400 ... 600		15	**3RT1956-1CF00**		1	1 unit	41B
					Spring-type terminals				
3RT1.5 ... 3RT1.7	**RC elements**	24 ... 48	24 ... 70	▶	**3RT1956-1CB02**		1	1 unit	41B
		48 ... 127	70 ... 150	2	**3RT1956-1CC02**		1	1 unit	41B
		127 ... 240	150 ... 250	▶	**3RT1956-1CD02**		1	1 unit	41B
		240 ... 400	--	2	**3RT1956-1CE02**		1	1 unit	41B
		400 ... 600		15	**3RT1956-1CF02**		1	1 unit	41B

[1] Can be used for AC operation for 50/60 Hz. Please inquire about further voltages.

Surge suppressors with LED (also for spring-type terminals)

Size S00


3RT2916-1J.00

For plugging onto the front side of the contactors (with and without auxiliary switch blocks)

For contactors Type	Version	Rated control supply voltage U_s[1] AC operation V AC	DC operation V DC	Power consumption P of LED at U_s mW	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
3RT2.1, 3RH2	**Varistors**	24 ... 48	12 ... 24	10 ... 120	▶	**3RT2916-1JJ00**		1	1 unit	41B
		48 ... 127	24 ... 70	20 ... 470	▶	**3RT2916-1JK00**		1	1 unit	41B
		127 ... 240	70 ... 150	50 ... 700	▶	**3RT2916-1JL00**		1	1 unit	41B
		--	150 ... 250	160 ... 950	2	**3RT2916-1JP00**		1	1 unit	41B
3RT2.1, 3RH2	**Noise suppression diodes**	--	24 ... 70	20 ... 470	▶	**3RT2916-1LM00**		1	1 unit	41B
		--	50 ... 150	50 ... 700	2	**3RT2916-1LN00**		1	1 unit	41B
		--	150 ... 250	160 ... 950	▶	**3RT2916-1LP00**		1	1 unit	41B

Size S0


3RT2926-1MR00

For plugging onto the front side of the contactors (before installing the auxiliary switch block)

For contactors Type	Version	Rated control supply voltage U_s[1] AC operation V AC	DC operation V DC	Power consumption P of LED at U_s mW	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
3RT2.2	**Varistors**	24 ... 48	12 ... 24	10 ... 120	▶	**3RT2926-1JJ00**		1	1 unit	41B
		48 ... 127	24 ... 70	20 ... 470	▶	**3RT2926-1JK00**		1	1 unit	41B
		127 ... 240	70 ... 150	50 ... 700	▶	**3RT2926-1JL00**		1	1 unit	41B
3RT2.2	**Diode assemblies**	--	24	20 ... 470	▶	**3RT2926-1MR00**		1	1 unit	41B

Sizes S2 and S3


3RT2936-1J.00

For plugging onto the front side of the contactors (before installing the auxiliary switch block)

For contactors Type	Version	Rated control supply voltage U_s[1] AC operation V AC	DC operation V DC	Power consumption P of LED at U_s mW	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
3RT2.3, 3RT2.4	**Varistors**[2]	24 ... 48	12 ... 24	10 ... 120	5	**3RT2936-1JJ00**		1	1 unit	41B
		48 ... 127	24 ... 70	20 ... 470	5	**3RT2936-1JK00**		1	1 unit	41B
		127 ... 240	70 ... 150	50 ... 700	▶	**3RT2936-1JL00**		1	1 unit	41B

[1] Can be used for AC operation for 50/60 Hz. Please inquire about further voltages.

[2] From product version E03 onwards, 3RT2936 surge suppressors can be used for 3RT2.4 contactors.

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Modules for contactor control

Selection and ordering data

For contactors Type	Version	SD d	Screw terminals Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Coupling links for control by PLC							
Size S0							
	For mounting onto the coil terminals of the contactors (for contactors with screw terminals only) With LED for the switching state and with integrated varistor for damping opening surges						
3RT2. 2	• 24 V DC control, 17 ... 30 V DC operating range	▶	**3RH2924-1GP11**		1	1 unit	41B
Sizes S00 to S3							
	For mounting on the front side of contactors with AC, DC or AC/DC operation						
3RT2. 1, 3RT2. 2, 3RT2. 3, 3RT2. 4 3RH2	• 24 V DC control, 17 ... 30 V DC operating range	5	**3RH2914-1GP11**		1	1 unit	41B
			Spring-type terminals				
3RT2. 1, 3RT2. 2, 3RT2. 3, 3RT2. 4 3RH2	• 24 V DC control, 17 ... 30 V DC operating range	5	**3RH2914-2GP11**		1	1 unit	41B


3RH2924-1GP11


3RH2914-1GP11


3RH2914-2GP11

Technical specifications, see page 3/80.

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

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



3RA2811-2CW10



3RA2812-1DW10



3RA2816-0EW20

For contactors Type	Size	Version	Rated control supply voltage U_s [1] V AC/DC	Time setting range t s	SD d	Screw terminals Article No.	Price per PU	SD d	Spring-type terminals Article No.	Price per PU
3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays										
For direct-on-line starting										
3RT2.1[2], 3RT2.2[2], 3RH21[2], 3RH24	S00, S0	**ON-delay Two-wire design, varistor integrated** The electrical connection between the function module and the contactor underneath is established automatically when it is snapped on and locked.	24 ... 240	0.05 ...100 (1, 10, 100; selectable)	2	**3RA2811-1CW10**		2	**3RA2811-2CW10**	
3RT2.3[2] 3RT2.4[2][3]	S2, S3		24 ... 90	0.05 ...100 (1, 10, 100; selectable)	2	**3RA2831-1DG10**		2	**3RA2831-2DG10**	
			90 ... 240		2	**3RA2831-1DH10**		2	**3RA2831-2DH10**	
3RT2.1[2], 3RT2.2[2], 3RH21[2], 3RH24	S00, S0	**OFF-delay with control signal, varistor integrated** The electrical connection between the function module and the contactor underneath is established automatically when it is snapped on and locked.	24 ... 240	0.05 ...100 (1, 10, 100; selectable)	2	**3RA2812-1DW10**		2	**3RA2812-2DW10**	
3RT2.3[2] 3RT2.4[2][3]	S2, S3		24 ... 90	0.05 ...100 (1, 10, 100; selectable)	2	**3RA2832-1DG10**		2	**3RA2832-2DG10**	
			90 ... 240		2	**3RA2832-1DH10**		2	**3RA2832-2DH10**	
For star-delta (wye-delta) starting										
3RT2.1, 3RT2.2 3RT2.3[2] 3RT2.4[2][4]	S00 ... S3	**Varistor integrated** Comprising one basic module and two coupling modules The electrical connection between the function module and the contactor assembly is established automatically by snapping on and plugging in the connecting cables.	24 ... 240	0.5 ... 60 (10, 30, 60; selectable)	2	**3RA2816-0EW20**		2	**3RA2816-0EW20**	
Accessories										
3RA28	S00 ... S3	**Cover, sealable**			2	**3RA2910-0**		2	**3RA2910-0**	

[1] AC voltage values apply for 50 Hz and 60 Hz.

[2] Cannot be fitted onto coupling relays and coupling contactor relays.

[3] From product version E03 onwards, 3RA283. function modules can be used for 3RT2.4 contactors.

[4] From product version E04 onwards, 3RA2816 function modules can be used for 3RT2.4 contactors.

Technical specifications, see page 3/81.

Assembly of reversing starters

We offer ready-made wiring kits for the assembly of reversing starters. Use of these wiring kits offers further advantages; see page 3/156.

Manual

Manual "SIRIUS 3RA28 function modules for mounting on 3RT2 contactors", see https://support.industry.siemens.com/cs/ww/en/view/60279150.

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

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Modules for contactor control

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



3RA2711-1AA00 3RA2711-2AA00 3RA2711-1BA00 3RA2711-2BA00 3RA2712-1CA00 3RA2711-2CA00

For contactors Type	Version	SD d	Screw terminals Article No.	Price per PU	SD d	Spring-type terminals Article No.	Price per PU
SIRIUS 3RA27 function modules for direct-on-line starting							
3RT201 ... 3RT204[1]	**IO-Link connection** includes one module connector for creating an IO-Link group	2	**3RA2711-1AA00**		2	**3RA2711-2AA00**	
	AS-Interface connection	2	**3RA2712-1AA00**		2	**3RA2712-2AA00**	
SIRIUS 3RA27 function modules for reversing starting[2]							
3RT201 ... 3RT204[1]	**IO-Link connection** comprising one basic and one coupling module and an additional module connector[3] for creating an IO-Link group	2	**3RA2711-1BA00**		2	**3RA2711-2BA00**	
	AS-Interface connection comprising one basic and one coupling module	2	**3RA2712-1BA00**		2	**3RA2712-2BA00**	
	Assembly kits for making 3-pole contactor assemblies See page 3/105						
SIRIUS 3RA27 function modules for star-delta (wye-delta) starting[4]							
3RT201 ... 3RT204[1]	**IO-Link connection** comprising one basic and two coupling modules and an additional module connector[3] for creating an IO-Link group	2	**3RA2711-1CA00**		2	**3RA2711-2CA00**	
	AS-Interface connection comprising one basic and two coupling modules	2	**3RA2712-1CA00**		2	**3RA2712-2CA00**	
	Assembly kits for making 3-pole contactor assemblies See page 3/106						

1) From product version E06 onwards, 3RA271. function modules can be used for 3RT2.4 contactors.

2) For prewired reversing contactor assemblies with voltage tap-off, see pages 3/157 to 3/160. When these contactor assemblies are used, the assembly kit for the wiring is already integrated.

3) 3RA2711-0EE17 module connectors for size S3 must be ordered separately; see page 3/103.

4) For complete contactor assemblies for star-delta (wye-delta) starting including function modules, see pages 3/174 to 3/177.

Technical specifications for 3RA27 function modules, see page 3/82.

For contactors with voltage tap-off, see pages 3/56, 3/60, 3/64 and 3/65.

For IO-Link masters and AS-Interface masters, routers and power supply units see "Industrial Communication", from page 2/1 onwards.

Manuals

- Manual "SIRIUS 3RA2711 function modules for IO-Link", see https://support.industry.siemens.com/cs/ww/en/view/39319600
- Manual "SIRIUS 3RA2712 function modules for AS-Interface": see https://support.industry.siemens.com/cs/ww/en/view/39318922

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3RA2711-0EE10


3RA2711-0EE06


3RA2711-0EE15


3RA2910-0


3RA6935-0A


3RA2711-0EE11

For function modules	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type		d					
Accessories for 3RA27 function modules							
3RA271.-..A00	**Module connector set** Comprising: • Two module connectors (14-pole, short) • Two interface covers	2	**3RA2711-0EE10**		1	1 unit	41B
3RA271.-..A00	**Module connectors**						
	• 14-pole						
	- 6 cm	2	**3RA2711-0EE17**		1	1 unit	41B
	- 9 cm	2	**3RA2711-0EE06**		1	1 unit	41B
	- 13 cm	2	**3RA2711-0EE18**		1	1 unit	41B
	- 26 cm	2	**3RA2711-0EE07**		1	1 unit	41B
	- 33.5 cm	2	**3RA2711-0EE08**		1	1 unit	41B
	• 10-pole, 9 cm for the additional auxiliary voltage infeed	2	**3RA2711-0EE16**		1	1 unit	41B
	Note: For selection of module connectors, see Manual "SIRIUS 3RA2711 function modules for IO-Link", https://support.industry.siemens.com/cs/ww/en/view/39319600						
3RA271.-..A00	**Interface covers** (Set of 5)	2	**3RA2711-0EE15**		1	1 unit	41B
3RA271.-..A00	**Sealable covers**	2	**3RA2910-0**		1	5 units	41B
Operator panel for communication via IO-Link							
3RA2711-..A00	**Operator panel (set)** Comprising: • 1 x operator panel • 1 x enabling module • 1 x interface cover • 1 x fixing terminal	10	**3RA6935-0A**		1	1 unit	42F
3RA2711-..A00	**Connection cable** For connecting the operator panel to the coupling module Length 2 m, 10- to 14-pole	2	**3RA2711-0EE11**		1	1 unit	41B
3RA2711-..A00	**Enabling modules** (replacement)	10	**3RA6936-0A**		1	1 unit	42F
3RA2711-..A00	**Interface covers** (replacement)	10	**3RA6936-0B**		1	5 units	42F

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Modules for contactor control

Mechanical latching blocks (no switching state change in the event of voltage drop)


3RT2926-3A.31

Size S0

For snapping onto the front of contactors

The contactor remains in the energized state after a power failure.

For contactors Type	Rated control supply voltage U_S V	Time setting range t s	SD d	Screw terminals Article No.	PU (UNIT, SET, M)	PS*	PG Price per PU
3RT202, 3RT232, 3RT252	24 AC/DC	--	5	**3RT2926-3AB31**	1	1 unit	41B
	110 AC/DC	--	5	**3RT2926-3AF31**	1	1 unit	41B
	230 AC/DC	--	5	**3RT2926-3AP31**	1	1 unit	41B

OFF-delay devices for contactors with AC/DC and DC operation


3RT2916-2B.01

Sizes S00 to S3

Non-adjustable delay time

For contactors Type	Rated control supply voltage U_S V	Time setting range t s	SD d	Screw terminals Article No.	PU (UNIT, SET, M)	PS*	PG Price per PU
3RT201.-1BF4., 3RT202.-1BF4., 3RT203.-1NF3., 3RH2…-1BF40	110 AC/DC	S00: > 0.1 S0: > 0.08 S2: > 0.25	5	**3RT2916-2BK01**	1	1 unit	41B
3RT201.-1BM4./1BP4., 3RT202.-1BM4./1BP4., 3RT203.-1NP3., 3RH2…-1BM40/1BP40	220/230 AC/DC	S00: > 0.5 S0: > 0.3 S2: > 0.8	5	**3RT2916-2BL01**	1	1 unit	41B
3RT201.-1BB4., 3RT202.-1BB4., 3RT203.-1NB3., 3RT204.-1NB3., 3RT244.-1NB3., 3RH2…-1BB40	24 DC	S00: > 0.2 S0: > 0.1 S2: > 0.1 S3: > 0.05	2	**3RT2916-2BE01**	1	1 unit	41B

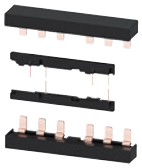
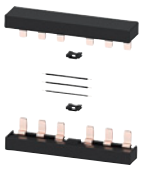
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Illustrations are approximate

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Selection and ordering data

For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Safety main circuit connectors for two contactors								
 3RA2926-1A								
3RT2.1	**S00**	For series connection of two contactors	2	**3RA2916-1A**		1	1 unit	41B
3RT2.2	**S0**		2	**3RA2926-1A**		1	1 unit	41B
3RT2.3	**S2**		2	**3RA2936-1A**		1	1 unit	41B

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

For contactors Type	Size	Version	SD d	Article No.	Price per PU	SD d	Article No.	Price per PU
Assembly kits for reversing contactor assemblies For making 3-pole contactor assemblies				**Screw terminals**			**Spring-type terminals**	
 3RA2923-2AA1								
3RT201	**S00-S00**	The assembly kit contains: Mechanical interlock, two connecting clips for two contactors, wiring modules on the top and bottom						
		• For main, auxiliary and control circuits	▶	**3RA2913-2AA1**		▶	**3RA2913-2AA2**	
 3RA2923-2AA2								
3RT202	**S0-S0**	The assembly kit contains: Mechanical interlock, two connecting clips for two contactors, wiring modules on the top and bottom						
		• For main, auxiliary and control circuits[1]	▶	**3RA2923-2AA1**			**--**	
		• Only for main circuit[2]		**--**		▶	**3RA2923-2AA2**	
 3RA2933-2AA1								
3RT203	**S2-S2**	The assembly kit contains: Two connectors for two contactors, wiring modules at top and bottom (3RA2934-2B mechanical interlock must be ordered separately, see page 3/109)						
		• For main and auxiliary circuits	▶	**3RA2933-2AA1**			**--**	
		• Only for main circuit[3]		**--**		5	**3RA2933-2AA2**	
 3RA2943-2AA1								
3RT204	**S3-S3**	The kit contains: Two connectors for two contactors, wiring modules at top and bottom (3RA2934-2B mechanical interlock must be ordered separately, see page 3/109)						
		• For main and auxiliary circuits	▶	**3RA2943-2AA1**			**--**	
		• Only for main circuit[3]		**--**		▶	**3RA2943-2AA2**	
 3RA2943-2AA2								
3RT1.5	**S6-S6**	The kit contains: Wiring modules on the top and bottom	2	**3RA1953-2A**		2	**3RA1953-2A**	
3RT1.6	**S10-S10**		2	**3RA1963-2A**		2	**3RA1963-2A**	
3RT1.7	**S12-S12**		2	**3RA1973-2A**		2	**3RA1973-2A**	

[1] Use of the 3RA2923-2AA1 assembly kit in conjunction with the 3RT202.-.....-3MA0 contactors is limited because the auxiliary switches in the basic unit are not allowed to be used on account of the permanently mounted auxiliary switch block.

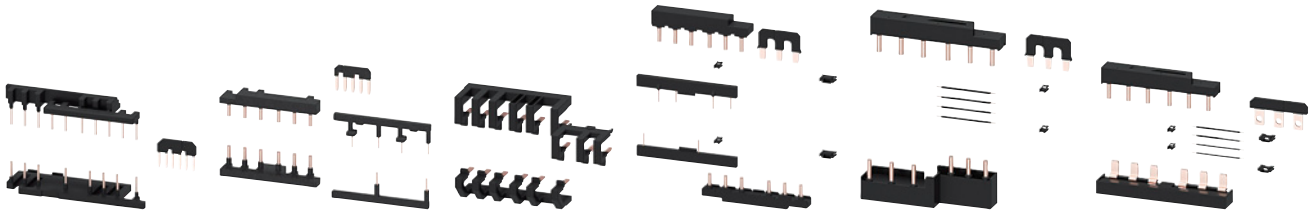
[2] Version in size S0 with spring-type terminals:
Only the wiring modules for the main circuit are included.
No connecting clips are included for the auxiliary and control circuit.

[3] Version in sizes S2 and S3 with spring-type terminals in the auxiliary and control circuits: Only the wiring modules for the main circuit are included. A cable set is included for the auxiliary circuit.

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Link modules

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



3RA2913-2BB1 | 3RA2923-2BB1 | 3RA2923-2BB2 | 3RA2933-2BB1 | 3RA2943-2C | 3RA2943-2BB2

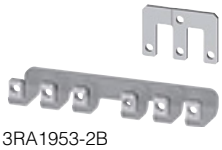
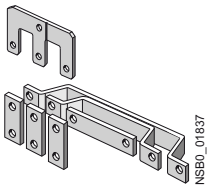
For contactors Type	Size	Version	SD d	Screw terminals Article No.	Price per PU	SD d	Spring-type terminals Article No.	Price per PU
Assembly kits[1] for contactor assemblies for star-delta (wye-delta) starting for making 3-pole contactor assemblies								
3RT201	**S00-S00-S00**	The assembly kit contains: Mechanical interlock, four connecting clips for three contactors, a star jumper, wiring modules on the top and bottom						
		• For main, auxiliary and control circuits	▶	**3RA2913-2BB1**		▶	**3RA2913-2BB2**	
3RT202	**S0-S0-S0**	The assembly kit contains: Mechanical interlock, four connecting clips for three contactors, a star jumper, wiring modules on the top and bottom						
		• For main, auxiliary and control circuits	▶	**3RA2923-2BB1**			**--**	
		• Only for main circuit		**--**		▶	**3RA2923-2BB2**	
3RT202	**S0-S0-S0**	The assembly kit contains: Mechanical interlock, four connecting clips for three contactors, a star jumper, wiring modules on the top and bottom, 3-phase infeed terminal						
		• For main, auxiliary and control circuits	5	**3RA2924-2BB1**			**--**	
3RT203	**S2-S2-S0**	The kit[2] contains: Two connectors for three contactors, an S0 star jumper, a spacer, wiring modules on the top and bottom (S2-S0) for the main circuit, a cable set for the auxiliary circuit, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor	▶	**3RA2933-2C**		▶	**3RA2933-2C**	
3RT203	**S2-S2-S2**	The kit[2] contains: Four connectors for three contactors, an S2 star jumper, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor and						
		• Wiring modules on the top and bottom for the main circuit and the auxiliary circuit	▶	**3RA2933-2BB1**			**--**	
		• Wiring modules on the top and bottom for the main circuit, a cable set for the auxiliary circuit		**--**		5	**3RA2933-2BB2**	
3RT204	**S3-S3-S2**	The kit[2] contains: Two connectors for three contactors, an S2 star jumper, a spacer, wiring modules on the top and bottom (S3-S2) for the main circuit, a cable set for the auxiliary circuit, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor	▶	**3RA2943-2C**		▶	**3RA2943-2C**	
3RT204	**S3-S3-S3**	The kit[2] contains: Four connectors for three contactors, an S3 star jumper, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor and						
		• Wiring modules on the top and bottom for the main circuit and the auxiliary circuit	▶	**3RA2943-2BB1**			**--**	
		• Wiring modules on the top and bottom for the main circuit, a cable set for the auxiliary circuit		**--**		▶	**3RA2943-2BB2**	

[1] When using the function modules for contactor assemblies for star-delta (wye-delta) starting, the wiring modules for the auxiliary current are not required.

[2] The 3RA2934-2B mechanical interlock for sizes S2 and S3 must be ordered separately; see page 3/109.

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Illustrations are approximate

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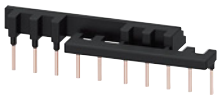
	For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Assembly kits for contactor assemblies for star-delta (wye-delta) starting for making 3-pole contactor assemblies									
			The kit contains: link rails at bottom (a double infeed between the line contactor and the delta contactor is recommended.)						
 3RA1953-3G	3RT1.5, 3RT204	**S6-S6-S3 for connection with box terminal**	The S3 star jumper must be ordered separately; see page 3/108.	X	**3RA1953-3G**		1	1 unit	41B
 3RA1953-2B	3RT1.5	**S6-S6-S6 for connection with box terminal**	--	2	**3RA1953-2B**		1	1 unit	41B
 3RA1953-2N	3RT1.5	**S6-S6-S6 for connection with box terminal**	--	2	**3RA1953-2N**		1	1 unit	41B
 3RA1963-3E	3RT1.6, 3RT1.5	**S10-S10-S6 for connection with box terminal**	The S6 star jumper must be ordered separately; see page 3/108.	20	**3RA1963-3E**		1	1 unit	41B
 3RA1963-2B	3RT1.6	**S10-S10-S10 for connection without box terminal**	--	2	**3RA1963-2B**		1	1 unit	41B
	3RT1.7, 3RT1.6	**S12-S12-S10 for connection with box terminal**	The S10 star jumper must be ordered separately; see page 3/108.	20	**3RA1973-3E**		1	1 unit	41B
 3RA1973-2B	3RT1.7	**S12-S12-S12 for connection without box terminal**	--	5	**3RA1973-2B**		1	1 unit	41B

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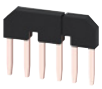
Link modules

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

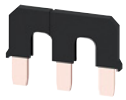

3RA2913-3DA1


3RA2913-3DA2


3RT1933-3D


3RT1916-4BA31


3RT2916-4BA32


3RT1936-4BA31

For contactors Type	Size	Version		SD d	Article No. Screw terminals	Price per PU	SD d	Article No. Spring-type terminals	Price per PU
Single wiring modules for making 3-pole contactor assemblies									
3RT201	**S00-S00**	• Top (in-phase)	PS = 5 units	5	**3RA2913-3DA1**		5	**3RA2913-3DA2**	
		• Bottom (with phase reversal)	PS = 5 units	5	**3RA2913-3EA1**		5	**3RA2913-3EA2**	
3RT202	**S0-S0**	• Top (in-phase)	PS = 5 units	5	**3RA2923-3DA1**		5	**3RA2923-3DA2**	
		• Bottom (with phase reversal)	PS = 5 units	5	**3RA2923-3EA1**		5	**3RA2923-3EA2**	
3RT203	**S2-S2**	• Top (in-phase), contactor clearance 10 mm	PS = 5 units	▶	**3RA1933-3D**		▶	**3RA1933-3D**	
		• Bottom (with phase reversal), Contactor clearance 10 mm	PS = 5 units	▶	**3RA1933-3E**		▶	**3RA1933-3E**	
3RT204	**S3-S3**	• Top (in-phase), contactor clearance 10 mm		▶	**3RA1943-3D**		▶	**3RA1943-3D**	
		• Bottom (with phase reversal), Contactor clearance 10 mm		▶	**3RA1943-3E**		▶	**3RA1943-3E**	
3RT1.5	**S6-S6**	• Top (in-phase, for connection with box terminal), contactor clearance 10 mm		2	**3RA1953-3D**		2	**3RA1953-3D**	
		• Top (with phase reversal, for connection without box terminal), contactor clearance 10 mm		2	**3RA1953-3P**		2	**3RA1953-3P**	
Star jumpers (links for paralleling), 3-pole									
					Screw terminals			**Spring-type terminals**	
3RT201	**S00**	**With through-hole**		▶	**3RT1916-4BA31**		2	**3RT2916-4BA32**	
3RT202	**S0**	The links for paralleling can be reduced by one pole.		▶	**3RT1926-4BA31**		2	**3RT2926-4BA32**	
3RT203	**S2**			▶	**3RT1936-4BA31**		▶	**3RT1936-4BA31**	
3RT204	**S3**	Without connecting terminal		▶	**3RT1946-4BA31**		▶	**3RT1946-4BA31**	
3RT1.5	**S6**			▶	**3RT1956-4BA31**		▶	**3RT1956-4BA31**	
3RT1.6, 3RT1.7	**S10, S12**			▶	**3RT1966-4BA31**		▶	**3RT1966-4BA31**	

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Illustrations are approximate

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	For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Mechanical interlock assembly kits for two contactors for making 3 and 4-pole contactor assemblies									
 3RA29.2-2H	3RT201, 3RT231	**S00-S00**	The interlocking assembly kits can be used without a contactor clearance. One assembly kit consists of a mechanical interlock and two connecting clips.	5	**3RA2912-2H**		1	10 units	41B
	3RT202, 3RT232	**S0-S0**		5	**3RA2922-2H**		1	10 units	41B

	For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Mechanical interlocks for contactor assemblies									
			A contactor clearance of 10 mm must be considered when using the following mechanical interlocks.						
 3RA2934-2B	3RT202, 3RT203, 3RT204	**S2-S2-S0, S2-S2-S2, S3-S3-S2, S3-S3-S3**	**Mechanical interlocks** Note: The mechanical interlock for sizes S2 and S3 must be ordered separately.	▶	**3RA2934-2B**		1	1 unit	41B
 3RA1954-2G	3RT1.5 with 3RT204	**S6 (3RT1)-S6 (3RT1)-S3 (3RT2)**	**Adapter in addition to the mechanical interlock** The mechanical interlock is only possible together with this 3RA1954-2G adapter and the 3RA1954-2A mechanical interlock. Two connectors are included with the adapter, the interlock must be ordered separately.	X	**3RA1954-2G**		1	1 unit	41B
 3RA1954-2A	3RT1.5 3RT1.6 3RT1.7	**S6 S10 S12**	**Mechanical interlocks** Without auxiliary contacts; contactors in sizes S6, S10 and S12 can be interlocked with each other as required. No adaption of mounting depth is necessary.	▶	**3RA1954-2A**		1	1 unit	41B
Mechanical connectors for contactor assemblies									
			Two connectors are required for each assembly. The contactor clearance must be considered when selecting the connectors.						
 3RA1932-2D			**3-pole version**						
	3RT203, 3RT204	**S2-S2, S3-S3**	• Without contactor clearance	▶	**3RA2932-2C**		1	10 units	41B
			• With 10 mm contactor clearance	▶	**3RA2932-2D**		1	10 units	41B
	3RT105	**S6-S6**	• With 10 mm contactor clearance (1 unit corresponds to 2 parts for 1 assembly)	▶	**3RA1932-2D**		1	10 units	41B
			4-pole version						
	3RT233	**S2-S2**	• With 20 mm contactor clearance	2	**3RA2932-2G**		1	10 units	41B

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Illustrations are approximate

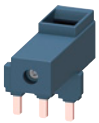
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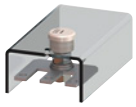
Terminal modules/adapters

Selection and ordering data


3RT1916-4BB31


3RT2926-4BB31


3RT1936-4BB31


3RT1946-4BB31


3RT1916-4BB41

For contactors Type	Size	Version	SD d	Screw terminals Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Links for paralleling for main circuits								
		The links for paralleling (insulated) can be reduced by one pole. With connecting terminal						
		3-pole						
3RT201	**S00**	• Max. conductor cross-section: 25 mm², stranded	▶	**3RT1916-4BB31**		1	1 unit	41B
3RT202	**S0**	• Max. conductor cross-section: 50 mm², stranded	2	**3RT2926-4BB31**		1	1 unit	41B
3RT203	**S2**	• Max. conductor cross-section: 120 mm², stranded	▶	**3RT1936-4BB31**		1	1 unit	41B
3RT204, 3RT244	**S3**	• Max. conductor cross-section: 185 mm², stranded a cover plate is included for touch protection (can only be used when box terminal is removed).	▶	**3RT1946-4BB31**		1	1 unit	41B
		4-pole						
3RT231, 3RT251	**S00**	• Max. conductor cross-section: 25 mm², stranded	15	**3RT1916-4BB41**		1	1 unit	41B

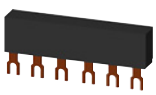

3RA2943-3L

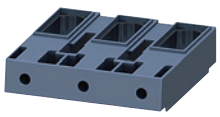

3RA2913-3K


3RV2925-5AB


3RV2935-5A


3RV2935-5E


3RV1915-1AB

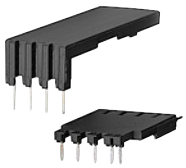

3RT1956-4G


3RT1966-4G

For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Single-phase infeed terminals								
3RT204, 3RT244, 3RT264	**S3**	Conductor cross-section: 95 mm²	2	**3RA2943-3L**		1	1 unit	41B
Three-phase infeed terminals								
		Infeed terminal blocks for the line contactor for large conductor cross-sections						
3RT201	**S00**	• Max. conductor cross-section: up to 10 mm², AWG 12 ... 8	2	**3RA2913-3K**		1	10 units	41B
3RT202	**S0**	• Max. conductor cross-section: up to 25 mm², AWG 10 ... 2/0	▶	**3RV2925-5AB**		1	1 unit	41E
3RT203	**S2**	• Max. conductor cross-section: up to 70 mm², AWG 10 ... 2/0	▶	**3RV2935-5A**		1	1 unit	41E
Three-phase infeed terminals with increased clearances and creepage distances								
3RT203	**S2**	Max. conductor cross-section: up to 70 mm², AWG 10 ... 2/0	▶	**3RV2935-5E**		1	1 unit	41E
Three-phase busbars								
3RT202	**S0**	Bridging phase-by-phase of all input terminals of the line contactor (Q11) and delta contactor (Q13)	▶	**3RV1915-1AB**		1	1 unit	41E
Box terminal blocks								
		For round and ribbon cables Connectable cross-sections of the contactors, see Technical specifications, page 3/47.						
3RT1.5	**S6**	• Up to 70 mm², as standard on 3RT1054-1 contactor (55 kW)	▶	**3RT1955-4G**		1	1 unit	41B
		• Up to 120 mm²	▶	**3RT1956-4G**		1	1 unit	41B
3RT1.6, 3RT1.7	**S10, S12**	• Up to 240 mm², With auxiliary conductor connection up to 2.5 mm²	▶	**3RT1966-4G**		1	1 unit	41B
3RT1.5	**S6**	**Box terminal for auxiliary conductor connection, 1-pole** For connection of auxiliary and control cables (0.5 ... 2.5 mm²) to the main conductor terminals	5	**3TX7500-0A**		1	1 unit	41B

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

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For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Solder pin adapters for mounting contactors on printed circuit boards up to 5.5 kW / 12 A								
				Screw terminals				
  3RT1916-4KA1	3RT2.1, 3RH21	**S00**	Assembly kit for soldering contactors with an integrated auxiliary contact onto a printed circuit board Note: For 1 contactor, 1 set is required.	2	**3RT1916-4KA1**		1	4 units	41B
   3RT1916-4KA2	3RT2.1, 3RH21	**S00**	Assembly kit for soldering contactors with 4-pole mounted auxiliary switch block onto a printed circuit board. Note: For 1 contactor, 1 set is required.	5	**3RT1916-4KA2**		1	4 units	41B
Coil connection modules for connections from top or from below								
 3RT2926-4RA11	3RT2.2, 3RT2.3, 3RT2.4	**S0 to S3**	• Connection from top	2	**3RT2926-4RA11**		1	1 unit	41B
			• Connection from below	2	**3RT2926-4RB11**		1	1 unit	41B
			• Connection diagonally	2	**3RT2926-4RC11**		1	1 unit	41B
					Spring-type terminals				
 3RT2926-4RA12	3RT2.2	**S0**	• Connection from top	2	**3RT2926-4RA12**		1	1 unit	41B
			• Connection from below	2	**3RT2926-4RB12**		1	1 unit	41B

For contactors Type	Size	Version	SD d	**Screw terminals** Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Motor feeder connectors for contactors with screw terminals								
		Adapters for contactors Ambient temperature $t_{u\ max.}$ = 60 °C						
 3RT1926-4RD01	3RT201, 3RH2	**S00**	• Rated operational current I_e at AC-3/400 V: 20 A	5	**3RT1916-4RD01**		1	1 unit	41B
	3RT202	**S0**	• Rated operational current I_e at AC-3/400 V: 25 A	5	**3RT1926-4RD01**		1	1 unit	41B
 3RT1900-4RE01	3RT201, 3RT202, 3RH2	**S00, S0**	**Motor feeder connectors for contactor**	5	**3RT1900-4RE01**		1	1 unit	41B

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Covers

Selection and ordering data

For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Terminal covers								
		Motor feeder connectors for contactors with screw terminals (box terminals) (2 units required per contactor)						
3RT203	**S2**	• For 3-pole contactors	2	**3RT2936-4EA2**		1	1 unit	41B
3RT204, 3RT244	**S3**		▶	**3RT2946-4EA2**		1	1 unit	41B
3RT1.5	**S6**[1]		▶	**3RT1956-4EA2**		1	1 unit	41B
3RT1.6, 3RT1.7	**S10**[1], **S12**[1]		▶	**3RT1966-4EA2**		1	1 unit	41B
3RT233, 3RT253	**S2**	• For 4-pole contactors (Scope of supply: one 3-pole and two 1-pole terminal covers are supplied)	5	**3RT2936-4EA4**		1	1 unit	41B
3RT234, 3RT254	**S3**	NEW	5	**3RT2946-4EA4**		1	1 unit	41B
		Covers for contactors with cable lugs and busbar connections For complying with the phase clearances and as touch protection if box terminal is removed (2 units required per contactor)						
3RT1.5	**S6**[1]	• Length: 100 mm	▶	**3RT1956-4EA1**		1	1 unit	41B
3RT1.6, 3RT1.7	**S10**[1], **S12**[1]	• Length: 120 mm	▶	**3RT1966-4EA1**		1	1 unit	41B
		• For the assembly kits for 3RA1953-.. contactor assemblies for star-delta (wye-delta) starting (page 3/107) or for the 3RA1953-3. single-wiring modules (page 3/108)						
3RT1.5	**S6**	- Length: 38 mm	▶	**3RT1956-4EA4**		1	1 unit	41B
		Terminal covers						
		• Cover the three busbar connections, between the contactor and 3RB2 overload relay						
3RT1.5	**S6**	- Length: 27 mm	▶	**3RT1956-4EA3**		1	1 unit	41B
3RT1.6, 3RT1.7	**S10**[2], **S12**[2]	- Length: 42 mm	▶	**3RT1966-4EA3**		1	1 unit	41B
		• Can be screwed on free screw end; covers one busbar connection (1 set = 6 units)						
3RT1.5	**S6**	- M8	5	**3TX6526-3B**		1	1 unit	41B
3RT1.6, 3RT1.7	**S10, S12**	- M10	5	**3TX6546-3B**		1	1 unit	41B
Sealable covers								
3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4, 3RH2[3]	**S00 ... S3**	For preventing manual operation (Not suitable for coupling relays)	2	**3RT2916-4MA10**		1	5 units	41B
3RT1.5 ... 3RT1.7[3]	**S6 ... S12**		15	**3RT1926-4MA10**		1	5 units	41B


3RT2936-4EA2


3RT2946-4EA2


3RT1956-4EA2


3RT1966-4EA2

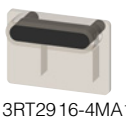

3RT2936-4EA4

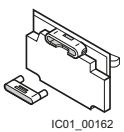

3RT1956-4EA1


3RT1966-4EA1


3RT1956-4EA4


3TX6526-3B


3RT2916-4MA10



3RT1926-4MA10

[1] Also fits on contactors of sizes S6 to S12 with box terminals.

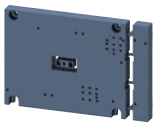
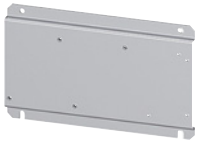
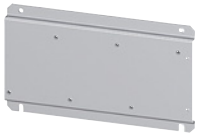
[2] The 3RT1966-4EA3 cover is required in addition for use in reversing contactor assemblies and contactor assemblies for star-delta (wye-delta) starting.

[3] Exception: contactors and contactor relays with auxiliary switch block mounted onto the front.

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

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Selection and ordering data

	For contactors Type	Size	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Base plates									
	For reversing contactor assemblies								
 3RA1952-2A	3RT1.5	**S6**	For customer assembly of reversing contactor assemblies	5	**3RA1952-2A**		1	1 unit	41B
	3RT1.6	**S10**		5	**3RA1962-2A**		1	1 unit	41B
	3RT1.7	**S12**		5	**3RA1972-2A**		1	1 unit	41B
	For contactor assemblies for star-delta (wye-delta) starting								
 3RA2932-2F	3RT2/ 3RT2/ 3RT2	**S2-S2-S0, S2-S2-S2**	For configuring contactor assemblies for star-delta (wye-delta) starting	2	**3RA2932-2F**		1	1 unit	41B
		S3-S3-S2, S3-S3-S3		3	**3RA2942-2F**		1	1 unit	41B
 3RA2942-2F									
 3RA1952-2E	3RT1/ 3RT1/ 3RT2	**S6-S6-S3**	For customer assembly of contactor assemblies for star-delta (wye-delta) starting with a **laterally mounted** timing relay 10 mm distance between the contactors	5	**3RA1952-2E**		1	1 unit	41B
	3RT1/ 3RT1/ 3RT1	**S6-S6-S6**		5	**3RA1952-2F**		1	1 unit	41B
		S10-S10-S6		5	**3RA1962-2E**		1	1 unit	41B
		S10-S10-S10		5	**3RA1962-2F**		1	1 unit	41B
		S12-S12-S10		5	**3RA1972-2E**		1	1 unit	41B
 3RA1952-2F		**S12-S12-S12**		5	**3RA1972-2F**		1	1 unit	41B
Adapters for screw fixing									
 3RT1926-4P	3RT2.2	**S0**	Screw adapters for securing the contactors, two units required per contactor (1 pack = 10 sets for 10 contactors)	15	**3RT1926-4P**		1	10 units	41B
EMC suppression modules; three-phase, up to 7.5 kW									
	For contactors with AC or DC operation								
					Screw terminals				
 3RT2916-1PA.	3RT201	**S00**	**RC elements** (3 x 220 Ω/0.22 µF)						
			• Up to 400 V	▶	**3RT2916-1PA1**		1	1 unit	41B
			• Up to 575 V	2	**3RT2916-1PA2**		1	1 unit	41B
			• Up to 690 V	15	**3RT2916-1PA3**		1	1 unit	41B
	3RT201	**S00**	**Varistors**						
			• Up to 400 V	2	**3RT2916-1PB1**		1	1 unit	41B
			• Up to 575 V	2	**3RT2916-1PB2**		1	1 unit	41B
			• Up to 690 V	15	**3RT2916-1PB3**		1	1 unit	41B

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

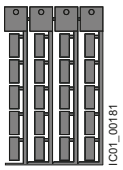
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Miscellaneous accessories

	For contactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Type			d					
Additional load modules									
 3RT2916-1GA00	3RT2.1, 3RH2	**S00**	For plugging onto the front side of the contactors with or without auxiliary switch blocks For increasing the permissible residual current and for limiting the residual voltage, it ensures the safe opening of contactors with direct control via 230 V AC semiconductor outputs of SIMATIC controllers, simultaneously provides overvoltage damping Rated voltage: 50/60 Hz AC, 180 ... 255 V Operating range: 0.8 ... 1.1 x U_s	▶	**3RT2916-1GA00**		1	1 unit	41B
LED modules for displaying contactor operation									
 3RT2926-1QT00	3RT2, 3RT1	**S00 ... S12**	For snapping into the location hole of an inscription label on the front of a contactor either directly on the contactor or on the front auxiliary switch. The LED module is connected to coil terminals A1 and A2 of the contactor and indicates its energized state with a yellow LED. Connecting leads need to be extended as required. Rated voltage: 24 ... 240 V AC/DC with reverse polarity protection	5	**3RT2926-1QT00**		1	5 units	41B
Control kit									
 3RT2916-4MC00	3RT2.1, 3RH2	**S00**	For manual operation of contactor contacts, for start up and service	2	**3RT2916-4MC00**		1	5 units	41B
	3RT2.2	**S0**		2	**3RT2926-4MC00**		1	5 units	41B
	3RT2.3, 3RT2.4	**S2, S3**		2	**3RT2936-4MC00**		1	5 units	41B

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

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	For contactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Type			d					
Insulation stop for securely holding back the conductor insulation for conductors up to 1 mm²									
					Spring-type terminals				
 3RT2916-4JA02			**Insulation stop strip**, can be inserted in cable entry of the spring-type terminal (two strips per contactor required)						
	3RT2.1, 3RH2	**S00**	• For basic units, removable individually	5	**3RT2916-4JA02**		1	20 units	41B
	3RT2.2 ... 3RT2.4, 3RT1, 3RH29	**S0 ... S12**	• For auxiliary and control current on basic units and for mountable 3RH29 auxiliary switches, removable in pairs	5	**3RT1916-4JA02**		1	20 units	41B
Tools for opening spring-type terminals									
 3RA2908-1A	3RT, 3RH	**S00 ... S12**	**Screwdrivers** For all SIRIUS devices with spring-type terminals Length: approx. 200 mm, 3.0 mm x 0.5 mm, titanium gray/black, partially insulated	2	**3RA2908-1A**		1	1 unit	41B
Blank labels									
 3RT2900-1SB20			**Unit labeling plates** For SIRIUS devices[1]						
	3RT2	**S00 ... S3**	• 10 mm × 7 mm, titanium gray	20	**3RT2900-1SB10**		100	816 units	41B
			• 20 mm × 7 mm, titanium gray	20	**3RT2900-1SB20**		100	340 units	41B
	3RT1	**S6 ... S12**	• 10 mm × 7 mm, pastel turquoise	15	**3RT1900-1SB10**		100	816 units	41B
			• 20 mm × 7 mm, pastel turquoise	20	**3RT1900-1SB20**		100	340 units	41B
			Adhesive labels For SIRIUS devices						
	3RT2	**S00 ... S3**	• 19 mm × 6 mm, titanium gray	5	**3RT2900-1SB60**		100	3 060 units	41B
	3RT1	**S6 ... S12**	• 19 mm × 6 mm						
			- Pastel turquoise	15	**3RT1900-1SB60**		100	3 060 units	41B
			- Zinc/yellow	15	**3RT1900-1SD60**		100	3 060 units	41B

[1] PC labeling system for individual inscription of unit labeling plates available from: murrplastik Systemtechnik GmbH (see page 16/15).

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Solenoid coils

Selection and ordering data

Screw terminals and spring-type terminals



3RT2924-5A.01

For contactors	Rated control supply voltage U_s			SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	50 Hz	50/60 Hz	60 Hz						
Type	V	V	V	d					
Solenoid coils · AC operation									
Size S0									
3RT2023-.A, 3RT2024-.A, 3RT2025-.A	24	--	--	5	**3RT2924-5AB01**		1	1 unit	41B
	42	--	--	5	**3RT2924-5AD01**		1	1 unit	41B
	48	--	--	5	**3RT2924-5AH01**		1	1 unit	41B
	110	--	--	5	**3RT2924-5AF01**		1	1 unit	41B
	230	--	--	5	**3RT2924-5AP01**		1	1 unit	41B
	400	--	--	5	**3RT2924-5AV01**		1	1 unit	41B
	--	24	--	5	**3RT2924-5AC21**		1	1 unit	41B
	--	42	--	5	**3RT2924-5AD21**		1	1 unit	41B
	--	48	--	5	**3RT2924-5AH21**		1	1 unit	41B
	--	110	--	5	**3RT2924-5AG21**		1	1 unit	41B
	--	220	--	5	**3RT2924-5AN21**		1	1 unit	41B
	--	230	--	5	**3RT2924-5AL21**		1	1 unit	41B
	--	--	24	5	**3RT2924-5AC11**		1	1 unit	41B
	110	--	120	5	**3RT2924-5AK61**		1	1 unit	41B
	220	--	240	5	**3RT2924-5AP61**		1	1 unit	41B
	--	100	110	5	**3RT2924-5AG61**		1	1 unit	41B
	--	200	220	5	**3RT2924-5AN61**		1	1 unit	41B
	--	400	440	5	**3RT2924-5AR61**		1	1 unit	41B
3RT2026-.A, 3RT2027-.A, 3RT2028-.A, 3RT2325-.A, 3RT2326-.A, 3RT2327-.A, 3RT2526-.A	24	--	--	5	**3RT2926-5AB01**		1	1 unit	41B
	42	--	--	5	**3RT2926-5AD01**		1	1 unit	41B
	48	--	--	5	**3RT2926-5AH01**		1	1 unit	41B
	110	--	--	5	**3RT2926-5AF01**		1	1 unit	41B
	230	--	--	5	**3RT2926-5AP01**		1	1 unit	41B
	400	--	--	5	**3RT2926-5AV01**		1	1 unit	41B
	--	24	--	5	**3RT2926-5AC21**		1	1 unit	41B
	--	42	--	5	**3RT2926-5AD21**		1	1 unit	41B
	--	48	--	5	**3RT2926-5AH21**		1	1 unit	41B
	--	110	--	5	**3RT2926-5AG21**		1	1 unit	41B
	--	220	--	5	**3RT2926-5AN21**		1	1 unit	41B
	--	230	--	5	**3RT2926-5AL21**		1	1 unit	41B
	--	--	24	5	**3RT2926-5AC11**		1	1 unit	41B
	110	--	120	5	**3RT2926-5AK61**		1	1 unit	41B
	220	--	240	5	**3RT2926-5AP61**		1	1 unit	41B
	--	100	110	5	**3RT2926-5AG61**		1	1 unit	41B
	--	200	220	5	**3RT2926-5AN61**		1	1 unit	41B
	--	400	440	5	**3RT2926-5AR61**		1	1 unit	41B

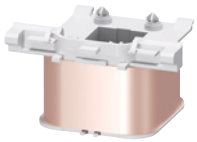
Note:

Contactors with AC and AC/DC coils have different depths. It is only possible to replace the coils on AC contactors with AC coils. It is not possible to replace the coils on DC contactors.

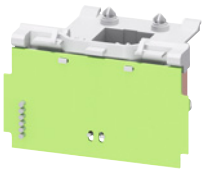
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Illustrations are approximate

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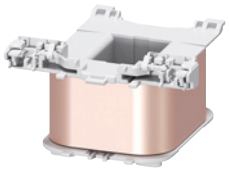
Screw terminals and spring-type terminals



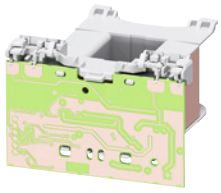
3RT2934-5A.01



3RT2934-5N.31



3RT2944-5A..1



3RT2944-5N.31

For contactors	Rated control supply voltage U_s				SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	50 Hz	50/60 Hz	60 Hz	DC						
Type	V	V	V		d					
Solenoid coils · AC operation										
Size S2										
3RT203.-.A, 3RT233.-.A, 3RT243.-.A, 3RT253.-.A	24	--	--	--	5	**3RT2934-5AB01**		1	1 unit	41B
	42	--	--	--	5	**3RT2934-5AD01**		1	1 unit	41B
	48	--	--	--	5	**3RT2934-5AH01**		1	1 unit	41B
	110	--	--	--	5	**3RT2934-5AF01**		1	1 unit	41B
	230	--	--	--	5	**3RT2934-5AP01**		1	1 unit	41B
	400	--	--	--	5	**3RT2934-5AV01**		1	1 unit	41B
	--	24	--	--	5	**3RT2934-5AC21**		1	1 unit	41B
	--	42	--	--	5	**3RT2934-5AD21**		1	1 unit	41B
	--	48	--	--	5	**3RT2934-5AH21**		1	1 unit	41B
	--	110	--	--	5	**3RT2934-5AG21**		1	1 unit	41B
	--	208	--	--	5	**3RT2934-5AM21**		1	1 unit	41B
	--	220	--	--	5	**3RT2934-5AN21**		1	1 unit	41B
	--	230	--	--	5	**3RT2934-5AL21**		1	1 unit	41B
	110	--	120	--	5	**3RT2934-5AK61**		1	1 unit	41B
	220	--	240	--	5	**3RT2934-5AP61**		1	1 unit	41B
	--	--	480	--	5	**3RT2934-5AV61**		1	1 unit	41B
	--	--	600	--	5	**3RT2934-5AT61**		1	1 unit	41B
	--	100	110	--	5	**3RT2934-5AG61**		1	1 unit	41B
	--	200	220	--	5	**3RT2934-5AN61**		1	1 unit	41B
	--	--	277	--	5	**3RT2934-5AU61**		1	1 unit	41B
	--	400	440	--	5	**3RT2934-5AR61**		1	1 unit	41B
Size S3										
3RT204.-.A, 3RT234.-.A, 3RT244.-.A, 3RT254.-.A	24	--	--	--	5	**3RT2944-5AB01**		1	1 unit	41B
	42	--	--	--	5	**3RT2944-5AD01**		1	1 unit	41B
	48	--	--	--	5	**3RT2944-5AH01**		1	1 unit	41B
	110	--	--	--	5	**3RT2944-5AF01**		1	1 unit	41B
	230	--	--	--	5	**3RT2944-5AP01**		1	1 unit	41B
	400	--	--	--	5	**3RT2944-5AV01**		1	1 unit	41B
	--	24	--	--	5	**3RT2944-5AC21**		1	1 unit	41B
	--	42	--	--	5	**3RT2944-5AD21**		1	1 unit	41B
	--	48	--	--	5	**3RT2944-5AH21**		1	1 unit	41B
	--	110	--	--	5	**3RT2944-5AG21**		1	1 unit	41B
	--	220	--	--	5	**3RT2944-5AN21**		1	1 unit	41B
	--	230	--	--	5	**3RT2944-5AL21**		1	1 unit	41B
	110	--	120	--	5	**3RT2944-5AK61**		1	1 unit	41B
	220	--	240	--	5	**3RT2944-5AP61**		1	1 unit	41B
	--	--	480	--	5	**3RT2944-5AV61**		1	1 unit	41B
	--	--	600	--	5	**3RT2944-5AT61**		1	1 unit	41B
	--	100	110	--	5	**3RT2944-5AG61**		1	1 unit	41B
	--	200	220	--	5	**3RT2944-5AN61**		1	1 unit	41B
	--	400	440	--	5	**3RT2944-5AR61**		1	1 unit	41B
Solenoid coils · AC/DC operation, with varistor										
Size S2										
3RT203.-.N, 3RT233.-.N	--	20 ... 33	--	20 ... 33	5	**3RT2934-5NB31**		1	1 unit	41B
	--	30 ... 42	--	30 ... 42	5	**3RT2934-5ND31**		1	1 unit	41B
	--	48 ... 80	--	48 ... 80	5	**3RT2934-5NE31**		1	1 unit	41B
	--	83 ... 155	--	83 ... 155	5	**3RT2934-5NF31**		1	1 unit	41B
	--	175 ... 280	--	175 ... 280	5	**3RT2934-5NP31**		1	1 unit	41B
Size S3										
3RT204.-.N, 3RT234.-.N, 3RT244.-.N, 3RT254.-.N	--	20 ... 33	--	20 ... 33	5	**3RT2944-5NB31**		1	1 unit	41B
	--	30 ... 42	--	30 ... 42	5	**3RT2944-5ND31**		1	1 unit	41B
	--	48 ... 80	--	48 ... 80	5	**3RT2944-5NE31**		1	1 unit	41B
	--	83 ... 155	--	83 ... 155	5	**3RT2944-5NF31**		1	1 unit	41B
	--	175 ... 280	--	175 ... 280	5	**3RT2944-5NP31**		1	1 unit	41B

Note:

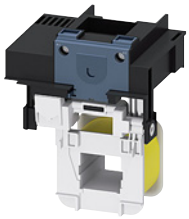
It is only possible to replace the coils on AC contactors with AC coils, and on AC/DC contactors with AC/DC coils.

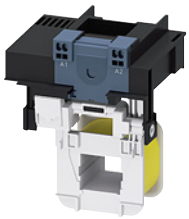
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Solenoid coils

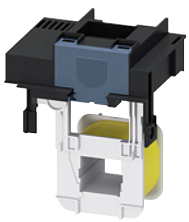
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

Withdrawable coils


3RT1955-5A.31


3RT1955-5A.32


3RT1955-5N.31


3RT1955-5P.31


3RT1955-5X.42

For contactors		Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
Size	Type	V	d	Article No. / Price per PU	d	Article No. / Price per PU
Conventional operating mechanisms for AC/DC						
S6	3RT105, 3RT145	23 ... 26 AC/DC	5	**3RT1955-5AB31**	5	**3RT1955-5AB32**
		42 ... 48 AC/DC	5	**3RT1955-5AD31**	5	**3RT1955-5AD32**
		110 ... 127 AC/DC	5	**3RT1955-5AF31**	5	**3RT1955-5AF32**
		200 ... 220 AC/DC	5	**3RT1955-5AM31**	5	**3RT1955-5AM32**
		220 ... 240 AC/DC	5	**3RT1955-5AP31**	5	**3RT1955-5AP32**
		240 ... 277 AC/DC	5	**3RT1955-5AU31**	5	**3RT1955-5AU32**
		380 ... 420 AC/DC	5	**3RT1955-5AV31**	5	**3RT1955-5AV32**
		440 ... 480 AC/DC	5	**3RT1955-5AR31**	5	**3RT1955-5AR32**
		500 ... 550 AC/DC	5	**3RT1955-5AS31**	5	**3RT1955-5AS32**
		575 ... 600 AC/DC	5	**3RT1955-5AT31**	5	**3RT1955-5AT32**
S10	3RT106, 3RT146	23 ... 26 AC/DC	5	**3RT1965-5AB31**	5	**3RT1965-5AB32**
		42 ... 48 AC/DC	5	**3RT1965-5AD31**	5	**3RT1965-5AD32**
		110 ... 127 AC/DC	5	**3RT1965-5AF31**	5	**3RT1965-5AF32**
		200 ... 220 AC/DC	5	**3RT1965-5AM31**	5	**3RT1965-5AM32**
		220 ... 240 AC/DC	5	**3RT1965-5AP31**	5	**3RT1965-5AP32**
		240 ... 277 AC/DC	5	**3RT1965-5AU31**	5	**3RT1965-5AU32**
		380 ... 420 AC/DC	5	**3RT1965-5AV31**	5	**3RT1965-5AV32**
		440 ... 480 AC/DC	5	**3RT1965-5AR31**	5	**3RT1965-5AR32**
		500 ... 550 AC/DC	5	**3RT1965-5AS31**	5	**3RT1965-5AS32**
		575 ... 600 AC/DC	5	**3RT1965-5AT31**	5	**3RT1965-5AT32**
S12	3RT107, 3RT147	23 ... 26 AC/DC	5	**3RT1975-5AB31**	5	**3RT1975-5AB32**
		42 ... 48 AC/DC	5	**3RT1975-5AD31**	5	**3RT1975-5AD32**
		110 ... 127 AC/DC	5	**3RT1975-5AF31**	5	**3RT1975-5AF32**
		200 ... 220 AC/DC	5	**3RT1975-5AM31**	5	**3RT1975-5AM32**
		220 ... 240 AC/DC	5	**3RT1975-5AP31**	5	**3RT1975-5AP32**
		240 ... 277 AC/DC	5	**3RT1975-5AU31**	5	**3RT1975-5AU32**
		380 ... 420 AC/DC	5	**3RT1975-5AV31**	5	**3RT1975-5AV32**
		440 ... 480 AC/DC	5	**3RT1975-5AR31**	5	**3RT1975-5AR32**
		500 ... 550 AC/DC	5	**3RT1975-5AS31**	5	**3RT1975-5AS32**
		575 ... 600 AC/DC	5	**3RT1975-5AT31**	5	**3RT1975-5AT32**
Solid-state operating mechanisms for AC/DC with 24 V DC control signal input e.g. for control by PLC						
S6	3RT105, 3RT145	21 ... 27.3 AC/DC	5	**3RT1955-5NB31**	5	**3RT1955-5NB32**
		96 ... 127 AC/DC	5	**3RT1955-5NF31**	5	**3RT1955-5NF32**
		200 ... 277 AC/DC	5	**3RT1955-5NP31**	5	**3RT1955-5NP32**
S10	3RT106, 3RT146	21 ... 27.3 AC/DC	5	**3RT1965-5NB31**	5	**3RT1965-5NB32**
		96 ... 127 AC/DC	5	**3RT1965-5NF31**	5	**3RT1965-5NF32**
		200 ... 277 AC/DC	5	**3RT1965-5NP31**	5	**3RT1965-5NP32**
S12	3RT107, 3RT147	21 ... 27.3 AC/DC	5	**3RT1975-5NB31**	5	**3RT1975-5NB32**
		96 ... 127 AC/DC	5	**3RT1975-5NF31**	5	**3RT1975-5NF32**
		200 ... 277 AC/DC	5	**3RT1975-5NP31**	5	**3RT1975-5NP32**
• **Additionally with PLC relay output and remaining lifetime indicator (RLT)** (withdrawable coil with laterally mounted solid-state module)						
S6	3RT105, 3RT145	96 ... 127 AC/DC	5	**3RT1955-5PF31**		--
		200 ... 277 AC/DC	5	**3RT1955-5PP31**		--
S10	3RT106, 3RT146	96 ... 127 AC/DC	5	**3RT1965-5PF31**		--
		200 ... 277 AC/DC	5	**3RT1965-5PP31**		--
S12	3RT107, 3RT147	96 ... 127 AC/DC	5	**3RT1975-5PF31**		--
		200 ... 277 AC/DC	5	**3RT1975-5PP31**		--
Solid-state operating mechanism for DC with 24 ... 110 V DC control signal input e.g. for control from PLC with extended application range (see also contactors for railway applications on page 4/55)						
S6	3RT105..-X...- 0LA2	24 DC		--	5	**3RT1955-5XB42**
		72 DC		--	5	**3RT1955-5XJ42**
		110 DC		--	5	**3RT1955-5XF42**
S10	3RT106..-X...- 0LA2	24 DC		--	5	**3RT1965-5XB42**
		72 DC		--	5	**3RT1965-5XJ42**
		110 DC		--	5	**3RT1965-5XF42**
S12	3RT107..-X...- 0LA2	24 DC		--	5	**3RT1975-5XB42**
		72 DC		--	5	**3RT1975-5XJ42**
		110 DC		--	5	**3RT1975-5XF42**

Removal or changing of the operating mechanism is not permitted for 3RT10..-.S contactors with fail-safe control inputs.

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

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Selection and ordering data

For contactors		Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Size	Type		d					
Contacts with fixing parts								
For contactors with 3 main contacts								
S2	3RT2035	Main contacts (3 NO contacts) for utilization category AC-3 (1 set = 3 movable and 6 fixed switching elements with fixing parts)	5	**3RT2935-6A**		1	1 unit	41B
	3RT2036		5	**3RT2936-6A**		1	1 unit	41B
	3RT2037		5	**3RT2937-6A**		1	1 unit	41B
	3RT2038		5	**3RT2938-6A**		1	1 unit	41B
S3	3RT2045		5	**3RT2945-6A**		1	1 unit	41B
	3RT2046		5	**3RT2946-6A**		1	1 unit	41B
	3RT2047		5	**3RT2947-6A**		1	1 unit	41B
S6	3RT1054		▶	**3RT1954-6A**		1	1 unit	41B
	3RT1055		▶	**3RT1955-6A**		1	1 unit	41B
	3RT1056		▶	**3RT1956-6A**		1	1 unit	41B
S10	3RT1064		▶	**3RT1964-6A**		1	1 unit	41B
	3RT1065		▶	**3RT1965-6A**		1	1 unit	41B
	3RT1066		▶	**3RT1966-6A**		1	1 unit	41B
S12	3RT1075		▶	**3RT1975-6A**		1	1 unit	41B
	3RT1076		2	**3RT1976-6A**		1	1 unit	41B
S6	3RT1456	Main contacts (3 NO contacts) for utilization category AC-1 (1 set = 3 movable and 6 fixed switching elements with fixing parts)	5	**3RT1956-6D**		1	1 unit	41B
S10	3RT1466		5	**3RT1966-6D**		1	1 unit	41B
S12	3RT1476		2	**3RT1976-6D**		1	1 unit	41B
For contactors with 4 main contacts								
S2	3RT2336	Main contacts (4 NO contacts) for utilization category AC-1 (1 set = 3 movable and 6 fixed switching elements and spare pole with fixing parts)	5	**3RT2936-6E**		1	1 unit	41B
	3RT2337		5	**3RT2937-6E**		1	1 unit	41B
Arc chambers								
For contactors with 3 main contacts								
S6	3RT1054	Only for contactors with AC/DC coil	5	**3RT1954-7A**		1	1 unit	41B
	3RT1055		5	**3RT1955-7A**		1	1 unit	41B
	3RT1056		5	**3RT1956-7A**		1	1 unit	41B
	3RT1456		5	**3RT1956-7B**		1	1 unit	41B
S10	3RT1064		5	**3RT1964-7A**		1	1 unit	41B
	3RT1065		5	**3RT1965-7A**		1	1 unit	41B
	3RT1066		5	**3RT1966-7A**		1	1 unit	41B
	3RT1466		5	**3RT1966-7B**		1	1 unit	41B
S12	3RT1075		5	**3RT1975-7A**		1	1 unit	41B
	3RT1076		5	**3RT1976-7A**		1	1 unit	41B
	3RT1476		5	**3RT1976-7B**		1	1 unit	41B

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Overview

Vacuum contactors

Standards

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

The SIRIUS 3RT12 and 3TF68/3TF69 vacuum contactors are suitable for use in any climate. They are finger-safe according to IEC 60529. Terminal covers may have to be fitted onto the connecting bars, depending on the configuration with other devices (see pages 3/112 and 3/133).

Connection methods

The vacuum contactors are available with screw terminals (box terminals).

Contact reliability

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

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

Short-circuit protection

For short-circuit protection of vacuum contactors without overload relays, see "Technical specifications", page 3/124.

For short-circuit protection of the vacuum contactors with overload relay, see Configuration Manual "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders" https://support.industry.siemens.com/cs/ww/en/view/39714188.

Electromagnetic compatibility (EMC)

The contactors with solid-state operating mechanism comply with the international standards IEC/EN 60947-1 and IEC/EN 60947-4-1.

These contactors have been developed for environment A.

Note:

Environment A refers to private low-voltage or industrial networks/locations/plants, including high-grade sources of interference.

Environment A corresponds to devices of Class A with CISPR 11, EN 55011.

Note:

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

Motor protection

For protection against overload, 3RB2 electronic overload relays (see page 7/113 onwards) can be mounted on the vacuum contactors. These must be ordered separately.

Ratings of three-phase motors

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

The power rating specifications of the vacuum contactors in kW are guide values for 4-pole standard motors at 50 Hz AC and specified voltage (e.g. 400 V). The specific starting and rated data of the motor to be switched are decisive when it comes to selecting the right devices, and the motor current, motor protection device and the permissible contactor current acc. to the utilization category must be aligned with each other when doing so.

Surge suppression

The vacuum contactors can be retrofitted with varistors for damping opening overvoltages in the coil.

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 to 5 ms)

Vacuum contactors are basically unsuitable for switching DC voltage.

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

AC/DC operation

The contactors can be operated with AC (50 to 60 Hz) as well as with DC.

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

Withdrawable coils

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

Vacuum interrupters

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

Auxiliary contact complement

The 3RT12 vacuum contactors of sizes S10 to S12 are supplied with laterally mounted auxiliary switch blocks. These can be fitted with up to eight lateral auxiliary contacts (identical auxiliary switch blocks for S10 and S12). Of these, no more than four are permitted to be NC contacts.

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

Main contacts

Contact erosion indication with 3TF68/3TF69 vacuum contactors:
The contact erosion of the vacuum interrupters can be checked during operation with the help of three white double slides on the contactor base. If the distance indicated by one of the double slides is < 0.5 mm while the contactor is in the closed position, the vacuum interrupter must be replaced. To ensure maximum reliability, it is recommended to replace all three vacuum interrupters simultaneously.

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Auxiliary contacts

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

Protection of the main current paths

An integrated RC varistor connection for the main current paths dampens the switching overvoltage rises to safe values.

This prevents multiple restricting. It can therefore be assumed that the motor winding cannot be damaged by switching overvoltages with steep voltage rises.

During operation in installations in which the emitted interference limits cannot be observed, e.g. when used for output contactors in converters, 3TF68/3TF69. . -. **Q** vacuum contactors – without connection of the main current path circuit – are recommended.

Technical specifications

Unless otherwise listed on subsequent pages, the technical specifications of the SIRIUS 3RT12 vacuum contactors correspond to those of the 3RT10 basic units; see pages 3/18 and 3/43 to 3/49.

More information

Technical specifications, see
https://support.industry.siemens.com/cs/ww/en/ps/16137/td

FAQs, see
https://support.industry.siemens.com/cs/ww/en/ps/16137/faq

Manuals, see

- System Manual "SIRIUS Modular System – System Overview", https://support.industry.siemens.com/cs/WW/en/view/60311318
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557
- Application Manual "Controls with IE3/IE4 motors", https://support.industry.siemens.com/cs/ww/en/view/94770820

	SIRIUS vacuum contactors
Type	3RT12
Size	S10 and S12

Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching resistive and inductive AC loads (AC-1/AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The rated operational current I_e complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

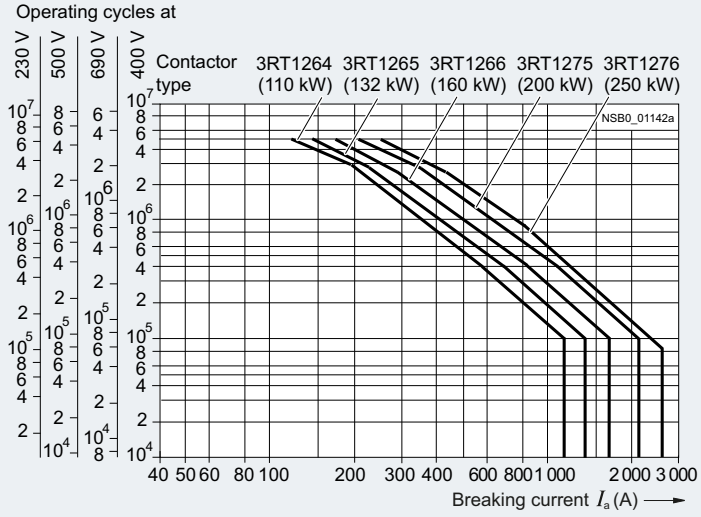
If a shorter contact endurance is sufficient, the rated operational current I_e/AC-4 can be increased.

If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100}\left(\frac{A}{B} - 1\right)}$$

Characters in the equation:

X Contact endurance for mixed operation in operating cycles
A Contact endurance for normal operation ($I_a = I_e$) in operating cycles
B Contact endurance for inching (I_a = multiple of I_e) in operating cycles
C Inching operations as a percentage of total switching operations



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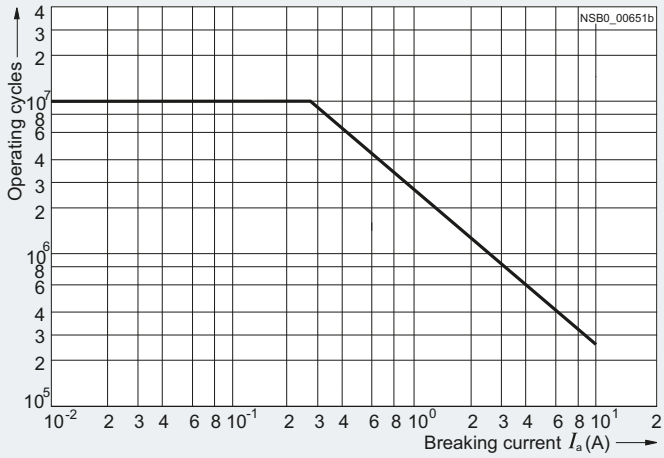
SIRIUS 3RT12 and 3TF6 vacuum contactors

		Vacuum contactors		
Type		3TF6		
Size		14		
Rated data of the auxiliary contacts		According to IEC 60947-5-1		
Rated insulation voltage U_i (pollution degree 3)	V	690		
Conventional thermal current I_{th} = rated operational current I_e/AC-12	A	10		
AC load				
Rated operational current I_e/AC-15/AC-14				
• For rated operational voltage U_e				
- At 24 V	A	10		
- At 110 V	A	10		
- At 125 V	A	10		
- At 220 V	A	6		
- At 230 V	A	5.6		
- At 380 V	A	4		
- At 400 V	A	3.6		
- At 500 V	A	2.5		
- At 660 V	A	2.5		
- At 690 V	A	2.3		
DC load				
Rated operational current I_e/DC-12				
• For rated operational voltage U_e				
- At 24 V	A	10		
- At 60 V	A	10		
- At 110 V	A	3.2		
- At 125 V	A	2.5		
- At 220 V	A	0.9		
- At 440 V	A	0.33		
- At 600 V	A	0.22		
Rated operational current I_e/DC-13			Auxiliary contacts with delayed NC contact:	N S = No specification
• For rated operational voltage U_e				
- At 24 V	A	10	6	
- At 60 V	A	5	N S	
- At 110 V	A	1.14	0.98	
- At 125 V	A	0.98	N S	
- At 220 V	A	0.48	N S	
- At 440 V	A	0.13	N S	
- At 600 V	A	0.07	0.07	
CSA and UL rated data of the auxiliary contacts				
Rated voltage, max.	V AC	600		
Switching capacity		A 600, P 600		

Endurance of the auxiliary contacts

The contact endurance for utilization category AC-12 or AC-15/AC-14 depends mainly on the breaking current. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The characteristic curves apply to 230 V AC.



Contact erosion indication with vacuum contactors

The contact erosion of the vacuum interrupters can be checked during operation with the help of three white double slides on the contactor base.

If the distance indicated by one of the double slides is < 0.5 mm while the contactor is in the closed position, the vacuum interrupter must be replaced. To ensure maximum reliability, it is recommended to replace all three vacuum interrupters at once.

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	Vacuum contactors
Type	3TF6
Size	14

Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching resistive and inductive AC loads (AC-1/AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The rated operational current I_e complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

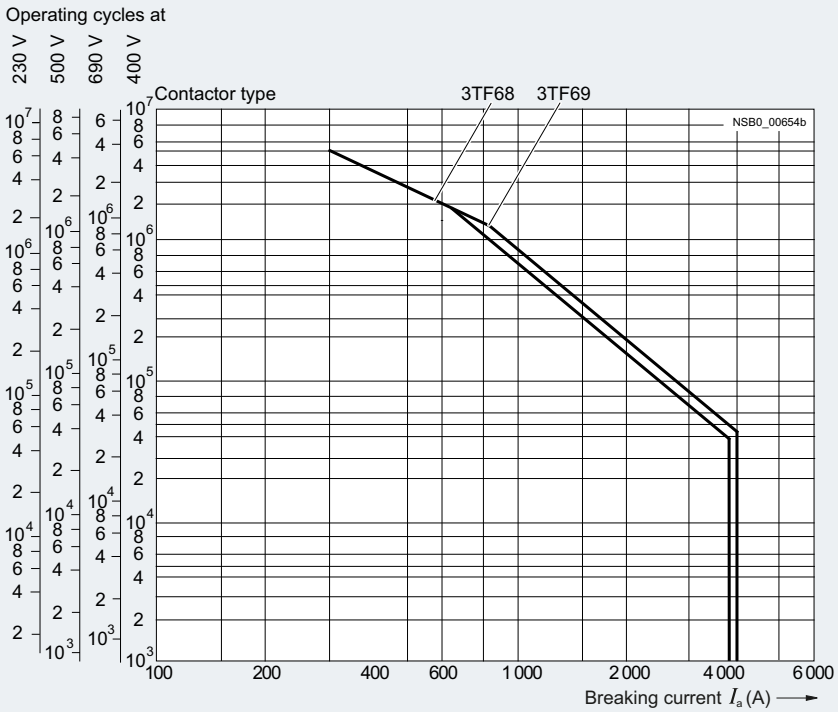
If a shorter contact endurance is sufficient, the rated operational current I_e/AC-4 can be increased.

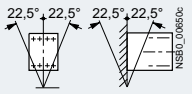
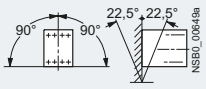
If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100}\left(\frac{A}{B} - 1\right)}$$

Characters in the equation:

- X Contact endurance for mixed operation in operating cycles
- A Contact endurance for normal operation ($I_a = I_e$) in operating cycles
- B Contact endurance for inching (I_a = multiple of I_e) in operating cycles
- C Inching operations as a percentage of total switching operations



		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT126	3RT127	3TF68	3TF69
Size		S10	S12	14	
General data					
Dimensions (W x H x D)	mm	145 x 210 x 206	160 x 214 x 225	230 x 276 x 237	230 x 295 x 237
Permissible mounting position The contactors are designed for operation on a vertical mounting surface.					
• To easily replace the laterally mounted auxiliary switches it is recommended to maintain a minimum distance of 30 mm between the contactors.		No		Yes	
• If mounted at a 90° angle (current paths are horizontally above each other), the switching frequency is reduced by 80% compared with the normal values.		No		Yes	
Mechanical endurance	Operating cycles	10 million		5 million	
Electrical endurance Contact endurance of the main contacts		See page 3/121		See above	
Rated insulation voltage U_i (pollution degree 3)	kV	1			
Rated impulse withstand voltage U_{imp}	kV	8			
Protective separation between the coil and the main contacts acc. to IEC 60947-1, Appendix N	V	690		1 000	
Mirror contacts A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.		Yes, acc. to IEC 60947-4-1, Appendix F		Yes, acc. to IEC 60947-4-1, Appendix F One NC contact each must be connected in series for the left and right auxiliary switch block respectively.	

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SIRIUS 3RT12 and 3TF6 vacuum contactors

		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT126	3RT127	3TF68	3TF69
Size		S10	S12	14	
General data (continued)					
Permissible ambient temperature					
• During operation	°C	-25 ... +60		-25 ... +55[1]	
• During storage	°C	-55 ... +80		-55 ... +80	
Degree of protection acc. to IEC 60529					
• On the front		IP00 (IP20 with box terminal/cover)		[2][3]	
• Connecting terminal		IP00 (for higher degree of protection, use additional terminal covers)			
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front with cover			
Shock resistance					
• Rectangular pulse					
- AC operation	*g*/ms	8.5/5 and 4.2/10		8.1/5 and 4.7/10	9.5/5 and 5.7/10
- DC operation	*g*/ms	8.5/5 and 4.2/10		9/5 and 5.7/10	8.6/5 and 5.1/10
• Sine pulse					
- AC operation	*g*/ms	13.4/5 and 6.5/10		12.8/5 and 7.4/10	13.5/5 and 7.8/10
- DC operation	*g*/ms	13.4/5 and 6.5/10		14.4/5 and 9.1/10	13.5/5 and 7.8/10
Electromagnetic compatibility (EMC)		See page 3/120			
Short-circuit protection					
Main circuit					
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC/EN 60947-4-1					
• Type of coordination "1"	A	500	800	1 000	1 250
• Type of coordination "2"	A	500	800	500	630
• Weld-free (test conditions according to IEC 60947-4-1)	A	400	500	400	500
Auxiliary circuit					
Short-circuit test					
• Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)	A	10			
• Miniature circuit breaker with C characteristic (short-circuit current $I_k \leq 400$ A)	A	10			
Short-circuit protection for contactors with overload relays		See Configuration Manual "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188			

[1] For ambient temperatures > 55 °C, only 3TF6.33-.Q..-Z A02 contactors (= without connection of the main current path circuit) can be used. Then, derating is also possible with these contactors:
- AC-1: I_e = 782 A, 644 operating cycles/h;
- AC-3: Operating range 0.85 to 1.05 x U_s, 460 operating cycles/h, mech. endurance 5 million operating cycles, lateral clearance 10 mm.

[2] For 3TF6.-.C.. the following applies:
- IP00 without cover (the connecting bar is reached directly from the front)
- IP00 with cover for conductor entry
- IP20 on the front plate with cover.

[3] For 3TF6.-.Q../-.D.. the following applies:
- IP00 without box terminal (the connecting bar, series resistor and the 3TC44 reversing contactor are reached directly from the front)
- IP00 with box terminal (the series resistor and the 3TC44 reversing contactor are reached directly).

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			SIRIUS vacuum contactors		Vacuum contactors	
Type			3RT126	3RT127	3TF68	3TF69
Size			S10	S12	14	
Control						
Solenoid coil operating range		AC/DC	0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$			
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)						
			Conventional operating mechanisms			
• AC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		VA	530/630	700/830	--	
- P.f.			0.9		--	
- Closed at $U_{s\,min}$/$U_{s\,max}$		VA	6.1/7.4	7.6/9.2	--	
- P.f.			0.9		--	
• DC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		W	580/780	770/920	--	
- Closed at $U_{s\,min}$/$U_{s\,max}$		W	6.8/8.2	8.5/10	--	
			Solid-state operating mechanisms			
• AC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		VA	420/570	560/750	1 200/1 850	600/950
- P.f.			0.8		1	0.98
- Closed at $U_{s\,min}$/$U_{s\,max}$		VA	5.5/8.5	5.6/9	13.5/49	12.9/30.6
- P.f.			0.5/0.4		0.15	0.31
• AC operation for 3TF68/3TF69..-.**Q**						
- Closing at $U_{s\,min}$		VA	--		1 000	1 150
- P.f.			--		0.99	
- Closed at $U_{s\,min}$		VA	--		11	
- P.f.			--		1	
• DC operation						
- Closing at $U_{s\,min}$/$U_{s\,max}$		W	460/630	600/800	--	
- Closed at $U_{s\,min}$/$U_{s\,max}$		W	2.8/3.4	3/3.6	--	
• DC economy circuit[1]						
- Closing at $U_{s\,min}$		W	--		1 010	960
- Closed at $U_{s\,min}$		W	--		28	20.6
PLC control input acc. to IEC 61131-2			Type 2		--	
• Rated voltage		V DC	24		--	
• Operating range		V DC	17 ... 30		--	
• Power consumption		mA	≤ 30		--	
Operating times (Total break time = Opening delay + Arcing time)					(Values apply to cold and warm coil)	
			Conventional operating mechanisms			
• For 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	30 ... 95	45 ... 100	--	
- Opening delay		ms	40 ... 80	60 ... 100	--	
• For $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	35 ... 50	50 ... 70	--	
- Opening delay		ms	50 ... 80	70 ... 100	--	
			Solid-state operating mechanisms, actuated via A1/A2		(Values in brackets apply to contactors with reduced operating times)	
• AC operation at 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	105 ... 145	120 ... 150	70 ... 120 (22 ... 65)	80 ... 120
- Opening delay		ms	80 ... 100		70 ... 100	70 ... 80
• AC operation for 3TF68/3TF69..-.**Q** at $U_{s\,min}$ (including reversing contactor)						
- Closing delay		ms	--		35 ... 90	45 ... 160
- Opening delay		ms	--		65 ... 90	30 ... 80
• AC operation at $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	110 ... 130	125 ... 150	80 ... 100 (30 ... 45)	85 ... 100
- Opening delay		ms	80 ... 100		70 ... 100	70
			Solid-state operating mechanisms, actuated via PLC input			
• For 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	45 ... 80	60 ... 90	--	
- Opening delay		ms	80 ... 100		--	
• DC economy circuit for 0.8 x $U_{s\,min}$ ... 1.1 x $U_{s\,max}$						
- Closing delay		ms	--		76 ... 110	86 ... 280
- Opening delay		ms	--		50	19 ... 25
• For $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	50 ... 65	65 ... 80	--	
- Opening delay		ms	80 ... 100		--	
• DC economy circuit for $U_{s\,min}$ ... $U_{s\,max}$						
- Closing delay		ms	--		80 ... 90	90 ... 125
- Opening delay		ms	--		50	19 ... 25
Arcing time		ms	10 ... 15		10 ... 15	10
Minimum command duration	Standard	ms	--		120	
For closing	Reduced make-time	ms	--		90	--
Minimum interval time between two ON commands		ms	--		100	300

[1] At 24 V DC; for further voltages, deviations of up to ± 10% are possible.

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SIRIUS 3RT12 and 3TF6 vacuum contactors

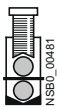
			SIRIUS vacuum contactors					Vacuum contactors	
Type			3RT1264	3RT1265	3RT1266	3RT1275	3RT1276	3TF68	3TF69
Size			S10			S12		14	
Rated data of the main contacts									
Load rating with AC									
Utilization category AC-1 Switching resistive loads									
• Rated operational currents I_e	- At 40 °C up to 690 V	A	330			610		700	910
	- At 40 °C up to 1 000 V	A	330			610		--	--
	- At 55 °C up to 690 V	A	--			--		630	850
	- At 55 °C up to 1 000 V	A	--			--		450	800
	- At 60 °C up to 1 000 V	A	300			550		--	--
• Rated power for AC loads[1] with p.f.= 0.95			At 60 °C			At 60 °C		At 55 °C	At 55 °C
	- At 230 V	kW	113			208		240	323
	- At 400 V	kW	197			362		415	558
	- At 500 V	kW	246			452		545	735
	- At 690 V	kW	340			624		720	970
	- At 1 000 V	kW	492			905		780	1 385
• Minimum conductor cross-section for loads with I_e	- At 40 °C	mm^2	185			2 x 185		2 x 240	$I_e \geq 800$ A: 2 x 60 x 5 (copper busbars)
	- At 55 °C	mm^2	--			--		2 x 185	$I_e < 800$ A: 2 x 240
	- At 60 °C	mm^2	185			2 x 185		--	--
Utilization categories AC-2 and AC-3									
• Rated operational currents I_e	- Up to 690 V	A	--	--	--	--	--	630	820
	- Up to 1 000 V	A	225	265	300	400	500	435	580
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	- At 230 V	kW	73	85	97	132	164	200	260
	- At 400 V	kW	128	151	171	231	291	347	450
	- At 500 V	kW	160	189	215	291	363	434	600
	- At 690 V	kW	223	265	288	400	507	600	800
	- At 1 000 V	kW	320	378	428	578	728	600	800
Thermal load capacity, 10 s current		A	1 800	2 120	2 400	3 200	4 000	5 040	7 000
Power loss per conducting path at I_e/AC-3		W	9	12	14	21	32	45	70
Utilization category AC-4 (for $I_a = 6 \times I_e$)									
Maximum values:									
• Rated operational current I_e	- Up to 690 V	A	195	230	280	350	430	610	690
• Rated power for squirrel-cage motors with 50 Hz and 60 Hz	- At 400 V	kW	110	132	160	200	250	355	400
The following applies to a contact endurance of about 200 000 operating cycles:									
• Rated operational currents I_e	- Up to 690 V	A	97	115	140	175	215	300	360
	- Up to 1 000 V	A	68	81	98	123	151	210	250
• Rated power for squirrel-cage motors with 50 Hz and 60 Hz	- At 230 V	kW	30	37	45	56	70	97	110
	- At 400 V	kW	55	65	79	98	122	168	191
	- At 500 V	kW	68	81	98	124	153	210[2]	250[2]
	- At 690 V	kW	94	112	138	172	212	278[2]	335[2]
	- At 1 000 V	kW	95	114	140	183	217	290[2]	350[2]
Switching frequency									
Switching frequency *z* in operating cycles/hour									
Contactors without overload relays									
• No-load switching frequency	- AC/DC	h^{-1}	Conventional operating mechanisms: 2 000, Solid-state operating mechanisms: 1 000					--	
	- AC	h^{-1}	--					2 000	1 000
	- DC	h^{-1}	--					1 000	
• Switching frequency *z* during rated operation[3]	- I_e/AC-1 at 400 V	h^{-1}	800	750				700	
	- I_e/AC-2 at 400 V	h^{-1}	300	250				200	
	- I_e/AC-3 at 400 V	h^{-1}	750					500	
	- I_e/AC-4 at 400 V	h^{-1}	250					150	
Contactors with overload relays									
• Mean value		h^{-1}	60					15	

1) Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

2) Max. permissible rated operational current I_e/AC-4 = I_e/AC-3 up to 500 V, for reduced contact endurance and reduced switching frequency.

3) Dependence of the switching frequency z' on the operational current I' and operational voltage U': $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

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		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT126.	3RT127.	3TF68	3TF69
Size		S10	S12	14	
Conductor cross-sections					
Main conductors (1 or 2 conductors can be connected)		Screw terminals			
With mounted box terminals	Type	3RT1966-4G		--	
• Terminal screws		M12 (hexagon socket, A/F 5)		--	
- Tightening torque	Nm	20 ... 22 (180 ... 195 lb.in)		--	
Front clamping point connected					
 NSB0_00479					
• Finely stranded with end sleeve (DIN 46228-1)	mm²	70 ... 240		--	
• Finely stranded without end sleeve	mm²	70 ... 240		--	
• Stranded	mm²	95 ... 300		--	
• AWG cables, solid or stranded	AWG	3/0 ... 600 kcmil		--	
• Ribbon cable conductors (Number x Width x Thickness)	mm	Min. 6 x 9 x 0.8; max. 20 x 24 x 0.5		--	
Rear clamping point connected					
 NSB0_00480					
• Finely stranded with end sleeve (DIN 46228-1)	mm²	120 ... 185		--	
• Finely stranded without end sleeve	mm²	120 ... 185		--	
• Stranded	mm²	120 ... 240		--	
• AWG cables, solid or stranded	AWG	250 ... 500 kcmil		--	
• Ribbon cable conductors (Number x Width x Thickness)	mm	Min. 6 x 9 x 0.8; max. 20 x 24 x 0.5		--	
Both clamping points connected					
 NSB0_00481					
• Finely stranded with end sleeve (DIN 46228-1)	mm²	Min. 2 x 50, max. 2 x 185		--	
• Finely stranded without end sleeve	mm²	Min. 2 x 50, max. 2 x 185		--	
• Stranded	mm²	Min. 2 x 70, max. 2 x 240		--	
• AWG cables, solid or stranded	AWG	Min. 2 x 2/0, max. 1 x 500 kcmil		--	
• Ribbon cable conductors (Number x Width x Thickness)	mm	Max. 2 x (20 x 24 x 0.5)		--	
Cable lug connection					
• Finely stranded with cable lug[1]	mm²	50 ... 240		--	
• Stranded with cable lug[1]	mm²	70 ... 240		--	
• AWG cables, solid or stranded	AWG	2/0 ... 500 kcmil		--	
• Terminal screws		M10 x 30 (A/F 17)		--	
- Tightening torque	Nm	14 ... 24 (124 ... 210 lb.in)		--	
Busbar connections					
• Finely stranded with cable lug	mm²	--		50 ... 240	
• Stranded with cable lug	mm²	--		70 ... 240	50 ... 240
• Solid or stranded	AWG	--		2/0 ... 500 MCM	2/0 ... 500 MCM
• Connecting bar (max. width)	mm	25		50	60 ($U_e \leq$ 690 V), 50 (U_e > 690 V)
• Terminal screws		--		M10 x 30	M12 x 40
- Tightening torque	Nm	--		14 ... 24	20 ... 35
	lb.in	--		124 ... 210	177 ... 310
With box terminal (see page 3/133)					
• Connectable laminated copper bars		--		Yes	
• Width	mm	--		15 ... 25	15 ... 38
• Max. thickness	mm	--		1 x 26 or 2 x 11	1 x 46 or 2 x 18
• Terminal screw		--		A/F 6 (hexagon socket)	A/F 8 (hexagon socket)
• Tightening torque	Nm	--		25 ... 40 (221 ... 354 lb.in)	35 ... 50 (266 ... 443 lb.in)
Auxiliary conductors (1 or 2 conductors can be connected)					
• Solid	mm²	2 x (0.5 ... 1.5)[2]; 2 x (0.75 ... 2.5)[2] acc. to IEC 60947; max. 2 x (0.75 ... 4)		2 x (0.5 ... 1)[2]/2 x (1 ... 2.5)[2]	
• Finely stranded with end sleeve (DIN 46228-1)	mm²	2 x (0.5 ... 1.5)[2]; 2 x (0.75 ... 2.5)[2]		2 x (0.5 ... 1)[2], 2 x (0.75 ... 2.5)[2]	
• Pin-end connector to DIN 46231	mm²	--		2 x (1 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (18 ... 14)		2 x (18 ... 12)	
• Terminal screws		M3 (Pozidriv size 2)		--	
- Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)		0.8 ... 1.4 (7 ... 12 lb.in)	

1) When connecting cable lugs according to DIN 46234, the 3RT1966-4EA1 terminal cover must be used for conductor cross-sections of 240 mm² and more as well as DIN 46235 for conductor cross-sections of 185 mm² and more to keep to the phase clearance; see page 3/112.

2) If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

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SIRIUS 3RT12 and 3TF6 vacuum contactors

		SIRIUS vacuum contactors					Vacuum contactors	
Type		3RT1264	3RT1265	3RT1266	3RT1275	3RT1276	3TF68	3TF69
Size		S10			S12		14	
CSA and UL rated data								
Rated insulation voltage	V AC	600					600	
Uninterrupted current at 40 °C, open and enclosed	A	330			540		630	820
Maximum horsepower ratings (from CSA and UL approved values)								
• Rated power for three-phase motors at 60 Hz								
- At 200 V	hp	60	75	100	125	150	231	290
- At 230 V	hp	75	100	125	150	200	266	350
- At 460 V	hp	150	200	250	300	400	530	700
- At 575 V	hp	200	250	300	400	500	664	860
NEMA/EEMAC ratings								
SIZE	hp	--					6	7
• Uninterrupted current								
- Open	A	--					600	820
- Enclosed	A	--					540	810
• Rated power for three-phase motors at 60 Hz								
- At 200 V	hp	--					150	--
- At 230 V	hp	--					200	300
- At 460 V	hp	--					400	600
- At 575 V	hp	--					400	600
Short-circuit protection[1]	kA	10	18			30	100	
• CLASS L fuse	A	600	700	800	1 000	1 200	1 600	
• Circuit breakers acc. to UL 489	A	500	700	800	1 000	1 200	On request[1]	

[1] For more information about short-circuit values, e.g. for protection against short-circuit currents, see Certificate of Compliance for the individual devices, https://support.industry.siemens.com/cs/ww/en/ps/16134/cert.

For the selection and dimensioning of load feeders, see UL guide "Industrial Control Panels and Electrical Equipment of Industrial Machinery for North America", https://support.industry.siemens.com/cs/ww/en/view/53433538.

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Selection and ordering data

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

AC/DC operation (50/60 Hz AC or DC)

- Operating mechanism with integrated coil circuit (varistor)
- For screw fixing
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections



3RT1264-6AF36



3RT127.-6N.36

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	SD	**Screw terminals** Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Operational current I_e up to	Rating of three-phase motors at 50 Hz and				Operational current I_e up to									
	1 000 V	230 V	**400 V**	500 V	690 V	1 000 V									
	A	kW	**kW**	kW	kW	A	NO	NC	V AC/DC	d					
Conventional operating mechanisms															
S10	225	55	**110**	160	200	330	2	2	110 ... 127	2	**3RT1264-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1264-6AP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	110 ... 127	2	**3RT1265-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1265-6AP36**		1	1 unit	41B
	300	90	**160**[1]	200	250	330	2	2	110 ... 127	2	**3RT1266-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1266-6AP36**		1	1 unit	41B
S12	400	132	**200**	250	400	610	2	2	110 ... 127	2	**3RT1275-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1275-6AP36**		1	1 unit	41B
	500	160	**250**[1]	355	500	610	2	2	110 ... 127	2	**3RT1276-6AF36**		1	1 unit	41B
									220 ... 240	2	**3RT1276-6AP36**		1	1 unit	41B
Solid-state operating mechanism															
With 24 V DC control signal input e.g. for control by PLC															
S10	225	55	**110**	160	200	330	2	2	96 ... 127	5	**3RT1264-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1264-6NP36**		1	1 unit	41B
	265	75	**132**	160	250	330	2	2	96 ... 127	5	**3RT1265-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1265-6NP36**		1	1 unit	41B
	300	90	**160**	200	250	330	2	2	96 ... 127	5	**3RT1266-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1266-6NP36**		1	1 unit	41B
S12	400	132	**200**	250	400	610	2	2	96 ... 127	5	**3RT1275-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1275-6NP36**		1	1 unit	41B
	500	160	**250**	355	500	610	2	2	96 ... 127	5	**3RT1276-6NF36**		1	1 unit	41B
									200 ... 277	5	**3RT1276-6NP36**		1	1 unit	41B

[1] When using 3RT12.6-6**A**... vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, use the 3RT12.6-6**N**... versions with solid-state operating mechanism.
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/70 on request.

For an overview of the 3RT12 vacuum contactors with mountable accessories, see pages 3/12 and 3/13.

The accessories for the 3RT1 vacuum contactors correspond to those for the basic units of the 3RT1 contactors, see from page 3/71 onwards.

Spare parts, see page 3/134.

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

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SIRIUS 3RT12 and 3TF6 vacuum contactors

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

AC operation, 50/60 Hz

- For screw fixing
- Main conductors: Busbar connections
- Auxiliary and control conductors: Screw terminals
- With overvoltage protection of the coil (varistor)



3TF68/3TF69

Size	Rated data AC-2 and AC-3, t_u: Up to 55° C						AC-1, t_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	Screw terminals		PU (UNIT, SET, M)	PS*	PG
	Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Operational current I_e up to					Article No.	Price per PU			
	690 V	230 V	**400 V**	500 V	690 V	1 000 V	690 V									
	A	kW	**kW**	kW	kW	kW	A	NO	NC	V AC	d					
AC operation, 50/60 Hz[1]																
14	630	200	**335**[2]	434	600	--	700	4	4	110 ... 132	2	**3TF6844-0CF7**		1	1 unit	41B
										200 ... 240	▶	**3TF6844-0CM7**		1	1 unit	41B
						600	700	4	4	110 ... 132	15	**3TF6844-8CF7**		1	1 unit	41B
										200 ... 240	2	**3TF6844-8CM7**		1	1 unit	41B
14	820	260	**450**[3]	600	800	--	910	4	4	110 ... 132	2	**3TF6944-0CF7**		1	1 unit	41B
										200 ... 240	▶	**3TF6944-0CM7**		1	1 unit	41B
						800	910	4	4	110 ... 132	15	**3TF6944-8CF7**		1	1 unit	41B
										200 ... 240	5	**3TF6944-8CM7**		1	1 unit	41B

1) For use of 3TF6 vacuum contactors in the environment of frequency converters, we recommend ordering a special version: **3TF6...-....-Z A02**.

3TF68/3TF69 vacuum contactors in their basic version are supplied with integrated overvoltage damping for the main current paths. The surge suppression circuit is not required for operation in circuits with DC choppers, frequency converters or speed-variable operating mechanisms, for example.

The circuit could be damaged by the voltage peaks and harmonics and thus cause phase-to-phase short circuits. For this reason, the contactors can also be supplied without integrated overvoltage damping. Without additional price.
The article number must be supplemented by **"–Z"** and the order code **"A02"**.

2) When using 3TF68 vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, please use 3TF69 vacuum contactors. For more information about dimensioning and configuring, see page 3/6.

3) Please inquire about use of 3TF69 vacuum contactors with IE3/IE4 motors.

For accessories and spare parts, see pages 3/132 to 3/135.

Rated control supply voltages, possible on request (change of the 10th and 11th digits of the Article No.)

Delivery time on request

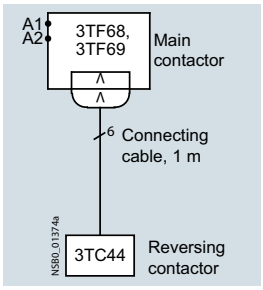
Rated control supply voltage U_s	**Contactor type**	**3TF6844-.C.., 3TF6944-.C..**
	Size	**14**
AC operation		
Solenoid coils for 50/60 Hz		
110 ... 132 V AC		F7
200 ... 240 V AC		M7
230 ... 277 V AC		P7
380 ... 460 V AC		Q7
500 ... 600 V AC		S7

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

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DC operation
and for AC operation subject to strong interference

- Main conductors: Busbar connections
- Auxiliary and control conductors: Screw terminals
- DC solenoid system with 3TC44 reversing contactor for series resistor





3TF6.33-.Q.7

Size	Rated data AC-2 and AC-3, t_u: Up to 55° C						AC-1, t_u: 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	Screw terminals Article No.	PU (UNIT, SET, M)	PS*	PG
	Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Operational current I_e up to					Price per PU			
	690 V	230 V	**400 V**	500 V	690 V	1 000 V	690 V								
	A	kW	**kW**	kW	kW	kW	A	NO	NC	V	d				
DC operation · DC economy circuit[1)2)]															
14	630	200	**335**[3)]	434	600	--	700	3	3	24 DC	15	**3TF6833-1DB4**	1	1 unit	41B
						600	700	3	3	24 DC	15	**3TF6833-8DB4**	1	1 unit	41B
14	820	260	**450**[4)]	600	800	--	910	3	3	24 DC	15	**3TF6933-1DB4**	1	1 unit	41B
						800	910	3	3	24 DC	15	**3TF6933-8DB4**	1	1 unit	41B
AC operation 50/60 Hz with DC economy circuit[2)5)] **. For AC operation subject to strong interference**															
14	630	200	**335**[3)]	434	600	--	700	3	3	110 ... 120 AC	15	**3TF6833-1QG7**	1	1 unit	41B
										220 ... 240 AC	2	**3TF6833-1QL7**	1	1 unit	41B
										380 ... 420 AC	15	**3TF6833-1QV7**	1	1 unit	41B
						600	700	3	3	220 ... 240 AC	15	**3TF6833-8QL7**	1	1 unit	41B
14	820	260	**450**[4)]	600	800	--	910	3	3	110 ... 120 AC	15	**3TF6933-1QG7**	1	1 unit	41B
										220 ... 240 AC	2	**3TF6933-1QL7**	1	1 unit	41B
										380 ... 420 AC	15	**3TF6933-1QV7**	1	1 unit	41B
						800	910	3	3	110 ... 120 AC	15	**3TF6933-8QG7**	1	1 unit	41B
										220 ... 240 AC	15	**3TF6933-8QL7**	1	1 unit	41B

1) On this version, a magnetic system is used in the DC economy circuit. A varistor can be retrofitted. A 3TC4417-4A.. reversing contactor is included in the scope of delivery of the vacuum contactor.

2) For use of 3TF6 vacuum contactors in the environment of frequency converters, we recommend ordering a special version: **3TF6...-....-Z A02**.

3TF68/3TF69 vacuum contactors in their basic version are supplied with integrated overvoltage damping for the main current paths. The surge suppression circuit is not required for operation in circuits with DC choppers, frequency converters or speed-variable operating mechanisms, for example.

The circuit could be damaged by the voltage peaks and harmonics and thus cause phase-to-phase short circuits. For this reason, the contactors can also be supplied without integrated overvoltage damping. Without additional price.
The article number must be supplemented by **"–Z"** and the order code **"A02"**.

3) When using 3TF68 vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, please use 3TF69 vacuum contactors. For more information about dimensioning and configuring, see page 3/6.

4) Please inquire about use of 3TF69 vacuum contactors with IE3/IE4 motors.

5) On this version, a magnetic system with rectifier is used in the DC economy circuit. Varistor integrated. A 3TC4417-.... reversing contactor with preassembled connecting cable (approx. 1 m) and plug is included in the scope of supply of the vacuum contactor.

For accessories and spare parts, see pages 3/132 to 3/135.

Rated control supply voltages, possible on request (change of the 10th and 11th digits of the Article No.)

Delivery time on request

Rated control supply voltage U_s	Contactor type	3TF6833-.D.., 3TF6933-.D..
	Size	14
DC operation		
Solenoid coils for DC economy circuit		
24 V DC		B4
110 V DC		F4
125 V DC		G4
220 V DC		M4
230 V DC		P4

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

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Selection and ordering data

Further accessories for the SIRIUS 3RT12 vacuum contactors,
see 3RT1 basic devices, from page 3/71 onwards.

For contactors		Version	Auxiliary contacts					SD	Screw terminals		PU (UNIT, SET, M)	PS*	PG
			Version			Connections			Article No.	Price per PU			
Size	Type		NO	NC	NC	Left	Right	d					
Auxiliary switch blocks, instantaneous													
For lateral mounting													
14	3TF68, 3TF69	1st auxiliary switch block (replacement for 3TY7561-1A/3TY7561-1B)	1	1	--	13 21 14 22	31 43 32 44		**3TY7561-1AA00**	►	1	1 unit	41B
	3TF68, 3TF69	1st auxiliary switch block	1	--	1	13 25 14 26	35 43 36 44	20	**3TY7561-1EA00**		1	1 unit	41B
	3TF68, 3TF69	2nd auxiliary switch block (replacement for 3TY7561-1K/3TY7561-1L)	1	1	--	53 61 54 62	71 83 72 84	2	**3TY7561-1KA00**		1	1 unit	41B
For reconnection of the coil with DC economy circuit													
14	3TF68, 3TF69	--	--	--	1	B1 25 B2 26	--	20	**3TY7681-1G**		1	1 unit	41B
Solid-state compatible auxiliary switch blocks													
For lateral mounting													
14	3TF68, 3TF69	2nd auxiliary switch block, left or right (replacement for 3TY6561-1U/3TY6561-1V)	1 CO contact			51 52 54 NSB0_00682	61 62 64 NSB0_00683		**3TY7561-1UA00**	►	1	1 unit	41B


3TY7561-1.A00


5TY7561-1UA00

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

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For contactors Size	Type	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Main current path surge suppression modules								
S10/ S12	3RT12	For damping overvoltages and protecting motor windings against multiple re-ignition when switching off three-phase motors For connection on the contactor feeder side (2-T1/4-T2/6-T3), for separate installation Rated operational voltage U_e						
		• 690 V AC	10	**3RT1966-1PV3**		1	1 unit	41B
		• 1 000 V AC	10	**3RT1966-1PV4**		1	1 unit	41B
Surge suppressors								
14	3TF68, 3TF69	**Varistors** AC operation The surge suppressor (varistor) is included in the scope of supply of the 3TF68 and 3TF69 contactors with AC operation. DC operation · DC economy circuit Varistor for snapping onto the side of the auxiliary switch (includes the peak value of the alternating voltage on the DC side) Rated control supply voltage U_s						
		• 24 ... 48 V DC	15	**3TX7572-3G**		1	1 unit	41B
		• 48 ... 127 V DC	20	**3TX7572-3H**		1	1 unit	41B
		• 127 ... 240 V DC	15	**3TX7572-3J**		1	1 unit	41B
Terminal covers								
14		Two units required per contactor (1 set = 2 units).						
	3TF68	For protection against inadvertent contact with exposed busbar connections	5	**3TX7686-0A**		1	1 unit	41B
	3TF69	Can be screwed onto free screw end on middle connecting bar	5	**3TX7696-0A**		1	1 unit	41B
Links for paralleling (star jumpers), 3-pole								
14	3TF68, 3TF69	**Links for paralleling** Without connection terminal (the link for paralleling can be reduced by one pole)	5	**3TX7680-0D**		1	1 unit	41B
14	3TF68, 3TF69	**Cover plates for links for paralleling** A cover plate must be used to protect against inadvertent contact with exposed busbar connections (IEC 60529).	15	**3TX7680-0E**		1	1 unit	41B
Box terminals for laminated copper bars								
14	3TF68	**without auxiliary conductor connection** (1 set = 3 units) With single covers for protection against inadvertent contact (IEC 60529)	30	**3TX7570-1E**		1	1 unit	41B
14	3TF69	**with auxiliary conductor connection** (1 set = 3 units) Conductor cross-sections for auxiliary conductors: • Solid 2 x (0.75 ... 2.5) mm^2 • Finely stranded with end sleeve 2 x (0.5 ... 2.5) mm^2 • AWG, solid or stranded 2 x (18 ... 12) • Tightening torque 0.8 ... 1.4 Nm (7 ... 12 lb.in)	30	**3TX7690-1F**		1	1 unit	41B
Locking devices for mechanical interlock								
14	3TF68	For two contactors of the same size	15	**3TX7686-1A**		1	1 unit	41B



3TX7572-3.



3TX76.6-0A

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Selection and ordering data

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

For contactors Size	Type	Rated control supply voltage $U_{s\,min}$ … $U_{s\,max}$ V AC/DC	SD d	Screw terminals Article No.	Price per PU	SD d	Spring-type terminals Article No.	Price per PU
Withdrawable coils								
		Conventional operating mechanisms for AC/DC						
S10	3RT126	23 … 26	5	**3RT1966-5AB31**			**--**	
		42 … 48	5	**3RT1966-5AD31**			**--**	
		110 … 127	2	**3RT1966-5AF31**			**--**	
		200 … 220	5	**3RT1966-5AM31**			**--**	
		220 … 240	2	**3RT1966-5AP31**			**--**	
		240 … 277	5	**3RT1966-5AU31**			**--**	
		380 … 420	5	**3RT1966-5AV31**			**--**	
		440 … 480	5	**3RT1966-5AR31**			**--**	
		500 … 550	5	**3RT1966-5AS31**			**--**	
		575 … 600	5	**3RT1966-5AT31**			**--**	
S12	3RT127	23 … 26	5	**3RT1975-5AB31**		5	**3RT1975-5AB32**	
		42 … 48	5	**3RT1975-5AD31**		5	**3RT1975-5AD32**	
		110 … 127	5	**3RT1975-5AF31**		5	**3RT1975-5AF32**	
		200 … 220	5	**3RT1975-5AM31**		5	**3RT1975-5AM32**	
		220 … 240	5	**3RT1975-5AP31**		5	**3RT1975-5AP32**	
		240 … 277	5	**3RT1975-5AU31**		5	**3RT1975-5AU32**	
		380 … 420	5	**3RT1975-5AV31**		5	**3RT1975-5AV32**	
		440 … 480	5	**3RT1975-5AR31**		5	**3RT1975-5AR32**	
		500 … 550	5	**3RT1975-5AS31**		5	**3RT1975-5AS32**	
		575 … 600	5	**3RT1975-5AT31**		5	**3RT1975-5AT32**	


3RT1975-5A.31


3RT1975-5A.32

		Solid-state operating mechanisms for AC/DC with 24 V DC control signal input e.g. for control by PLC						
S10	3RT126	21 … 27.3	5	**3RT1966-5NB31**			**--**	
		96 … 127	5	**3RT1966-5NF31**			**--**	
		200 … 277	5	**3RT1966-5NP31**			**--**	
S12	3RT127	21 … 27.3	5	**3RT1975-5NB31**		5	**3RT1975-5NB32**	
		96 … 127	5	**3RT1975-5NF31**		5	**3RT1975-5NF32**	
		200 … 277	5	**3RT1975-5NP31**		5	**3RT1975-5NP32**	


3RT1975-5N.31

For contactors Size	Type	Version	SD d	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Solenoid coils								
		AC operation[1]						
14	3TF68	The solenoid coils are fitted as standard with varistors against overvoltage; the coil is supplied with switch-on electronics.		**3TY7683-0C..**				
	3TF69			**3TY7693-0C..**				
		DC operation[1] **· DC economy circuit**						
14	3TF68	The solenoid coils are supplied without reversing contactor.		**3TY7683-0D..**				
	3TF69			**3TY7693-0D..**				
Vacuum interrupters								
S10	3RT1264	Set with 3 vacuum interrupters with fixing parts	5	**3RT1964-6V**		1	1 unit	41B
	3RT1265		5	**3RT1965-6V**		1	1 unit	41B
	3RT1266		5	**3RT1966-6V**		1	1 unit	41B
S12	3RT1275		5	**3RT1975-6V**		1	1 unit	41B
	3RT1276		5	**3RT1976-6V**		1	1 unit	41B
14	3TF68	Set with 3 vacuum interrupters with components	5	**3TY7680-0B**		1	1 unit	41B
	3TF69		15	**3TY7690-0B**		1	1 unit	41B
		Note: In order to ensure reliable operation of the contactors, only **original replacement interrupters** should be used.						


3TY76.3-0...

[1] Rated control supply voltages for solenoid coils:
The 10th and 11th digits of the article number must be supplemented accordingly, see the tables on pages 3/130 and 3/131.

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

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For contactors		Version	Rated control supply voltage U_s	SD	**Screw terminals**		PU (UNIT, SET, M)	PS*	PG
Size	Type		V AC	d	Article No.	Price per PU			
Solenoid coils for main contactor									
14	3TF68..-.Q	With rectifier bridge	110 ... 120	20	**3TY7683-0QG7**		1	1 unit	41B
			220 ... 240	20	**3TY7683-0QL7**		1	1 unit	41B
			380 ... 420	X	**3TY7683-0QV7**		1	1 unit	41B
14	3TF69..-.Q	With rectifier bridge	110 ... 120	20	**3TY7693-0QG7**		1	1 unit	41B
			220 ... 240	20	**3TY7693-0QL7**		1	1 unit	41B
			380 ... 420	20	**3TY7693-0QV7**		1	1 unit	41B
3TC44 reversing contactors									
14	3TF68..-.Q, 3TF69..-.Q	Complete with series resistor, 1 m connecting cable and plug-in connector	110 ... 120	20	**3TY7684-0QG7**		1	1 unit	41B
			220 ... 240	20	**3TY7684-0QL7**		1	1 unit	41B
			380 ... 420	20	**3TY7684-0QV7**		1	1 unit	41B

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

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Overview

Standards

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

The 3TF2 miniature contactors are climate-proof, and the versions with screw terminals are finger-safe according to IEC 60529.

Connection methods

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

Ratings of three-phase motors

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

The power rating specifications of the contactors in kW are guide values for 4-pole standard motors at 50 Hz and specified voltage (e.g. 400 V AC). The actual starting and rated data of the motor to be switched must be considered when selecting the units.

Technical specifications

More information

For Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16142/td

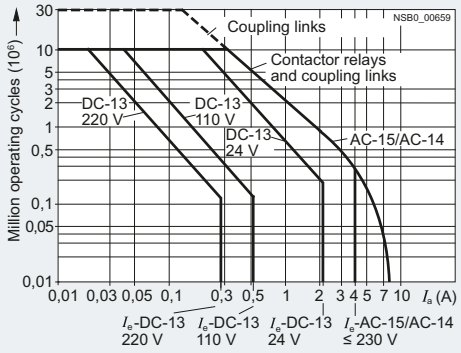
FAQs, see https://support.industry.siemens.com/cs/de/en/ps/16142/faq

Type	3TF2
Size	00

Contact endurance of the auxiliary contacts

The contact endurance for utilization category AC-12 or AC-15/AC-14 depends mainly on the breaking current. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

Diagram legend:
I_a = Breaking current
I_e = Rated operational current



Contact endurance of the main contacts

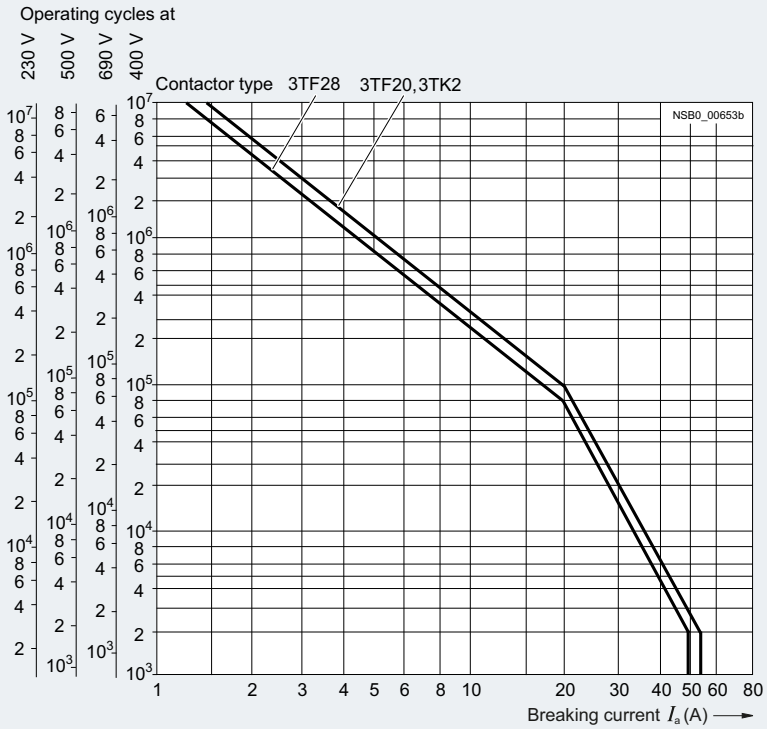
The characteristic curves show the contact endurance of the contactors when switching inductive AC loads (AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The rated operational current I_e in accordance with utilization category AC-4 (breaking 6 times the rated operational current) is determined for a contact service life of approximately 200 000 operating cycles. If a shorter contact endurance is sufficient, the rated operational current I_e/AC-4 can be increased.

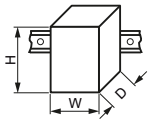
If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100}\left(\frac{A}{B} - 1\right)}$$

Characters in the equation:
- X Contact endurance for mixed operation in operating cycles
- A Contact endurance for normal operation ($I_a = I_e$) in operating cycles
- B Contact endurance for inching (I_a = multiple of I_e) in operating cycles
- C Inching operations as a percentage of total switching operations



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Type			3TF20, 3TF28	3TF22, 3TF29
Size			00	
General data				
Dimensions (W x H x D)				
• Basic unit		mm	45 x 48 x 63	--
• Basic unit with mounted auxiliary switch block		mm	45 x 48 x 91	
• Basic unit with 3TX4490 surge suppressor		mm	45 x 48 x 88	45 x 48 x 116
Permissible mounting position			Any	
Mechanical endurance				
• AC operation		Operating cycles	10 million	
• DC operation		Operating cycles	30 million	
• Auxiliary switch block		Operating cycles	10 million	
Rated insulation voltage U_i (Pollution degree 3)				
• Screw terminals		V	690	690 (auxiliary contacts 500 V)
• Flat connectors 6.3 mm x 0.8 mm		V	500	--
• Solder pin connections		V	500	--
Rated impulse withstand voltage U_{imp} (Pollution degree 3)				
• Screw terminals		kV	6 (control circuit max. 4 kV)	
• Flat connectors 6.3 mm x 0.8 mm		kV	6	--
• Solder pin connections		kV	6	--
Protective separation between the coil and the main contacts (according to IEC 60947-1, Appendix N)		V	Up to 300	
Mirror contacts				
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.			Yes, this applies to both the basic unit as well as to between the basic unit and the mounted auxiliary switch block acc. to IEC 60947-4-1, Appendix F	Yes, acc. to IEC 60947-4-1, Appendix F and SUVA
Permissible ambient temperature[1]				
• During operation		°C	-25 ... +55	
• During storage		°C	-55 ... +80	
Degree of protection acc. to IEC 60529				
• On front			IP20 (with screw terminals)	
• Connecting terminal			IP20 (with screw terminals)	
Touch protection acc. to IEC 60529			Finger-safe (for screw terminals)	
Shock resistance				
• Without 3TX44 auxiliary switch block				
- Rectangular pulse	AC operation	*g*/ms	8.3/5 and 5.2/10	--
	DC operation	*g*/ms	11.3/5 and 9.2/10	--
- Sine pulse	AC operation	*g*/ms	13/5 and 8/10	--
	DC operation	*g*/ms	17.4/5 and 12.9/10	--
• With 3TX44 auxiliary switch block				
- Rectangular pulse	AC operation	*g*/ms	5/5 and 3.6/10	
	DC operation	*g*/ms	9/5 and 6.9/10	9/5 and 7.3/10
- Sine pulse	AC operation	*g*/ms	7.8/5 and 5.6/10	
	DC operation	*g*/ms	13.9/5 and 10.1/10	14/5 and 11/10
Short-circuit protection				
Main circuit[2]				
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE according to IEC 60947-4-1				
- Type of coordination "1"		A	25	
- Type of coordination "2"[3]		A	10	
- Weld-free		A	10	
• Miniature circuit breaker with C characteristic		A	10	
Auxiliary circuit				
Short-circuit test				
• With fuse links of operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current I_k = 1 kA acc. to IEC 60947-5-1		A	6	

1) Applies to 50/60 Hz coil:
At 50 Hz, 1.1 x U_s, with side-by-side mounting and 100% ON period, the max. ambient temperature is +40 °C.

2) According to excerpt from IEC 60947-4-1
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible.
The contactor and/or overload relay can be replaced if necessary.
Type of coordination "2":
The overload relay must not suffer any damage. Contact welding on the contactor is permissible, however, if the contacts can be easily separated.

3) A short-circuit current of $I_q \leq 6$ kA applies to type of coordination "2".

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3TF2 miniature contactors, 3-pole

Type			3TF2
Size			00
Control			
Solenoid coil operating range[1]			0.8 ... 1.1 x U_s
Solenoid coil power consumption (for cold coil and 1.0 x U_s)			
Standard version			
• AC operation, 50 Hz	Closing	VA	15
	P.f.		0.41
	Closed	VA	6.8
	P.f.		0.42
• AC operation, 60 Hz	Closing	VA	14.4
	P.f.		0.36
	Closed	VA	6.1
	P.f.		0.46
• AC operation, 50/60 Hz[1]	Closing	VA	16.5/13.2
	P.f.		0.43/0.38
	Closed	VA	8.0/5.4
	P.f.		0.48/0.42
For USA and Canada			
• AC operation, 50 Hz	Closing	VA	14.6
	P.f.		0.38
	Closed	VA	6.5
	P.f.		0.40
• AC operation, 60 Hz	Closing	VA	14.4
	P.f.		0.30
	Closed	VA	6.0
	P.f.		0.44
• DC operation	Closing = Closed	W	3
Permissible residual current of the electronic circuit[2] (with 0 signal)			
• AC operation		mA	≤ 3 x (230 V/U_s)
• DC operation		mA	≤ 1 x (230 V/U_s)
Operating times for 0.8 ... 1.1 x U_s[3] **Total break time = Opening delay and arcing time**			
Values apply with coil in cold state and at operating temperature for operating range			
• AC operation	Closing delay	ms	5 ... 19
	Opening delay	ms	2 ... 22
	Dead interval		To use the 3TF2 AC-operated contactor in reversing an additional dead interval of 50 ms is required along with an NC contact interlock.
• DC operation	Closing delay	ms	16 ... 65
	Opening delay	ms	2 ... 5
• Arcing time		ms	10 ... 15
Operating times for 1.0 x U_s[3]			
• AC operation	Closing delay	ms	5 ... 18
	Opening delay	ms	3 ... 21
	Dead interval		To use the 3TF2 AC-operated contactor in reversing an additional dead interval of 50 ms is required along with an NC contact interlock.
• DC operation	Closing delay	ms	19 ... 31
	Opening delay	ms	3 ... 4
• Arcing time		ms	10 ... 15

1) Applies to 50/60 Hz coil:
At 50 Hz, 1.1 x U_s, with side-by-side mounting and 100% ON period the max. ambient temperature is +40 °C.

2) The 3TX4490-1J additional load module is recommended for higher residual currents; see page 3/145.

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

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Type			3TF28, 3TF29	3TF20..-0..., 3TF22..-0...	3TF20..-3..., 3TF20..-6..., 3TF20..-7...
Size			00		
Rated data of the main contacts					
Load rating with AC					
Utilization category AC-1, switching resistive loads					
• Rated operational current I_e (at 40 °C)	Up to 400/380 V	A	18		
	690/660 V	A	18		--
• Rated operational current I_e (at 55 °C)	400/380 V	A	16		
	690/660 V	A	16		--
• Rated power of AC loads P.f. = 1	At 230/220 V	kW	6.0		
	400/380 V	kW	10		
	500 V	kW	13		
	690/660 V	kW	17		--
• Minimum conductor cross-section for loads with I_e		mm^2	2.5		
Utilization categories AC-2 and AC-3					
• Rated operational current I_e	Up to 220 V	A	5.1	9.0	
	230 V	A	5.1	9.0	
	380 V	A	5.1	9.0	
	400 V	A	5.1	8.4	
	500 V	A	4.8	6.5	
	660 V	A	4.8	5.2	--
	690 V	A	4.8	5.2	--
• Rated power for motors with slipring or squirrel cage at 50 and 60 Hz and	At 110 V	kW	0.7	1.2	
	115 V	kW	0.7	1.2	
	120 V	kW	0.7	1.3	
	127 V	kW	0.8	1.4	
	200 V	kW	1.2	2.2	
	220 V	kW	1.3	2.4	
	230 V	kW	1.4	2.5	
	240 V	kW	1.5	2.6	
	380 V	kW	2.2	4.0	
	400 V	kW	2.2	4.0	
	415 V	kW	2.5	4.0	
	440 V	kW	2.5	4.0	
	460 V	kW	2.7	4.0	
	500 V	kW	2.9	4.0	
	575 V	kW	3.2	4.0	--
	660 V	kW	3.8	4.0	--
	690 V	kW	4.0		
Utilization category AC-4					
(Contact endurance approx. 200 000 operating cycles at I_a = 6 x I_e)					
• Rated operational current I_e (max. permissible operational current I_e/AC-4 ≙ I_e/AC-3 up to 500 V, for reduced contact endurance and reduced switching frequency)	Up to 400 V	A	1.9	2.6	
	690 V	A	1.4	1.8	--
• Rated power for motors with squirrel cage at 50 and 60 Hz and	At 110 V	kW	0.23	0.32	
	115 V	kW	0.24	0.33	
	120 V	kW	0.26	0.35	
	127 V	kW	0.27	0.37	
	200 V	kW	0.42	0.58	
	220 V	kW	0.47	0.64	
	230 V	kW	0.49	0.67	
	240 V	kW	0.51	0.70	
	380 V	kW	0.81	1.10	
	400 V	kW	0.85	1.15	
	415 V	kW	0.93	1.20	
	440 V	kW	1.0	1.27	
	460 V	kW	1.0	1.33	
	500 V	kW	1.1	1.45	
	575 V	kW	1.0	1.30	--
	660 V	kW	0.86	1.10	--
	690 V	kW	0.89	1.15	--
Thermal load capacity	10 s current	A	70		
Power loss per conducting path	At I_e/AC-3	W	0.3		

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3TF2 miniature contactors, 3-pole

Type				3TF28, 3TF29	3TF20, 3TF22
Size				00	
Rated data of the main contacts (continued)					
Load rating with DC					
Utilization category DC-1, switching resistive loads (*L/R* ≤ 1 ms)					
• Rated operational currents I_e (at 55 °C)					
- 1 conducting path	Up to 24 V	A		10	16
	60 V	A		4	6
	110 V	A		1.5	2
	220/240 V	A		0.6	1
- 2 conducting paths in series	Up to 24 V	A		10	16
	60 V	A		10	16
	110 V	A		4	6
	220/240 V	A		1.5	2
- 3 conducting paths in series	Up to 24 V	A		10	16
	60 V	A		10	16
	110 V	A		10	16
	220/240 V	A		4	6
Utilization category DC-3/DC-5, shunt-wound and series-wound motors (*L/R* ≤ 15 ms)					
• Rated operational currents I_e (at 55 °C)					
- 1 conducting path	Up to 24 V	A		4	6
	60 V	A		1.8	3
	110 V	A		0.3	0.5
	220/240 V	A		--	0.1
- 2 conducting paths in series	Up to 24 V	A		6	10
	60 V	A		3	5
	110 V	A		1.5	2
	220/240 V	A		0.3	0.5
- 3 conducting paths in series	Up to 24 V	A		10	16
	60 V	A		10	16
	110 V	A		10	16
	220/240 V	A		1.5	2
Switching frequency					
Switching frequency *z* in operating cycles/hour					
• Contactors without overload relays for rated operation	No-load switching frequency		h^{-1}	10 000	
Dependence of the switching frequency z' on the operational current I' and operational voltage U': $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$	AC-1		h^{-1}	1 000	
	AC-2		h^{-1}	500	
	AC-3		h^{-1}	1 000	
• Contactors with overload relays (mean value)			h^{-1}	15	
Conductor cross-sections					
Main and auxiliary conductors (1 or 2 conductors connectable)				**Screw terminals**	
• Solid			mm^2	2 x (0.5 ... 2.5), 1 x 4	
• Finely stranded with end sleeve			mm^2	2 x (0.5 ... 1.5), 1 x 2.5	
• AWG cables, solid or stranded			AWG	2 x (20 ... 14), 1 x 12	
• Pin-end connector (DIN 46231)			mm^2	1 x 1 ... 2.5	
• Terminal screw				M3	
• Prescribed tightening torque for terminal screws			Nm lb.in	0.8 ... 1.3 7 ... 11	
Main and auxiliary conductors (1 or 2 conductors connectable)				**Flat connectors**	
• When using a plug-in sleeve 6.3 - 1			mm^2	0.5 ... 1	
• Solid with 6.3 - 2.5			mm^2	1 ... 2.5	
				Solder pin connections (only for printed circuit boards)	
• Solder pin cross-section	(does not apply to plug-in bases)		mm^2	0.8 x 1.2	
• Solder pin cross-section, plug-in base			mm^2	0.32 x 1.0	

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Type				3TF2
Size				00
Rated data of the auxiliary contacts according to IEC 60947-5-1				
General data				
Rated insulation voltage U_i (Pollution degree 3)			V	690
Conventional thermal current I_{th} = Rated operational current I_e/AC-12			A	10
Load rating with AC				
Rated operational current I_e/AC-15/AC-14				
• For rated operational voltage U_e	24 V		A	4
	110 V		A	4
	125 V		A	4
	220 V		A	4
	230 V		A	4
	380 V		A	3
	400 V		A	3
	500 V		A	2
	660 V		A	1
	690 V		A	1
Load rating with DC				
Rated operational current I_e/DC-12				
• For rated operational voltage U_e	24 V		A	4
	48 V		A	2.2
	110 V		A	1.1
	125 V		A	1.1
	220 V		A	0.5
	440 V		A	--
	600 V		A	--
Rated operational current I_e/DC-13				
• For rated operational voltage U_e	24 V		A	2.1
	48 V		A	1.1
	110 V		A	0.52
	125 V		A	0.52
	220 V		A	0.27
	440 V		A	--
	600 V		A	--

Type				3TF20..-0...	3TF20..-3..., 3TF20..-6..., 3TF20..-7...
Size				00	
cULus rated data					
Rated insulation voltage U_i			V AC	600	300
Uninterrupted current	Open and enclosed		A	16	16 (10 for solder pin connection)
Maximum horsepower ratings (cULus approved values)					
• Rated power for three-phase motors at 60 Hz					
- Single-phase	At 115 V		hp	0.5	--
	200 V		hp	1	
	230 V		hp	1.5	1
	460/575 V		hp	--	
- Three-phase	At 115 V		hp	--	--
	200 V		hp	3	3 (1 for 3TF20..-6)
	230 V		hp	3	3 (1 for 3TF20..-6)
	460/575 V		hp	5	--
cULus and CSA rated data of the auxiliary contacts					
Rated voltage, max.			V AC	600	
Auxiliary switch blocks, max.			V AC	300	
Switching capacity				A 600, Q 300	
Uninterrupted current at 240 V AC			A	10	

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Selection and ordering data

AC operation ~ or DC operation ⎓

- Size 00
- AC-1: Operational current I_e = 16 A (at 55 °C)
- For screw fixing and snap-on mounting onto TH 35 standard mounting rail
- Screw terminals

Rated data Utilization categories AC-2 and AC-3					Auxiliary contacts			SD	**Screw terminals** ⏚	PU (UNIT, SET, M)	PS*	PG
Operational current I_e	Ratings of three-phase motors at 50 Hz and				Ident. No.	Version						
At 380 V	230 V	**400/ 380 V**	500 V	690 V		NO	NC		Article No. Price per PU			
A	kW	**kW**	kW	kW				d				
Miniature contactors with screw terminals												
AC operation, rated control supply voltage U_S = 50 Hz 230/220 V AC [1]												
5.1	1.4	**2.2**	2.9	4	**10**	1	--	5	**3TF2810-0AP0**	1	1 unit	41B
					01	--	1	5	**3TF2801-0AP0**	1	1 unit	41B
9	2.5	**4**	4	4	**10**	1	--	2	**3TF2010-0AP0**	1	1 unit	41B
					01	--	1	2	**3TF2001-0AP0**	1	1 unit	41B
With permanently mounted auxiliary switch blocks												
5.1	1.4	**2.2**	2.9	4	**11**	1	1	20	**3TF2911-0AP0**	1	1 unit	41B
					22	2	2	15	**3TF2922-0AP0**	1	1 unit	41B
9	2.5	**4**	4	4	**11**	1	1	15	**3TF2211-0AP0**	1	1 unit	41B
					22	2	2	15	**3TF2222-0AP0**	1	1 unit	41B
DC operation, rated control supply voltage U_S = 24 V DC												
5.1	1.4	**2.2**	2.9	4	**10**	1	--	2	**3TF2810-0BB4**	1	1 unit	41B
					01	--	1	5	**3TF2801-0BB4**	1	1 unit	41B
9	2.5	**4**	4	4	**10**	1	--	2	**3TF2010-0BB4**	1	1 unit	41B
					01	--	1	2	**3TF2001-0BB4**	1	1 unit	41B
With permanently mounted auxiliary switch blocks												
5.1	1.4	**2.2**	2.9	4	**11**	1	1	15	**3TF2911-0BB4**	1	1 unit	41B
					22	2	2	20	**3TF2922-0BB4**	1	1 unit	41B
9	2.5	**4**	4	4	**11**	1	1	20	**3TF2211-0BB4**	1	1 unit	41B
					22	2	2	2	**3TF2222-0BB4**	1	1 unit	41B



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



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

[1] Operating range at AC-1 and 220 V: 0.85 to 1.15 × U_S; lower operating range limit according to IEC 60947.

For further rated control supply voltages, see page 3/143.

Accessories, see pages 3/144 and 3/145.

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

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AC operation ~ or DC operation ⎓

- Size 00
- AC-1: Operational current I_e = 16 A (at 55 °C)
- For screw fixing and snap-on mounting onto TH 35 standard mounting rail (diagonal)
- Flat connectors or solder pin connection

Rated data Utilization categories AC-2 and AC-3					Auxiliary contacts			SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Operational current I_e	Ratings of three-phase motors at 50 Hz and				Ident No.	Version							
At 380 V	230 V	**400/ 380 V**	500 V	690 V		NO	NC						
A	kW	**kW**	kW	kW				d					
Miniature contactors with 6.3 mm x 0.8 mm flat connectors									**Flat connectors**				
AC operation, rated control supply voltage U_s = 50 Hz 230/220 V AC [1]													
For screw fixing and snap-on mounting onto TH 35 standard mounting rail													
9	2.5	**4**	4	--	**10**	1	--	15	**3TF2010-3AP0**		1	1 unit	41B
					01	--	1	15	**3TF2001-3AP0**		1	1 unit	41B
For screw fixing (diagonal)													
9	2.5	**4**	4	--	**10**	1	--	20	**3TF2010-7AP0**		1	1 unit	41B
					01	--	1	20	**3TF2001-7AP0**		1	1 unit	41B
DC operation, rated control supply voltage U_s = 24 V DC													
For screw fixing and snap-on mounting onto TH 35 standard mounting rail													
9	2.5	**4**	4	--	**10**	1	--	20	**3TF2010-3BB4**		1	1 unit	41B
					01	--	1	20	**3TF2001-3BB4**		1	1 unit	41B
For screw fixing (diagonal)													
9	2.5	**4**	4	--	**10**	1	--	20	**3TF2010-7BB4**		1	1 unit	41B
					01	--	1	20	**3TF2001-7BB4**		1	1 unit	41B
Miniature contactors with solder pin connections for printed circuit boards									**Solder pin connection**				
AC operation, rated control supply voltage U_s = 50 Hz 230/220 V AC [1]													
For screw fixing and snap-on mounting onto TH 35 standard mounting rail													
9	2.5	**4**	4	--	**10**	1	--	15	**3TF2010-6AP0**		1	1 unit	41B
					01	--	1	20	**3TF2001-6AP0**		1	1 unit	41B
DC operation, rated control supply voltage U_s = 24 V DC													
For screw fixing (diagonal)													
9	2.5	**4**	4	--	**10**	1	--	2	**3TF2010-6BB4**		1	1 unit	41B
					01	--	1	2	**3TF2001-6BB4**		1	1 unit	41B



3TF20..-3...



3TF20..-7...



3TF20..-6...

[1] Operating range at AC-1 and 220 V: 0.85 to 1.15 × U_s; lower operating range limit according to IEC 60947.

Accessories, see pages 3/144 and 3/145.

Rated control supply voltages, possible on request (change of the 10th and 11th digits of the Article No.)

Delivery time on request

Rated control supply voltage U_s		Contactor type	3TF20, 3TF28
		Size	00
AC operation			
Solenoid coils for AC 50 and 60 Hz			
50 Hz	**60 Hz**		
24 V AC	29 V AC		B0
110 V AC	132 V AC		F0
230/220 V AC	276 V AC		P0[1]
Solenoid coils for AC 50/60 Hz			
230 V AC			L2
DC operation			
24 V DC			B4

[1] Operating range at AC-1 and 220 V: 0.85 to 1.15 × U_s; lower operating range limit according to IEC 60947.

Other voltages and delivery times on request.

Rated control supply voltage U_s		Contactor type	3TF22, 3TF29
		Size	00
AC operation			
Solenoid coils for AC 50 and 60 Hz			
50 Hz	**60 Hz**		
230/220 V AC	276 V AC		P0[1]
DC operation			
24 V DC			B4

[1] Operating range at AC-1 and 220 V: 0.85 to 1.15 × U_s; lower operating range limit according to IEC 60947.

Other voltages and delivery times on request.

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Selection and ordering data

Rated operational current I_e/AC-15/AC-14 at			Auxiliary contacts						SD	Screw terminals		PU (UNIT, SET, M)	PS*	PG
			Ident No.	Version				Connections						
230/ 220 V	400/ 380 V	500 V		NO	NC	NO	NC			Article No.	Price per PU			
A	A	A		NO	NC	NO	NC		d					
Snap-on auxiliary switch blocks for 3TF2 miniature contactor relays														
			For expansion to 2, 4 or 5 auxiliary contacts according to EN 50012											
			Only for 3TF2.10, Ident. No. 10 (with auxiliary contact 1 NO)											
4	3	2	**11**	--	1	--	--		20	**3TX4401-1A**		1	1 unit	41A
			22	1	2	--	--		▶	**3TX4412-1A**		1	1 unit	41A
			23	1	3	--	--		5	**3TX4413-1A**		1	1 unit	41A
			32	2	2	--	--		▶	**3TX4422-1A**		1	1 unit	41A
			For expansion to 3 or 5 auxiliary contacts according to EN 50005											
4	3	2	**20**	2	--	--	--	53 63 54 64	▶	**3TX4420-2A**		1	1 unit	41A
			11	1	1	--	--	53 61 54 62	▶	**3TX4411-2A**		1	1 unit	41A
			02	--	2	--	--	51 61 52 62	20	**3TX4402-2A**		1	1 unit	41A
			11; U	--	--	1	1	57 65 58 66	20	**3TX4411-2G**		1	1 unit	41A
4	3	2	**40**	4	--	--	--	53 63 73 83 54 64 74 84	▶	**3TX4440-2A**		1	1 unit	41A
			31	3	1	--	--	53 61 73 83 54 62 74 84	▶	**3TX4431-2A**		1	1 unit	41A
			22	2	2	--	--	53 61 71 83 54 62 72 84	▶	**3TX4422-2A**		1	1 unit	41A
			22; 2 U	--	--	2	2	57 67 75 85 58 68 76 86	5	**3TX4422-2G**		1	1 unit	41A



3TX44..-.A

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

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For contactors	Rated control supply voltage U_s		Power consumption of LED at U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type	V AC	V DC	mW	d					
Surge suppressors[1] **For plugging onto 3TF2 miniature contactors with and without auxiliary switch blocks**									
Version without LED									
RC elements									
3TF2...-0..., 3TF2...-1...	24 ... 48	24 ... 70	--	5	**3TX4490-3R**		1	1 unit	41B
	48 ... 127	70 ... 150	--	5	**3TX4490-3S**		1	1 unit	41B
	127 ... 240	150 ... 250	--	5	**3TX4490-3T**		1	1 unit	41B
	240 ... 400	--	--	5	**3TX4490-3U**		1	1 unit	41B
	400 ... 600	--	--	5	**3TX4490-3V**		1	1 unit	41B
Varistors									
3TF2...-0..., 3TF2...-1...	≤ 48	24 ... 70	--	▶	**3TX4490-3G**		1	1 unit	41B
	48 ... 127	70 ... 150	--	5	**3TX4490-3H**		1	1 unit	41B
	127 ... 240	150 ... 250	--	5	**3TX4490-3J**		1	1 unit	41B
	240 ... 400	--	--	5	**3TX4490-3K**		1	10 units	41B
	400 ... 600	--	--	5	**3TX4490-3L**		1	10 units	41B
Noise suppression diodes									
3TF2...-0..., 3TF2...-1...	--	12 ... 250	--	▶	**3TX4490-3A**		1	1 unit	41B
Diode assemblies (diode and Zener diode) For DC operation and short break times									
3TF2...-0..., 3TF2...-1...	--	24 ... 250	--	5	**3TX4490-3B**		1	1 unit	41B
Version with LED									
Varistors									
3TF2...-0..., 3TF2...-1...	24 ... 48	12 ... 24	10 ... 120	5	**3TX4490-4G**		1	1 unit	41B
	48 ... 127	24 ... 70	20 ... 470	5	**3TX4490-4H**		1	1 unit	41B
	127 ... 240	70 ... 150	50 ... 700	5	**3TX4490-4J**		1	1 unit	41B
	--	150 ... 250	160 ... 950	20	**3TX4490-4K**		1	1 unit	41B
Noise suppression diodes									
3TF2...-0..., 3TF2...-1...	--	24 ... 70	20 ... 470	5	**3TX4490-4A**		1	1 unit	41B
	--	70 ... 150	50 ... 700	5	**3TX4490-4B**		1	1 unit	41B
	--	150 ... 250	160 ... 950	5	**3TX4490-4C**		1	1 unit	41B
Additional load modules For plugging onto 3TF2 miniature contactors with and without auxiliary switch blocks									
To increase the permissible residual current and limit the residual voltage, identical dimensions to 3TX4490-3 surge suppressor.									
3TF2...-0A.., 3TF2...-1A..	230/220, 50 Hz 230, 60 Hz 230, 50/60 Hz Operating range 0.8 ... 1.1 x U_s		--	20	**3TX4490-1J**		1	1 unit	41B
Plug-in bases with solder pin connections for printed circuit boards, 45 mm									
Rated insulation voltage U_i: 400 V (for pollution degree 3); rated impulse withstand voltage U_{imp}: 6 kV; rated operational current I_e: 6 A; CE and UL rated data: max. 300 V, 6 A									
3TF20..-3..., 3TF20..-7..., 3TK20..-3..., 3TK20..-7...	For contactors with flat connectors, 6.3 mm x 0.8 mm			20	**3TX4491-2A**		1	5 units	41A
Release tools									
For releasing miniature contactors from 3TX4491-2A plug-in bases									
3TF2...-7..., 3TK2...-7...	--		--	20	**3TX4491-2K**		1	1 unit	41A



3TX4490-3A



3TX4490-4G



3TX4491-2A

[1] The OFF-delay times of the NO contacts and the ON-delay times of the NC contacts increase if the contactor coils are attenuated against voltage peaks (suppression diode 6x to 10x; diode assembly 2x to 6x; varistor +2 to 5 ms).

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Overview

Standards

IEC 60947-1, IEC 60947-4-1, IEC 60947-5-1

Version

The 3TG10 power relays/miniature contactors are available with screw terminals or 6.3 mm × 0.8 mm flat connectors. The versions with screw terminals are suitable for use in any climate and finger-safe according to IEC 60529.

The 3TG10 miniature contactors are characterized by their width of just 36 mm.

Surge suppression

The 3TG10 power relays/miniature contactors have an integrated protective circuit against opening surges.

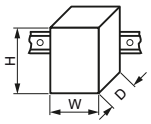
Application

Because they are hum-free they are suitable for use in household appliances and distribution boards in office and residential areas.

They can also be used for applications where there is little space such as air conditioners, heating systems, pumps and fans, i.e. for simple electrical controls.

Technical specifications

More information	
For Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16186/td	For Reference Manual "Switching Devices - Contactors and Contactor Assemblies", see https://support.industry.siemens.com/cs/ww/en/view/35554359 For FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16186/faq

Type			3TG10
General data			
Dimensions (W x H x D)		mm	36 x 56 x 56
Endurance			
• Mechanical	Operating cycles		3 million
• Electrical			
- AC-1 at I_e	Operating cycles		0.1 million
- AC-3 at I_e	Operating cycles		0.4 million
Rated insulation voltage U_i (pollution degree 3)		V	400
Rated impulse withstand voltage U_{imp}		kV	4
Protective separation Between coil and contacts acc. to IEC 60947-1, Appendix N		V	Up to 300
Permissible ambient temperature			
• During operation[1]		°C	-25 ... + 55
• During storage		°C	-50 ... + 80
Degree of protection acc. to IEC 60529			IP00
Touch protection acc. to IEC 60529			Finger-safe for vertical touching from the front (with screw terminals)
Short-circuit protection			
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE according to IEC 60947-4-1			
• Type of coordination "1"		A	25
• Type of coordination "2"		A	10
Miniature circuit breakers, C characteristic		A	10
Control			
Solenoid coil operating range			0.85 ... 1.1 x U_s
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)			
• AC operation, 45 ... 450 Hz		VA	4.4
- P.f.			0.9 (hum-free)
• DC operation		W	4
Rated data of the main contacts			
Load rating with AC			
Utilization category AC-1, switching resistive loads			
• Rated operational current I_e up to 400 V at 55 °C[1]		A	20 for screw terminals, 16 for flat connectors
• Rated power U_e for AC loads with p.f. = 1, 230/220 V			
- For screw terminals		kW	7.5 (13 at 400 V)
- For flat connectors		kW	6 (10 at 400 V)
• Minimum conductor cross-section for loads with I_e		mm^2	2.5

[1] If the three main current paths carry a load of 20 A, the following applies if I > 10 A in the fourth current path: Permissible ambient temperature 40 °C.

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Type					3TG10
Rated data of the main contacts (continued)					
Load rating with AC					
Utilization categories AC-2 and AC-3					
• Operational current for AC-3 at $U_e \leq 400$ V rated value				A	8.4
• Rated power for slipring or squirrel-cage motors with 50 and 60 Hz and at $U_e \leq 400$ V				kW	4
Utilization category AC-5a (permissible nominal impedance: ≥ 0.5 Ω)					
Switching of gas discharge lamps					
Per main current path at 230 V, 50 Hz					
Rated power/rated operational current per lamp					
• Uncompensated	18 W	0.37 A		Unit(s)	43
	36 W	0.43 A		Unit(s)	37
	58 W	0.67 A		Unit(s)	24
• DUO switching	18 W	2 x 0.11 A		Unit(s)	2 x 81
	36 W	2 x 0.21 A		Unit(s)	2 x 42
	58 W	2 x 0.32 A		Unit(s)	2 x 28
Switching gas discharge lamps with compensation or ECG					
Per main current path 230 V, 50 Hz					
Connection	Rated power per lamp	Capacitor capacitance	Rated operational current per lamp		
• Shunt compensation	L18 W	4.5 µF	0.11 A	Unit(s)	15
	L36 W	4.5 µF	0.21 A	Unit(s)	15
	L58 W	7 µF	0.32 A	Unit(s)	10
• With ECG (single lamp)	L18 W	6.8 µF	0.10 A	Unit(s)	39
	L36 W	6.8 µF	0.18 A	Unit(s)	39
	L58 W	10 µF	0.27 A	Unit(s)	26
• With ECG (two lamps)	L18 W	10 µF	0.18 A	Unit(s)	2 x 26
	L36 W	10 µF	0.35 A	Unit(s)	2 x 26
	L58 W	22 µF	0.52 A	Unit(s)	2 x 12
Utilization category AC-5b, switching incandescent lamps Per main current path at 230 V, 50 Hz				kW	1.6
Load rating with DC					
Utilization category DC-1, switching resistive loads (*L/R* ≤ 15 ms)					
• Rated operational currents I_e					
- 1 conducting path			Up to 24 V	A	16
			60 V	A	6
			110 V	A	2
			220 V/240 V	A	0.8
- 2 conducting paths in series			Up to 24 V	A	16
			60 V	A	16
			110 V	A	6
			220 V/240 V	A	1.6
- 3 conducting paths in series			Up to 24 V	A	18
			60 V	A	18
			110 V	A	16
			220 V/240 V	A	6
- 4 conducting paths in series			Up to 24 V	A	20
			60 V	A	20
			110 V	A	20
			220 V/240 V	A	20
Utilization category DC-3 and DC-5 Shunt-wound and series-wound motors (*L/R* ≤ 15 ms)					
• Rated operational currents I_e					
- 1 conducting path			Up to 24 V	A	10
			60 V	A	0.5
			110 V	A	0.15
			220 V/240 V	A	0
- 2 conducting paths in series			Up to 24 V	A	16
			60 V	A	5
			110 V	A	0.35
			220 V/240 V	A	0
- 3 conducting paths in series			Up to 24 V	A	16
			60 V	A	16
			110 V	A	10
			220 V/240 V	A	1.75
- 4 conducting paths in series			Up to 24 V	A	18
			60 V	A	16
			110 V	A	10
			220 V/240 V	A	2

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3TG10 power relays/miniature contactors

Type			3TG10
Conductor cross-sections			
			Screw terminals
• Terminal screws			M3
• Finely stranded with end sleeve (DIN 46228 Form A/D/C)		mm^2	2 x (0.75 ... 2.5)
• Solid		mm^2	2 x (1 ... 2.5), 1 x 4
• Permissible opening tool (screwdriver)			3.0 mm x 0.5 mm (3RA2908-1A) or Pozidriv 2
			Flat connectors
• Finely stranded 6.3 mm plug-in sleeve acc. to DIN 46245/DIN 46247			
- 6.3 ... 1		mm^2	0.5 ... 1
- 6.3 ... 2.5		mm^2	1 ... 2.5
CSA and UL rating (screw terminals)			
Rated insulation voltage		V AC	600
Uninterrupted current	Open and enclosed	A	20
Maximum horsepower ratings (from CSA and UL approved values)			Single-phase/three-phase
• Rated power for three-phase motors at 60 Hz	At 115 V	hp	0.5/ --
	200 V	hp	1/ 3
	230 V	hp	1.5/ 3
	460 ... 600 V	hp	0/ 5

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Selection and ordering data

AC operation ~ ***or DC operation*** ⎓

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

Rated data Utilization category AC-1 Switching of resistive loads at 55 °C		AC-2 and AC-3		Main contacts		Rated control supply voltage U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Operational current I_e up to 400 V	Power of AC loads at 50 Hz and 400 V	Operational current I_e up to 400 V[1]	Power of AC loads at 50 Hz and 400 V	Version NO	NC	V	d					
A	kW	A	kW									
Hum-free · with screw terminals								**Screw terminals**				
 3TG10..-0...												
AC operation, 45 ... 450 Hz												
20	13	8.4	4	4	--	24 AC	5	**3TG1010-0AC2**		1	1 unit	41H
						110 AC	5	**3TG1010-0AG2**		1	1 unit	41H
						230 AC	5	**3TG1010-0AL2**		1	1 unit	41H
				3	1	24 AC	▶	**3TG1001-0AC2**		1	1 unit	41H
						110 AC	▶	**3TG1001-0AG2**		1	1 unit	41H
						230 AC	▶	**3TG1001-0AL2**		1	1 unit	41H
DC operation												
20	13	8.4	4	4	--	24 DC	5	**3TG1010-0BB4**		1	1 unit	41H
				3	1	24 DC	▶	**3TG1001-0BB4**		1	1 unit	41H
Hum-free · with 6.3 mm x 0.8 mm flat connectors								**Flat connectors**				
 3TG10..-1...												
AC operation, 45 ... 450 Hz												
16	10	8.4	4	4	--	24 AC	5	**3TG1010-1AC2**		1	1 unit	41H
						110 AC	30	**3TG1010-1AG2**		1	1 unit	41H
						230 AC	5	**3TG1010-1AL2**		1	1 unit	41H
				3	1	24 AC	30	**3TG1001-1AC2**		1	1 unit	41H
						110 AC	30	**3TG1001-1AG2**		1	1 unit	41H
						230 AC	5	**3TG1001-1AL2**		1	1 unit	41H
DC operation												
16	10	8.4	4	4	--	24 DC	5	**3TG1010-1BB4**		1	1 unit	41H
		8.4	4	3	1	24 DC	5	**3TG1001-1BB4**		1	1 unit	41H

[1] The rated operational currents apply to each pole.

Accessories

Version	Max. rated operational currents I_e/AC-1 (at 55 °C) of the contactors	Max. conductor cross-sections	SD	**Screw terminals** Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	A	mm^2	d					
Links for paralleling (insulated star jumpers)[1]								
 3RT1916-4BB31								
3-pole								
• Without connection terminal (replacement for 3TX4490-2C)	16	--	▶	**3RT1916-4BA31**		1	1 unit	41B
• With connection terminal (replacement for 3TX4490-2A)	40	25	▶	**3RT1916-4BB31**		1	1 unit	41B
4-pole								
• With connection terminal (replacement for 3TX4490-2B)	40	25	15	**3RT1916-4BB41**		1	1 unit	41B

[1] The links for paralleling can be reduced by one pole. The rated operational currents apply to each pole.

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Overview

More information	
Homepage, see www.siemens.com/sirius Industry Mall, see www.siemens.com/product?3RA23_3RT1	Conversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-tool TIA Selection Tool Cloud (TST Cloud), see https://mall.industry.siemens.com/spice/TSTWeb/?kmat=LoadFeeder

The 3RA23 reversing contactor assemblies in sizes S00 to S3 can be ordered as follows:

- Fully wired and tested, with mechanical and electrical interlock; see from page 3/157 onwards.
- All individual parts for customer assembly, see from page 3/71 onwards.

The 3RA23 reversing contactor assemblies have screw or spring-type terminals (main and control circuits) and are suitable for screw fixing and snap-on mounting onto TH 35 standard mounting rails.

Complete 3RA23 reversing contactor assemblies

The fully wired reversing contactor assemblies are suitable for use in any climate.

They are finger-safe according to IEC 60529.

The 3RA23 reversing contactor assemblies of size S00 to S3 each consist of two contactors with the same power, with one NC contact (S00) or one NO contact and one NC contact (S0 to S3) in the basic unit. The contactors are mechanically and electrically interlocked (NC contact interlock).

3RU2 overload relays (see from page 7/88 onwards) or 3RB3 overload relays (see from page 7/101 onwards) for contactor mounting or stand-alone installation, SIMOCODE pro 3UF7 motor management and control devices (from page 10/15 onwards) or 3RN thermistor motor protection evaluation units (page 10/164) can be used for motor protection.

Reversing contactor assemblies with voltage tap-off

The 3RA23 reversing contactor assemblies with voltage tap-off (see pages 3/157 to 3/160) are required for mounting the function modules for connection to the controller via the IO-Link or AS-Interface communication systems. The 3RA27 function modules must be ordered separately; see page 3/102.

For more information on IO-Link and AS-Interface, see "Industrial Communication", from page 2/1 onwards.

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Sizes S00 to S3

Rated data AC-2 and AC-3 for 50 Hz 400 V AC		Size	Type		
Rating	Operational current I_e		Contactor (See from page 3/50 onwards)	Assembly kit (See from page 3/105 onwards)	**Fully-wired and tested reversing contactor assemblies**
kW	A				
			Screw terminals		
3	7	S00	3RT2015-1…2	3RA2913-2AA1	**3RA2315-8XB30-1…**
4	9		3RT2016-1…2	3RA2913-2AA1	**3RA2316-8XB30-1…**
5.5	12		3RT2017-1…2	3RA2913-2AA1	**3RA2317-8XB30-1…**
7.5	16		3RT2018-1…2	3RA2913-2AA1	**3RA2318-8XB30-1…**
5.5	12	S0	3RT2024-1…0	3RA2923-2AA1	**3RA2324-8XB30-1…**
7.5	16		3RT2025-1…0	3RA2923-2AA1	**3RA2325-8XB30-1…**
11	25		3RT2026-1…0	3RA2923-2AA1	**3RA2326-8XB30-1…**
15	32		3RT2027-1…0	3RA2923-2AA1	**3RA2327-8XB30-1…**
18.5	38		3RT2028-1…0	3RA2923-2AA1	**3RA2328-8XB30-1…**
18.5	40	S2	3RT2035-1…0	3RA2933-2AA1	**3RA2335-8XB30-1…**
22	55		3RT2036-1…0	3RA2933-2AA1	**3RA2336-8XB30-1…**
30	65		3RT2037-1…0	3RA2933-2AA1	**3RA2337-8XB30-1…**
37	80		3RT2038-1…0	3RA2933-2AA1	**3RA2338-8XB30-1…**
37	80	S3	3RT2045-1…0	3RA2943-2AA1	**3RA2345-8XB30-1…**
45	90		3RT2046-1…0	3RA2943-2AA1	**3RA2346-8XB30-1…**
55	110		3RT2047-1…0	3RA2943-2AA1	**3RA2347-8XB30-1…**
			Spring-type terminals		
3	7	S00	3RT2015-2…2	3RA2913-2AA2	**3RA2315-8XB30-2…**
4	9		3RT2016-2…2	3RA2913-2AA2	**3RA2316-8XB30-2…**
5.5	12		3RT2017-2…2	3RA2913-2AA2	**3RA2317-8XB30-2…**
7.5	16		3RT2018-2…2	3RA2913-2AA2	**3RA2318-8XB30-2…**
5.5	12	S0	3RT2024-2…0	3RA2923-2AA2	**3RA2324-8XB30-2…**
7.5	16		3RT2025-2…0	3RA2923-2AA2	**3RA2325-8XB30-2…**
11	25		3RT2026-2…0	3RA2923-2AA2	**3RA2326-8XB30-2…**
15	32		3RT2027-2…0	3RA2923-2AA2	**3RA2327-8XB30-2…**
18.5	38		3RT2028-2…0	3RA2923-2AA2	**3RA2328-8XB30-2…**

Note:

The 3RA2934-2B mechanical interlock for sizes S2 and S3 must be ordered separately; see page 3/109.

Article No. scheme

Product versions		**Article number**
SIRIUS reversing contactor assembly		**3RA23** □ □ – □ □ □ □ □ – □ □ □ □
Size of the contactor	e.g. 4 = S3	□
Power dependent on size	e.g. 5 = 37 kW for size S3	□
Type of overload relay	e.g. 8X = without	□ □
Assembly	e.g. E = communication-capable installation	□
Interlocking	e.g. 3 = mechanical and electrical	□
Free auxiliary switches	e.g. 0 = S3: 2 NO total	□
Type of electrical connection	e.g. 1 = screw terminals (main and auxiliary circuits)	□
Operating range / solenoid coil circuit	e.g. A = AC standard / without coil circuit	□
Rated control supply voltage	e.g. L2 = 230 V AC, 50/60 Hz	□ □
Example		**3RA23 4 5 – 8 X E 3 0 – 1 A L 2**

Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

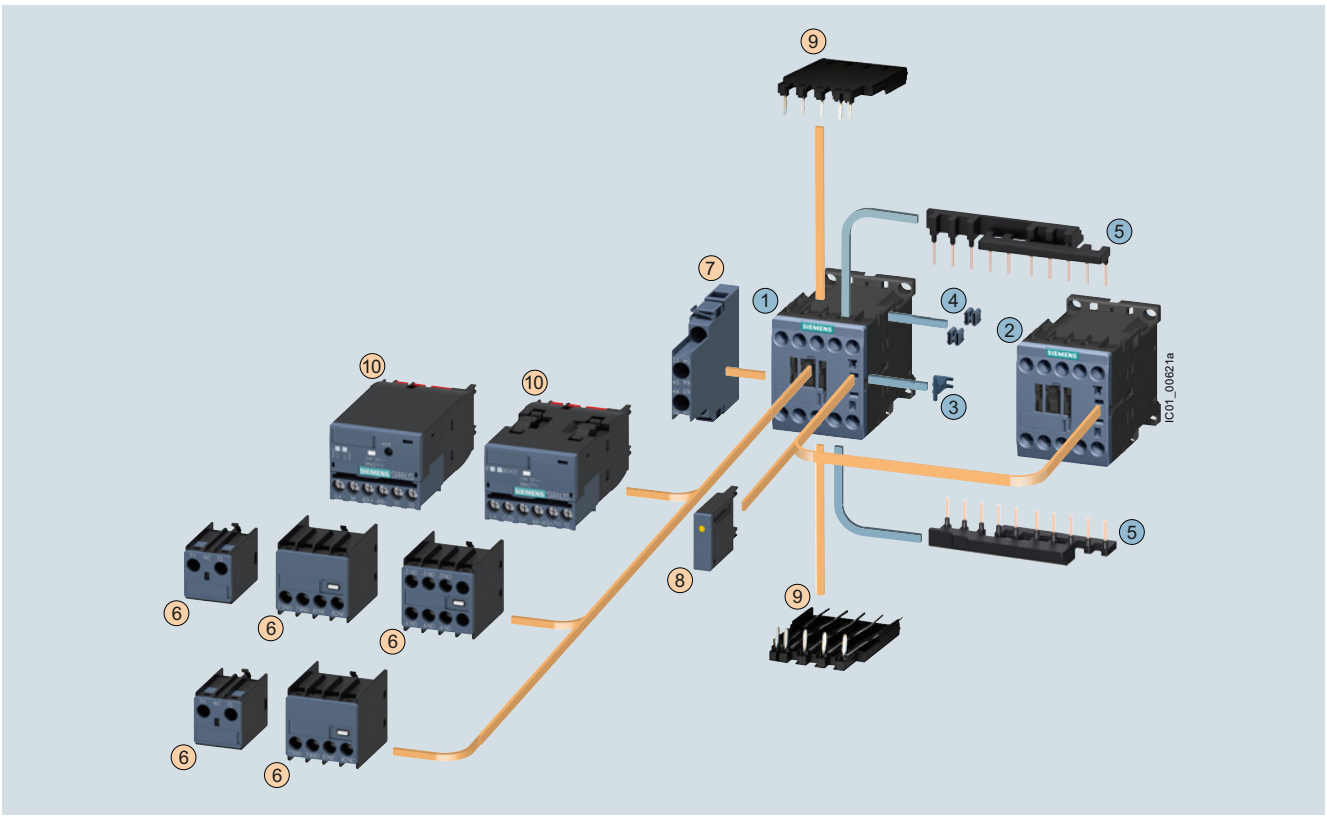
For your orders, please use the article numbers quoted in the selection and ordering data.

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S00 · Up to 7.5 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately		Type	Page
6	Auxiliary switch block, front[1]	3RH2911	3/89 ... 3/91
7	Auxiliary switch block, lateral	3RH2921	3/93
8	Surge suppressors	3RT2916	3/98, 3/99
9	Solder pin adapters	3RT1916-4KA1	3/111
10	Function module for connection to the control system	3RA271.-1BA00	3/102

Complete reversing contactor assembly

Individual parts		Type Q11	Type Q12	Page
1 2	Contactors, 3 kW	3RT2015	3RT2015	3/50, 3/57
1 2	Contactors, 4 kW	3RT2016	3RT2016	3/50, 3/57
1 2	Contactors, 5.5 kW	3RT2017	3RT2017	3/50, 3/57
1 2	Contactors, 7.5 kW	3RT2018	3RT2018	3/50, 3/57
3 ... 5	Assembly kit comprising:	3RA2913-2AA1		3/105
	3 Mechanical interlock[2]			
	4 Two connecting clips for two contactors[2]			
	5 Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included[3], interruptible (NC contact interlock)			

[1] Auxiliary switch block according to EN 50005 must be used.

[2] The parts 3 and 4 can only be ordered together as 3RA2912-2H mechanical connectors.

[3] 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

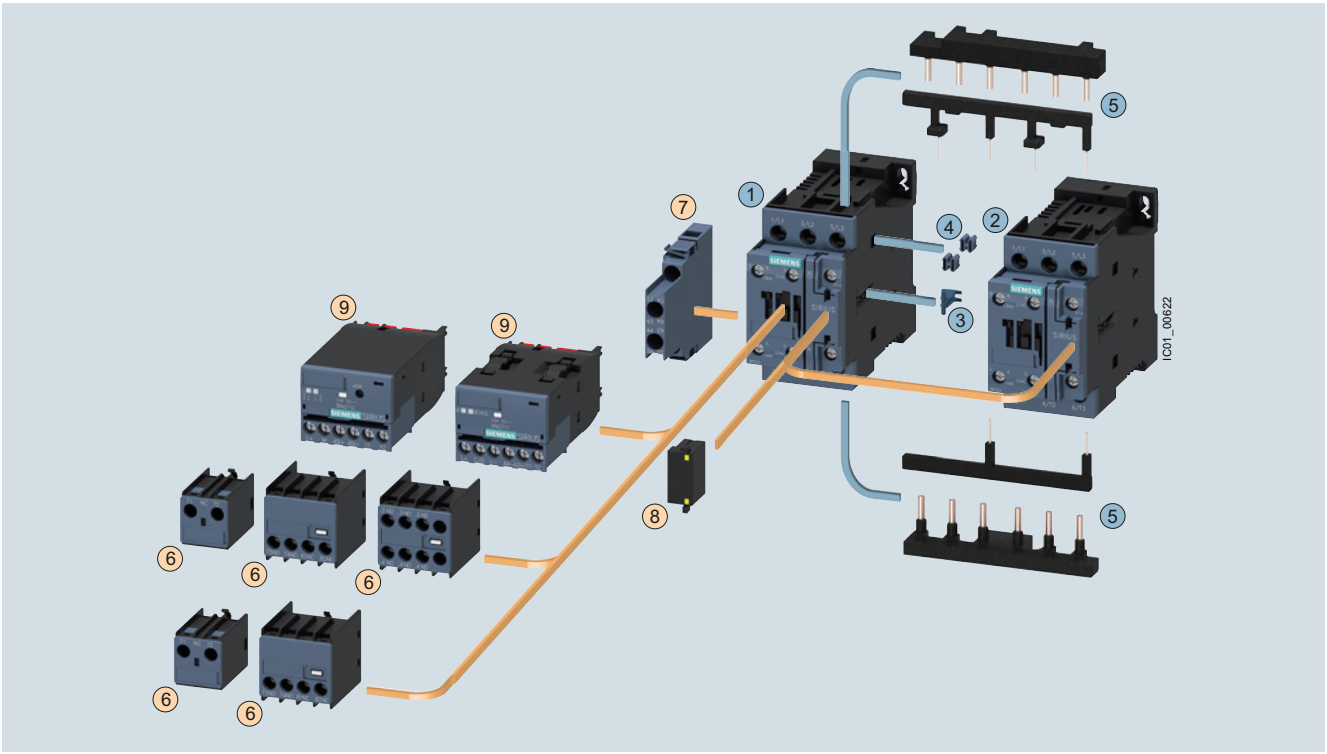
For complete reversing contactor assemblies, see page 3/157.

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S0 · Up to 18.5 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately		Type	Page
6	Auxiliary switch block, front	3RH2911	3/89 ... 3/91
7	Auxiliary switch block, lateral	3RH2921	3/93
8	Surge suppressors	3RT2926	3/98, 3/99
9	Function module for connection to the control system	3RA271.-1BA00	3/102

Complete reversing contactor assembly

Individual parts		Type Q11	Type Q12	Page
1 2	Contactors, 5.5 kW	3RT2024	3RT2024	3/51, 3/61
1 2	Contactors, 7.5 kW	3RT2025	3RT2025	3/51, 3/61
1 2	Contactors, 11 kW	3RT2026	3RT2026	3/51, 3/61
1 2	Contactors, 15 kW	3RT2027	3RT2027	3/51, 3/61
1 2	Contactors, 18.5 kW	3RT2028	3RT2028	3/51, 3/61
3 ... 5	Assembly kit comprising:	3RA2923-2AA1		3/105
	3 Mechanical interlock[1)]			
	4 Two connecting clips for two contactors[1)]			
	5 Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included (NC contact interlock)			

[1)] The parts 3 and 4 can only be ordered together as 3RA2922-2H mechanical connectors.

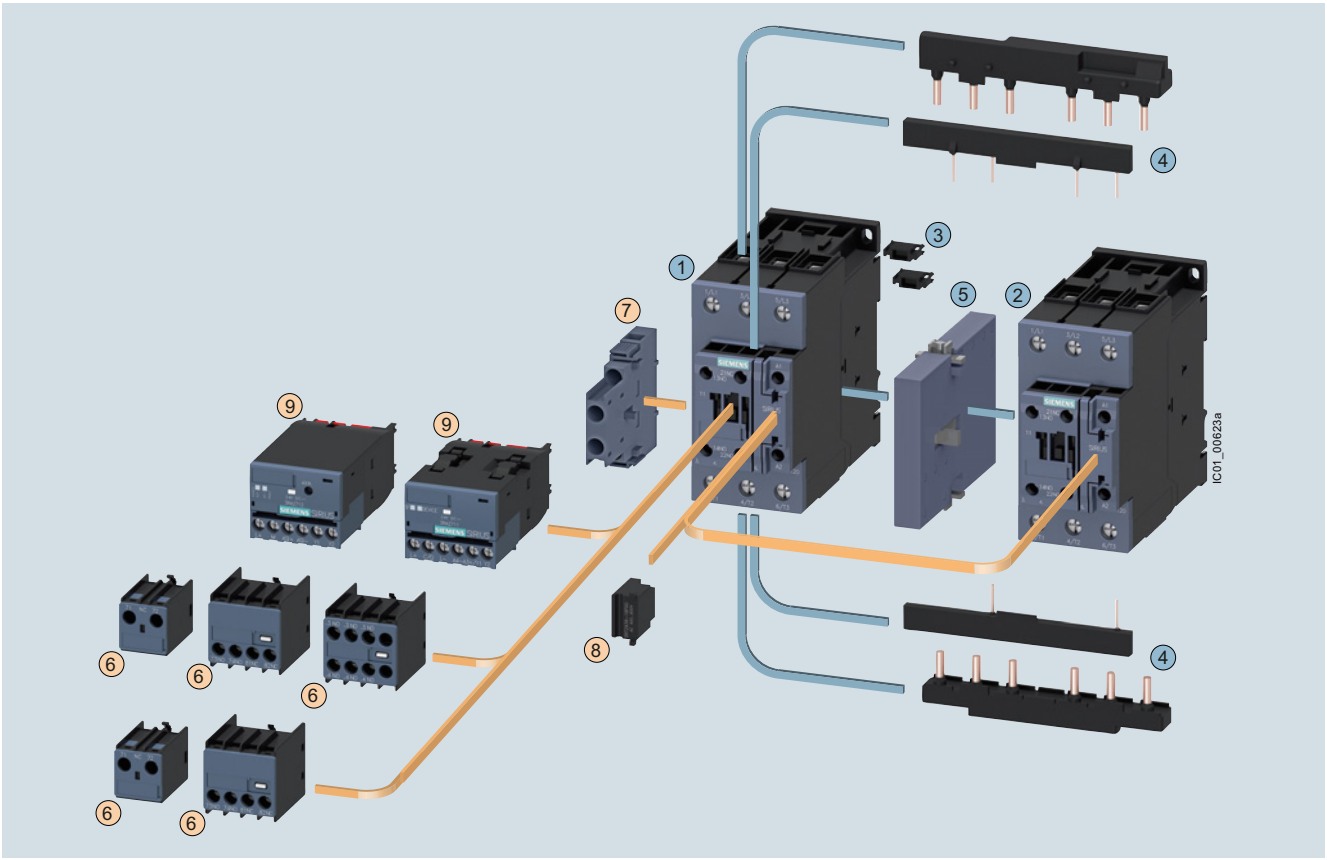
For complete reversing contactor assemblies, see page 3/158.

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S2 · Up to 37 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately		Type	Page
6	Auxiliary switch block, front	3RH2911	3/89 ... 3/91
7	Auxiliary switch block, lateral	3RH2921	3/93
8	Surge suppressors	3RT2936	3/98, 3/99
9	Function module for connection to the control system	3RA271.-1BA00	3/102

Complete reversing contactor assembly

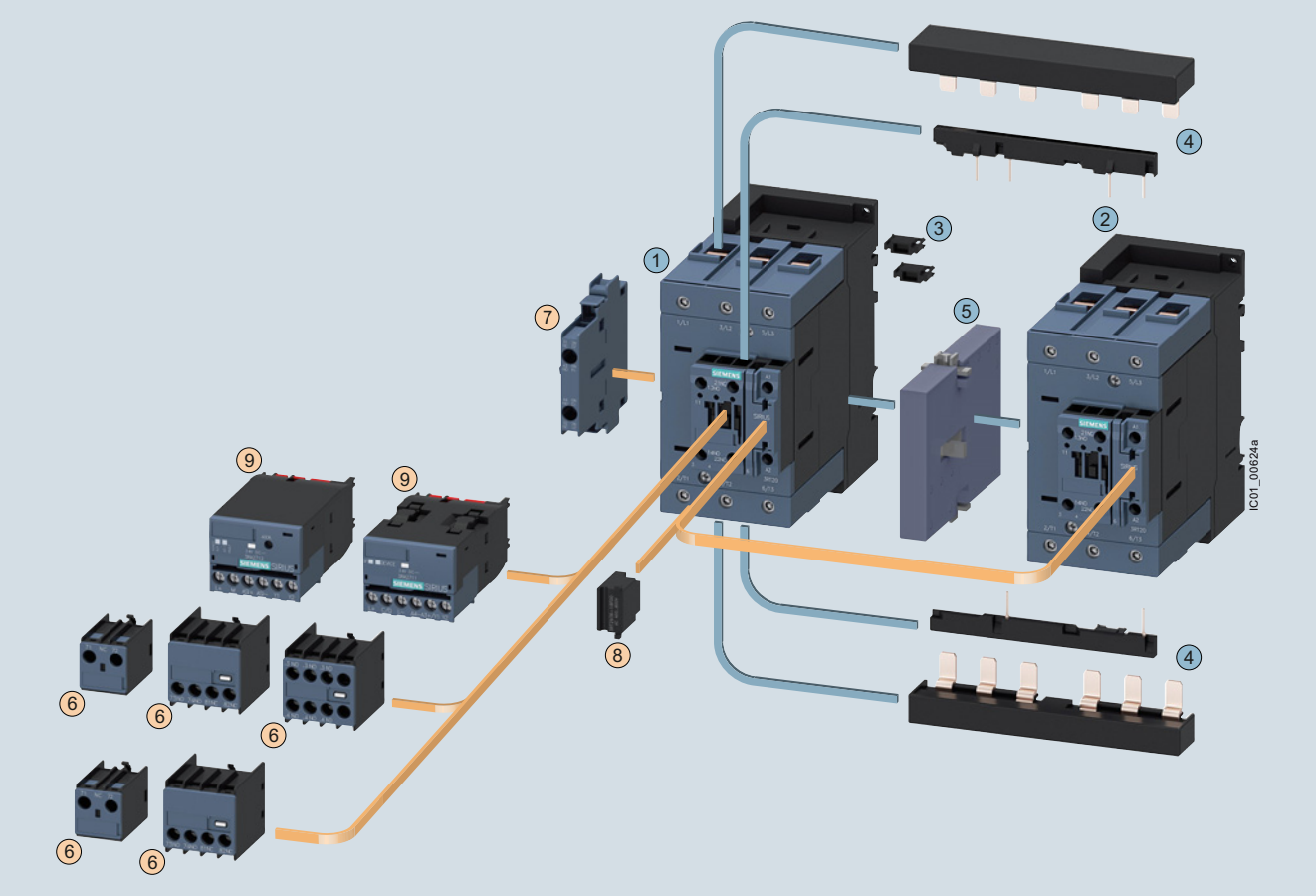
Individual parts		Type Q11	Type Q12	Page
1 2	Contactors, 18.5 kW	3RT2035	3RT2035	3/53, 3/62
1 2	Contactors, 22 kW	3RT2036	3RT2036	3/53, 3/62
1 2	Contactors, 30 kW	3RT2037	3RT2037	3/53, 3/62
1 2	Contactors, 37 kW	3RT2038	3RT2038	3/53, 3/62
3 4	Assembly kit comprising:	3RA2933-2AA1		3/105
	3 Two connectors for two contactors			
	4 Wiring modules on the top and bottom for connecting the main and auxiliary circuits, electrical interlock included (NC contact interlock)			
5	Mechanical interlock (must be ordered separately)	3RA2934-2B		3/109

For complete reversing contactor assemblies, see page 3/159.

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Fully wired and tested reversing contactor assemblies · Size S3 · Up to 55 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately		Type	Page
6	Auxiliary switch block, front	3RH2911	3/89 ... 3/91
7	Auxiliary switch block, lateral	3RH2921	3/93
8	Surge suppressors	3RT2936 [1], 3RT2946	3/98, 3/99
9	Function module for connection to the control system (the associated module connectors 3RA2711-0EE17 must be ordered separately; see page 3/103)	3RA271.-1BA00	3/102

Complete reversing contactor assembly

Individual parts		Type Q11	Type Q12	Page
1 2	Contactors, 37 kW	3RT2045	3RT2045	3/54, 3/62
1 2	Contactors, 45 kW	3RT2046	3RT2046	3/54, 3/62
1 2	Contactors, 55 kW	3RT2047	3RT2047	3/54, 3/62
3 4	Assembly kit comprising:	3RA2943-2AA1		3/105
	3 Two connectors for two contactors			
	4 Wiring modules on the top and bottom for connecting the main and auxiliary circuits, electrical interlock included (NC contact interlock)			
5	Mechanical interlock (must be ordered separately)	3RA2934-2B		3/109

[1] As from product version E03, 3RT2936-1B/-1E surge suppressors can be used for 3RT2.4 contactors.

For complete reversing contactor assemblies, see page 3/160.

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Benefits

Using wiring kits for reversing contactor assemblies has the following advantages:

- Notable reduction of wiring in the control circuit
- Integrated mechanical interlock for sizes S00 and S0
- Prevention of wiring errors in the main circuit

Connecting combs for screw terminals also result in:

- Prevention of wiring errors in the control circuit
- Reduction of testing costs
- Ready-jumpered actuation of the auxiliary switches and the frame (A2)
- Integrated electrical interlocking

Accessories

Selecting the auxiliary switches

The following points should be noted:

Size S00

- For maintained-contact operation:
  Use contactors with an NC contact in the basic unit for the electrical interlock.
- For momentary-contact operation:
  Use contactors with an NC contact in the basic unit for the electrical interlock; in addition, an auxiliary switch block with at least one NO contact for latching is required per contactor.

Sizes S0 to S3

- For maintained-contact operation:
  The contactors have two integrated auxiliary contacts (1 NO + 1 NC); the NC contact can be used for electrical interlocking.
- For momentary-contact operation:
  Electrical interlock as for maintained-contact operation; the NO contact in the basic unit can be used for the latching.

Surge suppression

Sizes S00 to S3

All reversing contactor assemblies can be fitted with RC elements or varistors for damping opening surges in the coil.

As with the individual contactors, the surge suppressors can either be plugged onto the top of the contactors (S00) or be plugged into the front of the contactors (S0 to S3).

Technical specifications

More information	
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16146/td FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16146/faq	Manuals, see • System Manual "SIRIUS Modular System – System Overview", https://support.industry.siemens.com/cs/WW/en/view/60311318 • Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557 • Application Manual "Controls with IE3/IE4 Motors", https://support.industry.siemens.com/cs/ww/en/view/94770820

The technical specifications are the same as for the individual contactors (see page 3/18 onwards).

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Selection and ordering data

Fully wired and tested reversing contactor assemblies*[1] · *Size S00 · Up to 7.5 kW
AC operation or DC operation

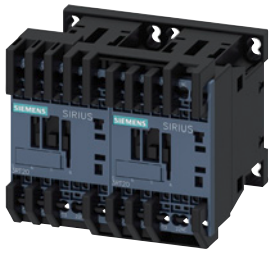
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA231.-8XB30-1A.0



3RA231.-8XE30-1BB4



3RA231.-8XB30-2A.0

Rated data AC-2 and AC-3				Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No. Price per PU		Article No. Price per PU
400 V	230 V	**400 V**	690 V					
A	kW	**kW**	kW	V	d		d	
AC operation, 50/60 Hz								
7	2.2	**3**	4	24 AC	5	**3RA2315-8XB30-1AB0**	5	**3RA2315-8XB30-2AB0**
				110 AC	5	**3RA2315-8XB30-1AF0**	5	**3RA2315-8XB30-2AF0**
				230 AC	2	**3RA2315-8XB30-1AP0**	2	**3RA2315-8XB30-2AP0**
9	3	**4**	5.5	24 AC	5	**3RA2316-8XB30-1AB0**	5	**3RA2316-8XB30-2AB0**
				110 AC	5	**3RA2316-8XB30-1AF0**	5	**3RA2316-8XB30-2AF0**
				230 AC	2	**3RA2316-8XB30-1AP0**	2	**3RA2316-8XB30-2AP0**
12	3	**5.5**	5.5	24 AC	5	**3RA2317-8XB30-1AB0**	5	**3RA2317-8XB30-2AB0**
				110 AC	5	**3RA2317-8XB30-1AF0**	5	**3RA2317-8XB30-2AF0**
				230 AC	2	**3RA2317-8XB30-1AP0**	2	**3RA2317-8XB30-2AP0**
16	4	**7.5**	7.5	24 AC	5	**3RA2318-8XB30-1AB0**	5	**3RA2318-8XB30-2AB0**
				110 AC	5	**3RA2318-8XB30-1AF0**	5	**3RA2318-8XB30-2AF0**
				230 AC	2	**3RA2318-8XB30-1AP0**	2	**3RA2318-8XB30-2AP0**
DC operation								
7	2.2	**3**	4	24 DC	2	**3RA2315-8XB30-1BB4**	2	**3RA2315-8XB30-2BB4**
9	3	**4**	5.5	24 DC	2	**3RA2316-8XB30-1BB4**	2	**3RA2316-8XB30-2BB4**
12	3	**5.5**	5.5	24 DC	2	**3RA2317-8XB30-1BB4**	2	**3RA2317-8XB30-2BB4**
16	4	**7.5**	7.5	24 DC	2	**3RA2318-8XB30-1BB4**	2	**3RA2318-8XB30-2BB4**
With voltage tap-off								
7	2.2	**3**	4	24 DC	2	**3RA2315-8XE30-1BB4**	5	**3RA2315-8XE30-2BB4**
9	3	**4**	5.5	24 DC	2	**3RA2316-8XE30-1BB4**	5	**3RA2316-8XE30-2BB4**
12	3	**5.5**	5.5	24 DC	2	**3RA2317-8XE30-1BB4**	2	**3RA2317-8XE30-2BB4**
16	4	**7.5**	7.5	24 DC	2	**3RA2318-8XE30-1BB4**	2	**3RA2318-8XE30-2BB4**

[1] The contactors integrated in the reversing contactor assemblies have no unassigned auxiliary contacts. When used with a voltage tap-off and function module, the auxiliary contacts are unassigned.

Representation of the complete reversing contactor assemblies with optionally mountable accessories, see page 3/152.

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

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW *IE3/IE4* ready

Fully wired and tested reversing contactor assemblies · Size S0 · Up to 18.5 kW
AC operation or DC operation

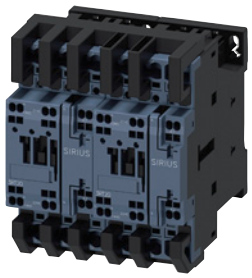
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA232.-8XB30-1A.2



3RA2324-8XE30-1BB4



3RA232.-8XB30-2A.2

Rated data AC-2 and AC-3				Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No. Price per PU		Article No. Price per PU
400 V	230 V	**400 V**	690 V					
A	kW	**kW**	kW	V	d		d	
AC operation, 50/60 Hz								
12	3	**5.5**	7.5	24 AC	5	**3RA2324-8XB30-1AC2**	5	**3RA2324-8XB30-2AC2**
				110 AC	5	**3RA2324-8XB30-1AG2**	5	**3RA2324-8XB30-2AG2**
				230 AC	5	**3RA2324-8XB30-1AL2**	5	**3RA2324-8XB30-2AL2**
17	4	**7.5**	11	24 AC	5	**3RA2325-8XB30-1AC2**	5	**3RA2325-8XB30-2AC2**
				110 AC	5	**3RA2325-8XB30-1AG2**	5	**3RA2325-8XB30-2AG2**
				230 AC	5	**3RA2325-8XB30-1AL2**	5	**3RA2325-8XB30-2AL2**
25	5.5	**11**	11	24 AC	5	**3RA2326-8XB30-1AC2**	5	**3RA2326-8XB30-2AC2**
				110 AC	5	**3RA2326-8XB30-1AG2**	5	**3RA2326-8XB30-2AG2**
				230 AC	5	**3RA2326-8XB30-1AL2**	5	**3RA2326-8XB30-2AL2**
32	7.5	**15**	18.5	24 AC	5	**3RA2327-8XB30-1AC2**	5	**3RA2327-8XB30-2AC2**
				110 AC	5	**3RA2327-8XB30-1AG2**	5	**3RA2327-8XB30-2AG2**
				230 AC	5	**3RA2327-8XB30-1AL2**	5	**3RA2327-8XB30-2AL2**
38	11	**18.5**	18.5	24 AC	5	**3RA2328-8XB30-1AC2**	5	**3RA2328-8XB30-2AC2**
				110 AC	5	**3RA2328-8XB30-1AG2**	5	**3RA2328-8XB30-2AG2**
				230 AC	5	**3RA2328-8XB30-1AL2**	5	**3RA2328-8XB30-2AL2**
DC operation								
12	3	**5.5**	7.5	24 DC	2	**3RA2324-8XB30-1BB4**	2	**3RA2324-8XB30-2BB4**
17	4	**7.5**	11	24 DC	2	**3RA2325-8XB30-1BB4**	2	**3RA2325-8XB30-2BB4**
25	5.5	**11**	11	24 DC	2	**3RA2326-8XB30-1BB4**	2	**3RA2326-8XB30-2BB4**
32	7.5	**15**	18.5	24 DC	2	**3RA2327-8XB30-1BB4**	2	**3RA2327-8XB30-2BB4**
38	11	**18.5**	18.5	24 DC	2	**3RA2328-8XB30-1BB4**	2	**3RA2328-8XB30-2BB4**
With voltage tap-off								
12	3	**5.5**	7.5	24 DC	2	**3RA2324-8XE30-1BB4**	2	**3RA2324-8XE30-2BB4**
17	4	**7.5**	11	24 DC	2	**3RA2325-8XE30-1BB4**	5	**3RA2325-8XE30-2BB4**
25	5.5	**11**	11	24 DC	2	**3RA2326-8XE30-1BB4**	2	**3RA2326-8XE30-2BB4**
32	7.5	**15**	18.5	24 DC	5	**3RA2327-8XE30-1BB4**	2	**3RA2327-8XE30-2BB4**
38	11	**18.5**	18.5	24 DC	2	**3RA2328-8XE30-1BB4**	2	**3RA2328-8XE30-2BB4**

Representation of the complete reversing contactor assemblies with optionally mountable accessories, see page 3/153.

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

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IE3/IE4 ready SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S2 · Up to 37 kW
AC operation or AC/DC operation

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



3RA233.-8XB30-1A.2



3RA233.-8XE30-1NB3

Rated data AC-2 and AC-3				Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No.	Price per PU		Article No.	Price per PU
400 V	230 V	**400 V**	690 V							
A	kW	**kW**	kW	V	d			d		
AC operation, 50/60 Hz										
40	11	**18.5**	22	110 AC	2	**3RA2335-8XB30-1AG2**			--	
				230 AC	2	**3RA2335-8XB30-1AL2**			--	
50	15	**22**	22	110 AC	5	**3RA2336-8XB30-1AG2**			--	
				230 AC	2	**3RA2336-8XB30-1AL2**			--	
65	18.5	**30**	45	110 AC	5	**3RA2337-8XB30-1AG2**			--	
				230 AC	2	**3RA2337-8XB30-1AL2**			--	
80	22	**37**	55	110 AC	5	**3RA2338-8XB30-1AG2**			--	
				230 AC	2	**3RA2338-8XB30-1AL2**			--	
AC/DC operation[1]										
40	11	**18.5**	22	20 ... 33 AC/DC	2	**3RA2335-8XB30-1NB3**			--	
50	15	**22**	22	20 ... 33 AC/DC	2	**3RA2336-8XB30-1NB3**			--	
65	18.5	**30**	45	20 ... 33 AC/DC	2	**3RA2337-8XB30-1NB3**			--	
80	22	**37**	55	20 ... 33 AC/DC	2	**3RA2338-8XB30-1NB3**			--	
With voltage tap-off										
40	11	**18.5**	22	20 ... 33 AC/DC	5	**3RA2335-8XE30-1NB3**			--	
50	15	**22**	22	20 ... 33 AC/DC	5	**3RA2336-8XE30-1NB3**			--	
65	18.5	**30**	45	20 ... 33 AC/DC	5	**3RA2337-8XE30-1NB3**			--	
80	22	**37**	55	20 ... 33 AC/DC	5	**3RA2338-8XE30-1NB3**			--	

[1] With integrated coil circuit (varistor).

Representation of the complete reversing contactor assemblies with optionally mountable accessories, see page 3/154.

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

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SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW *IE3/IE4 ready*

Fully wired and tested reversing contactor assemblies · Size S3 · Up to 55 kW
AC operation or AC/DC operation

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



3RA234.-8XB30-1A.2



3RA234.-8XE30-1NB3

Rated data AC-2 and AC-3				Rated control supply voltage U_s [1]	SD	Screw terminals		SD	Spring-type terminals	
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No.	Price per PU		Article No.	Price per PU
400 V	230 V	**400 V**	690 V							
A	kW	**kW**	kW	V	d			d		
AC operation, 50/60 Hz										
80	22	**37**	55	110 AC	X	**3RA2345-8XB30-1AG2**			**--**	
				230 AC	X	**3RA2345-8XB30-1AL2**			**--**	
95	22	**45**	75	110 AC	X	**3RA2346-8XB30-1AG2**			**--**	
				230 AC	X	**3RA2346-8XB30-1AL2**			**--**	
110	30	**55**	75	110 AC	X	**3RA2347-8XB30-1AG2**			**--**	
				230 AC	X	**3RA2347-8XB30-1AL2**			**--**	
AC/DC operation [1]										
80	22	**37**	55	20 ... 33 AC/DC	X	**3RA2345-8XB30-1NB3**			**--**	
95	22	**45**	75	20 ... 33 AC/DC	X	**3RA2346-8XB30-1NB3**			**--**	
110	30	**55**	75	20 ... 33 AC/DC	X	**3RA2347-8XB30-1NB3**			**--**	
With voltage tap-off [2]										
80	22	**37**	55	20 ... 33 AC/DC	X	**3RA2345-8XE30-1NB3**			**--**	
95	22	**45**	75	20 ... 33 AC/DC	X	**3RA2346-8XE30-1NB3**			**--**	
110	30	**55**	75	20 ... 33 AC/DC	X	**3RA2347-8XE30-1NB3**			**--**	

1) With integrated coil circuit (varistor).

2) The associated module connectors 3RA2711-0EE17 for the 3RA271. function modules must be ordered separately, see page 3/103.

Representation of the complete reversing contactor assemblies with optionally mountable accessories, see page 3/155.

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

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Overview

The individual parts for the reversing contactor assemblies for customer assembly must be ordered separately.

- 3RT contactors: The operating times of the individual 3RT10 contactors are rated in such a way that no overlapping of the contact making and the arcing time between two contactors can occur on reversing, providing they are interlocked by way of their auxiliary switches (NC contact interlock) and the mechanical interlock.
  For assemblies with AC operation and 50/60 Hz, a dead interval of 50 ms must be provided when used with voltages over 500 V; a dead interval of 30 ms is recommended for use with voltages up to and including 400 V. These dead times do not apply to assemblies with DC operation.
  The operating times of the individual contactors are not affected by the mechanical interlock.
- Mechanical interlock
- Wiring kits consisting of link rails
- Base plate

Additional components

- For momentary-contact operation: auxiliary switch (NO contact) for self-locking
- 3RB2 overload relays (see from page 7/113 onwards), SIMOCODE pro 3UF7 motor management and control devices (from page 10/15 onwards) or 3RN thermistor motor protection evaluation units (page 10/164) can be used for overload protection.

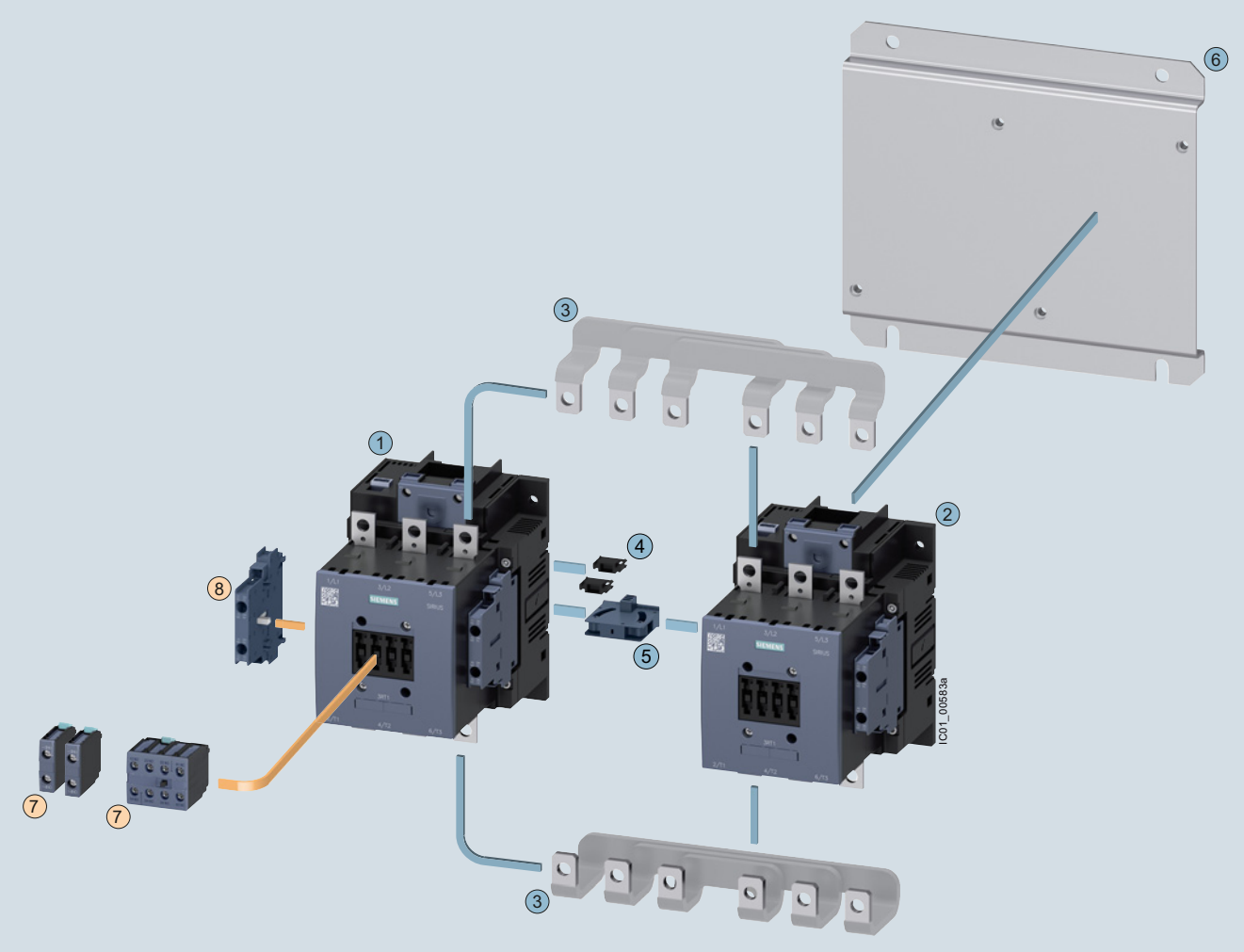
More information

Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RA23_3RT1

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Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Reversing contactor assemblies for customer assembly · Size S6 · Up to 90 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
⑥ Auxiliary switch block, front	3RH1921	3/92
⑦ Auxiliary switch block, lateral	3RH1921	3/94

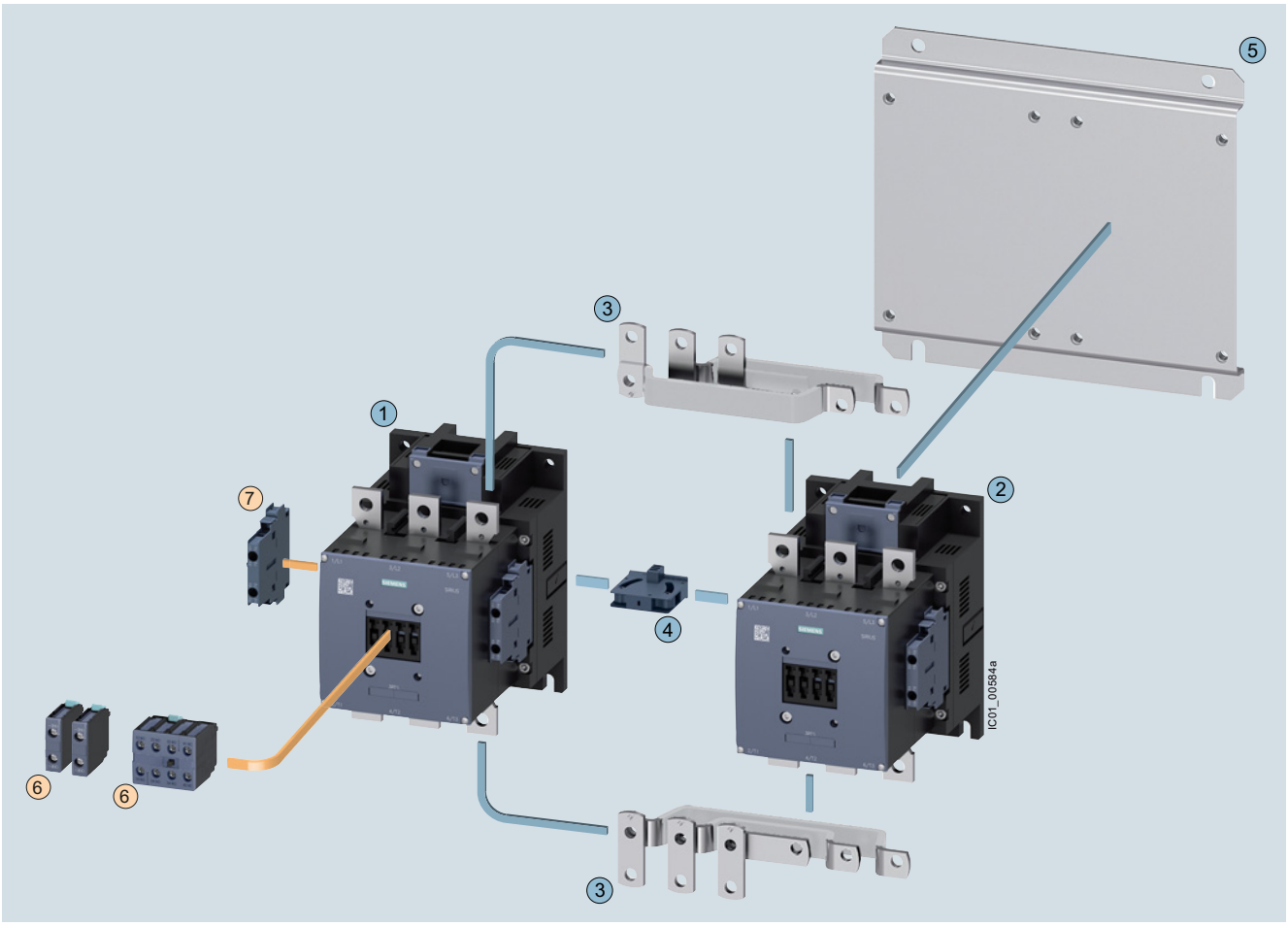
Reversing contactor assembly for customer assembly

Individual parts	Type Q11	Type Q12	Page
①② Contactors, 55 kW	3RT1.54	3RT1.54	3/66 ... 3/68
①② Contactors, 75 kW	3RT1.55	3RT1.55	3/66 ... 3/68
①② Contactors, 90 kW	3RT1.56	3RT1.56	3/66 ... 3/68
③ Assembly kit consisting of: Wiring modules on the top and bottom for contactors without box terminals for connecting the main and auxiliary circuits, electrical interlock included (NC contact interlock)	3RA1953-2A		3/105
④ Two connectors for two contactors	3RA1932-2D		3/109
⑤ Mechanical interlock (must be ordered separately)	3RA1954-2A		3/109
⑥ Base plate for reversing contactor assemblies	3RA1952-2A		3/113

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Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Reversing contactor assemblies for customer assembly · Size S10 · Up to 160 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
⑥ Auxiliary switch block, front	3RH1921	3/92
⑦ Auxiliary switch block, lateral	3RH1921	3/94

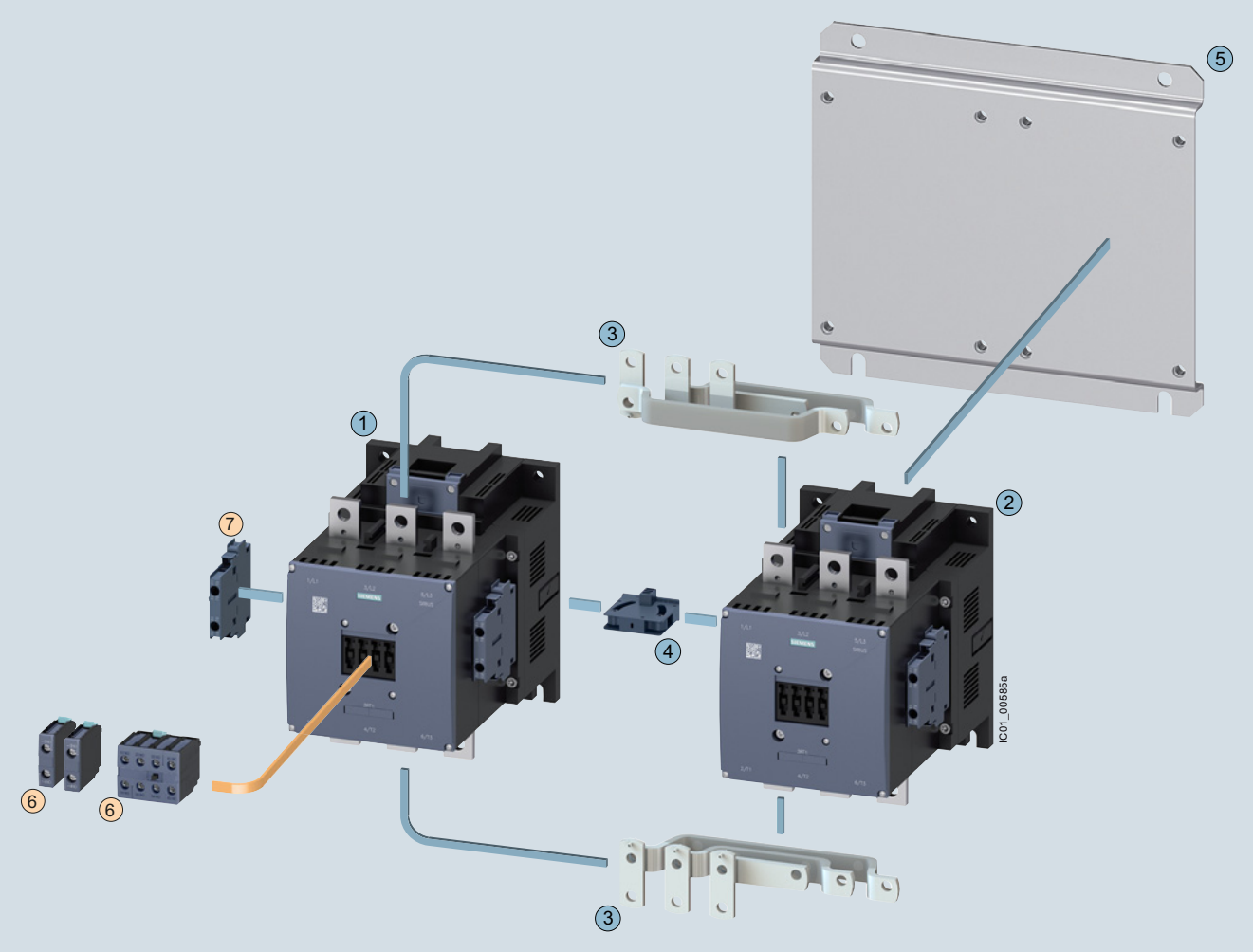
Reversing contactor assembly for customer assembly

Individual parts		Type Q11	Type Q12	Page
①②	Contactors, 110 kW	3RT1.64	3RT1.64	3/66 ... 3/68
①②	Contactors, 132 kW	3RT1.65	3RT1.65	3/66 ... 3/68
①②	Contactors, 160 kW	3RT1.66	3RT1.66	3/66 ... 3/68
③	Assembly kit consisting of: Wiring modules on the top and bottom for contactors without box terminals for connecting the main and auxiliary circuits, electrical interlock included (NC contact interlock)	3RA1963-2A		3/105
④	Mechanical interlock (must be ordered separately)	3RA1954-2A		3/109
⑤	Base plate for reversing contactor assemblies	3RA1962-2A		3/113

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Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Reversing contactor assemblies for customer assembly · Size S12 · Up to 250 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
⑥ Auxiliary switch block, front	3RH1921	3/92
⑦ Auxiliary switch block, lateral	3RH1921	3/94

Reversing contactor assembly for customer assembly

Individual parts		Type Q11	Type Q12	Page
①②	Contactors, 200 kW	3RT1.74	3RT1.74	3/66 ... 3/68
①②	Contactors, 250 kW	3RT1.75	3RT1.75	3/66 ... 3/68
③	Assembly kit consisting of: Wiring modules on the top and bottom for contactors without box terminals for connecting the main and auxiliary circuits, electrical interlock included (NC contact interlock)	3RA1973-2A		3/105
④	Mechanical interlock (must be ordered separately)	3RA1954-2A		3/109
⑤	Base plate for reversing contactor assemblies	3RA1972-2A		3/113

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Overview

More information	
Homepage, see www.siemens.com/sirius Industry Mall, see www.siemens.com/product?3RA24_3RT	Conversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-tool TIA Selection Tool Cloud (TST Cloud), see https://mall.industry.siemens.com/spice/TSTWeb/?kmat=LoadFeeder

The 3RA24 contactor assemblies for star-delta (wye-delta) starting in sizes S00 to S3 can be ordered as follows:

- Fully wired and tested, with electrical and mechanical interlock; see page 3/174 onwards.
- For all individual parts for customer assembly, see from page 3/71 onwards.

The 3RA24 contactor assemblies for star-delta (wye-delta) starting have screw or spring-type terminals and are suitable for screwing and snapping onto TH 35 standard mounting rails.

A base plate is also available for the size S2 and S3 assemblies.

A dead interval of 50 ms on reversing is already integrated in the 3RA28 function module for star-delta (wye-delta) starting.

With the fully wired and tested 3RA24 contactor assemblies for star-delta (wye-delta) starting, the auxiliary contacts included in the basic units are unassigned.

The 3RA24 contactor assemblies for star-delta (wye-delta) starting are designed for standard applications.

Note:

Contactor assemblies for star-delta (wye-delta) starting in special applications such as very heavy starting[1)] or star-delta (wye-delta) starting of special motors must be customized. Help with designing such special applications is available from our Technical Assistance,
Tel.: +49 (911) 895-5900
Email: technical-assistance@siemens.com

Surge suppression

Surge suppression (varistor) is included in the 3RA28 function modules for star-delta (wye-delta) starting.

Motor protection

3RU2 overload relays (see from page 7/88 onwards) or 3RB3 overload relays (see from page 7/101 onwards) for contactor mounting or stand-alone installation, SIMOCODE pro 3UF7 motor management and control devices (from page 10/15 onwards) or 3RN thermistor motor protection evaluation units (page 10/164) can be used for motor 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.

SIRIUS 3RA28 function module for star-delta (wye-delta) starting

The 3RA2816-0EW20 star-delta (wye-delta) function module (see page 3/101) replaces the complete wiring in the control circuit and can be used in the voltage range from 24 to 240 V AC/DC. It is snapped onto the front of contactor assemblies for star-delta (wye-delta) starting in sizes S00, S0, S2 or S3.

One function module comprises a complete module kit:

- Basic module with integrated control logic and time setting
- Two coupling modules with corresponding connecting cables

The scope of supply thus comprises a complete module kit for one contactor assembly for star-delta (wye-delta) starting in size S00, S0, S2 or S3, regardless of the connection method.

Data of the control circuit:

- Wide voltage range 24 to 240 V AC/DC
- Time setting range 0.5 to 60 s (3 selectable settings)
- Dead interval of 50 ms, non-adjustable

1) For effective support from Technical Assistance you must provide the following details:
- Rated motor voltage
- Rated motor current
- Service factor, operating values
- Motor starting current factor
- Starting time
- Ambient temperature.

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Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Complete units

Note:

The selection of contactor types refers to fused designs.

Rated data at 50 Hz 400 V AC			Size	Type		
Rating ***P***	Operational current I_e	Motor current		Line/delta contactor	Star contactor	**Fully-wired and tested contactor assemblies for star-delta (wye-delta) starting**
kW	A	A				
				Screw terminals		
5.5	12	9.5 ... 13.8	**S00-S00-S00**	3RT2015-1....	3RT2015-1....	**3RA2415-8XF31-1...**
7.5	16	12.1 ... 17		3RT2017-1....	3RT2015-1....	**3RA2416-8XF31-1...**
11	25	19 ... 25		3RT2018-1....	3RT2016-1....	**3RA2417-8XF31-1...**
11	25	19 ... 25	**S0-S0-S0**	3RT2024-1...0	3RT2024-1...0	**3RA2423-8XF32-1...**
15	32	24.1 ... 34		3RT2026-1...0	3RT2024-1...0	**3RA2425-8XF32-1...**
18.5	40	34.5 ... 40		3RT2026-1...0	3RT2024-1...0	**3RA2425-8XF32-1...**
22	50	31 ... 43		3RT2027-1...0	3RT2026-1...0	**3RA2426-8XF32-1...**
22/30	50	31 ... 43	**S2-S2-S0**	3RT2035-1...0	3RT2026-1...0	**3RA2434-8XF32-1...**
37	80	62.1 ... 77.8		3RT2035-1...0	3RT2027-1...0	**3RA2435-8XF32-1...**
45	86	69 ... 86		3RT2036-1...0	3RT2028-1...0	**3RA2436-8XF32-1...**
55	115	77.6 ... 108.6	**S2-S2-S2**	3RT2037-1...0	3RT2035-1...0	**3RA2437-8XF32-1...**
55	115	77.6 ... 108.6	**S3-S3-S2**	3RT2045-1...0	3RT2035-1...0	**3RA2444-8XF32-1...**
75	150	120.7 ... 150		3RT2045-1...0	3RT2036-1...0	**3RA2445-8XF32-1...**
90	160	86 ... 160		3RT2046-1...0	3RT2037-1...0	**3RA2446-8XF32-1...**
				Spring-type terminals		
5.5	12	9.5 ... 13.8	**S00-S00-S00**	3RT2015-2....	3RT2015-2....	**3RA2415-8XF31-2...**
7.5	16	12.1 ... 17		3RT2017-2....	3RT2015-2....	**3RA2416-8XF31-2...**
11	25	19 ... 25		3RT2018-2....	3RT2016-2....	**3RA2417-8XF31-2...**
11	25	19 ... 25	**S0-S0-S0**	3RT2024-2...0	3RT2024-2...0	**3RA2423-8XF32-2...**
15	32	24.1 ... 34		3RT2026-2...0	3RT2024-2...0	**3RA2425-8XF32-2...**
18.5	40	34.5 ... 40		3RT2026-2...0	3RT2024-2...0	**3RA2425-8XF32-2...**
22	50	31 ... 43		3RT2027-2...0	3RT2026-2...0	**3RA2426-8XF32-2...**

Article No. scheme

Product versions		**Article number**
SIRIUS contactor assembly for star-delta (wye-delta) starting		**3RA24** □ □ – □ □ □ □ □ – □ □ □ □
Contactor size	e.g. 4 = S3	□
Power dependent on size	e.g. 5 = 75 kW for size S3	□
Type of overload relay	e.g. 8X = without	□ □
Assembly	e.g. F = ready-assembled with function modules	□
Interlock	e.g. 3 = mechanical and electrical	□
Free auxiliary switches	e.g. 2 = S3: 3 NO + 3 NC total	□
Type of electrical connection	e.g. 1 = screw terminals (main and auxiliary circuits)	□
Operating range / solenoid coil circuit	e.g. A = AC standard / without coil circuit	□
Rated control supply voltage	e.g. L2 = 230 V AC, 50/60 Hz	□ □
Example		**3RA24 4 5 – 8 X F 3 2 – 1 A L 2**

Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

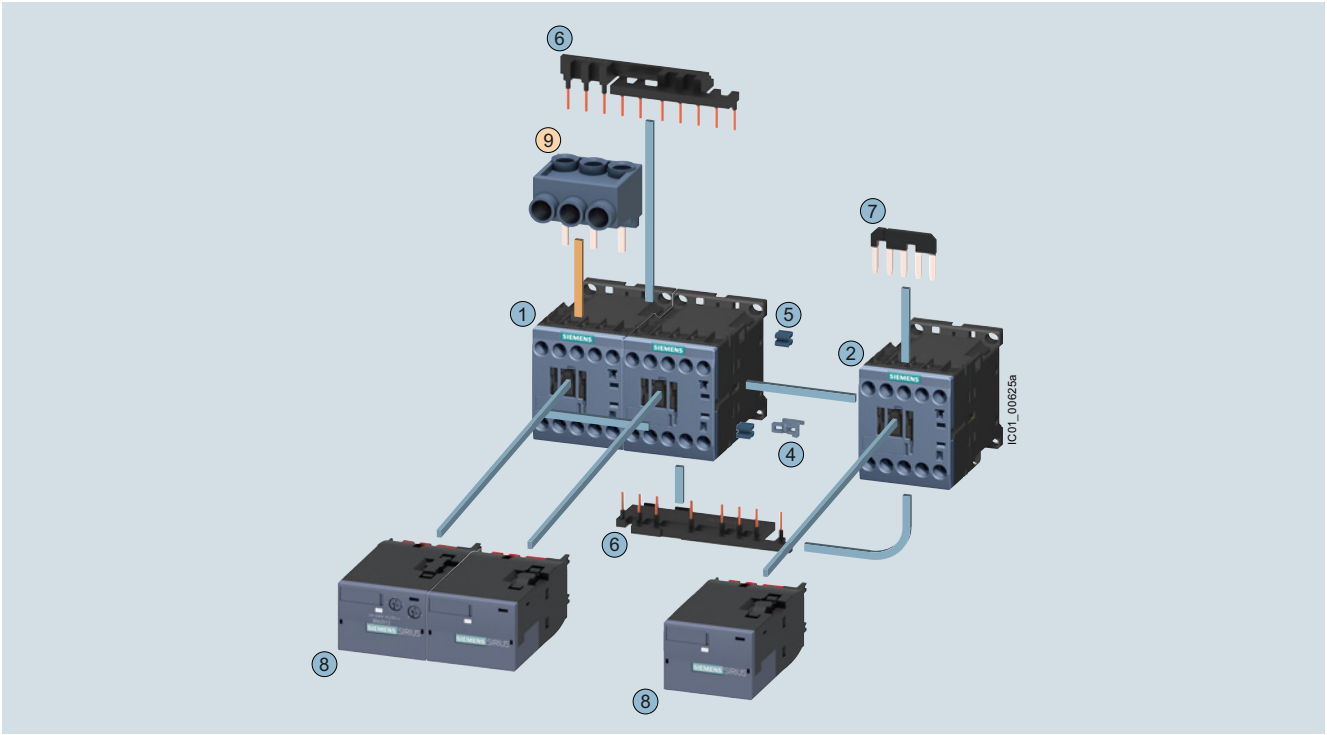
For your orders please use the article numbers quoted in the selection and ordering data.

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SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S00-S00-S00 · Up to 11 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately	Type	Page
(9) Three-phase infeed terminal[1]	3RA2913-3K	3/110

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts		Type Q11[2]	Type Q13	Type Q12	Page
(1)(2)(3)	Contactors, 5.5 kW	3RT2015	3RT2015	3RT2015	3/50, 3/57
(1)(2)(3)	Contactors, 7.5 kW	3RT2017	3RT2017	3RT2015	3/50, 3/57
(1)(2)(3)	Contactors, 11 kW	3RT2018	3RT2018	3RT2016	3/50, 3/57
(4) ... (7)	Assembly kit S00-S00-S00 comprising:	3RA2913-2BB1			3/106
	(4) Mechanical interlock				
	(5) Four connecting clips for three contactors				
	(6) Wiring modules on top and bottom for connecting the main and auxiliary circuits				
	(7) Star jumper				
(8)	Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/101

[1] Part (9) can only be mounted in the case of contactors with screw terminal.
[2] The version with 1 NO is required for momentary-contact operation.

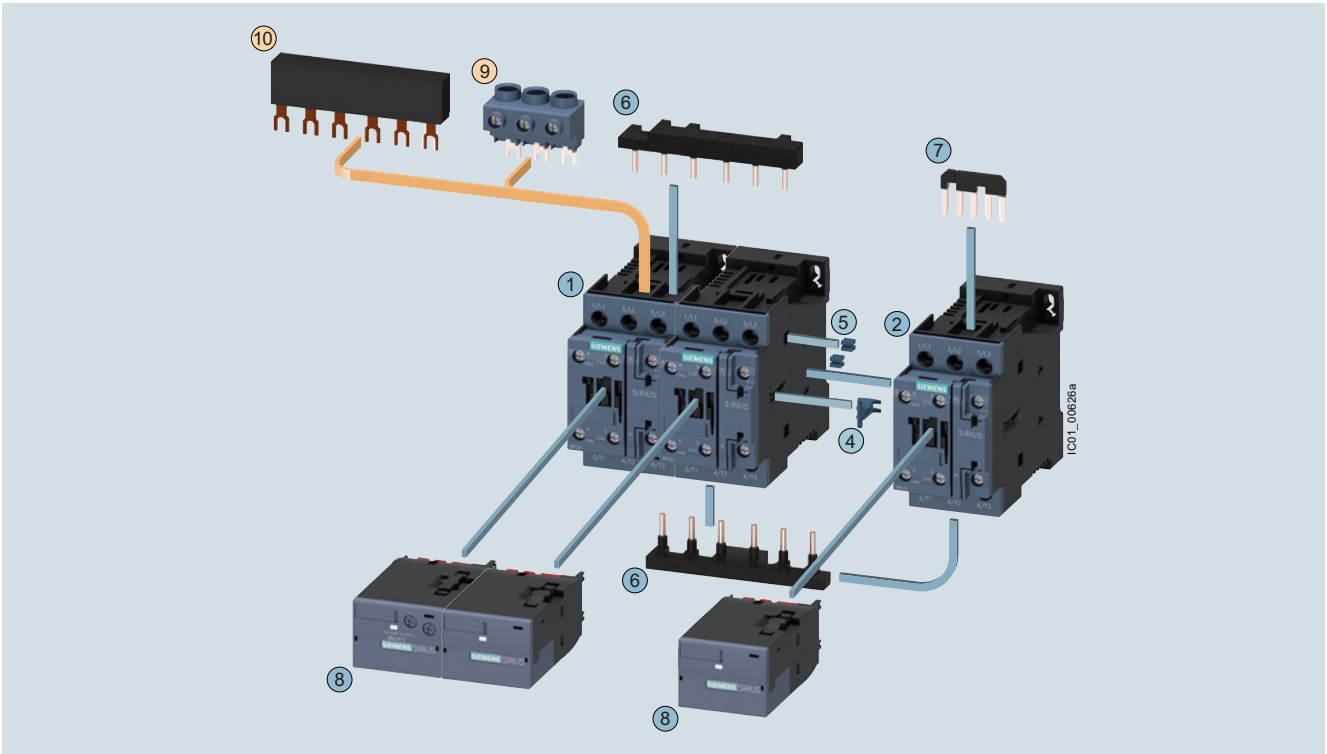
Complete contactor assemblies for star-delta (wye-delta) starting see page 3/174.

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SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S0-S0-S0 · Up to 22 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately	Type	Page
9 Three-phase infeed terminal[1)]	3RV2925-5AB	3/110
10 Three-phase busbar[1)]	3RV1915-1AB	3/110

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts	Type			Page
	Q11	Q13	Q12	
1 2 3 Contactors, 11 kW	3RT2024	3RT2024	3RT2024	3/51, 3/61
1 2 3 Contactors, 15/18.5 kW	3RT2026	3RT2026	3RT2024	3/51, 3/61
1 2 3 Contactors, 22 kW	3RT2027	3RT2027	3RT2026	3/51, 3/61
4 ... 7 Assembly kit S0-S0-S0 comprising:	3RA2923-2BB1			3/106
4 Mechanical interlock				
5 Four connecting clips for three contactors				
6 Wiring modules on top and bottom for connecting the main and auxiliary circuits				
7 Star jumper				
8 Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/101

[1)] The parts 9 and 10 can only be mounted with contactors with screw terminal, the 6 wiring modules must be removed beforehand.

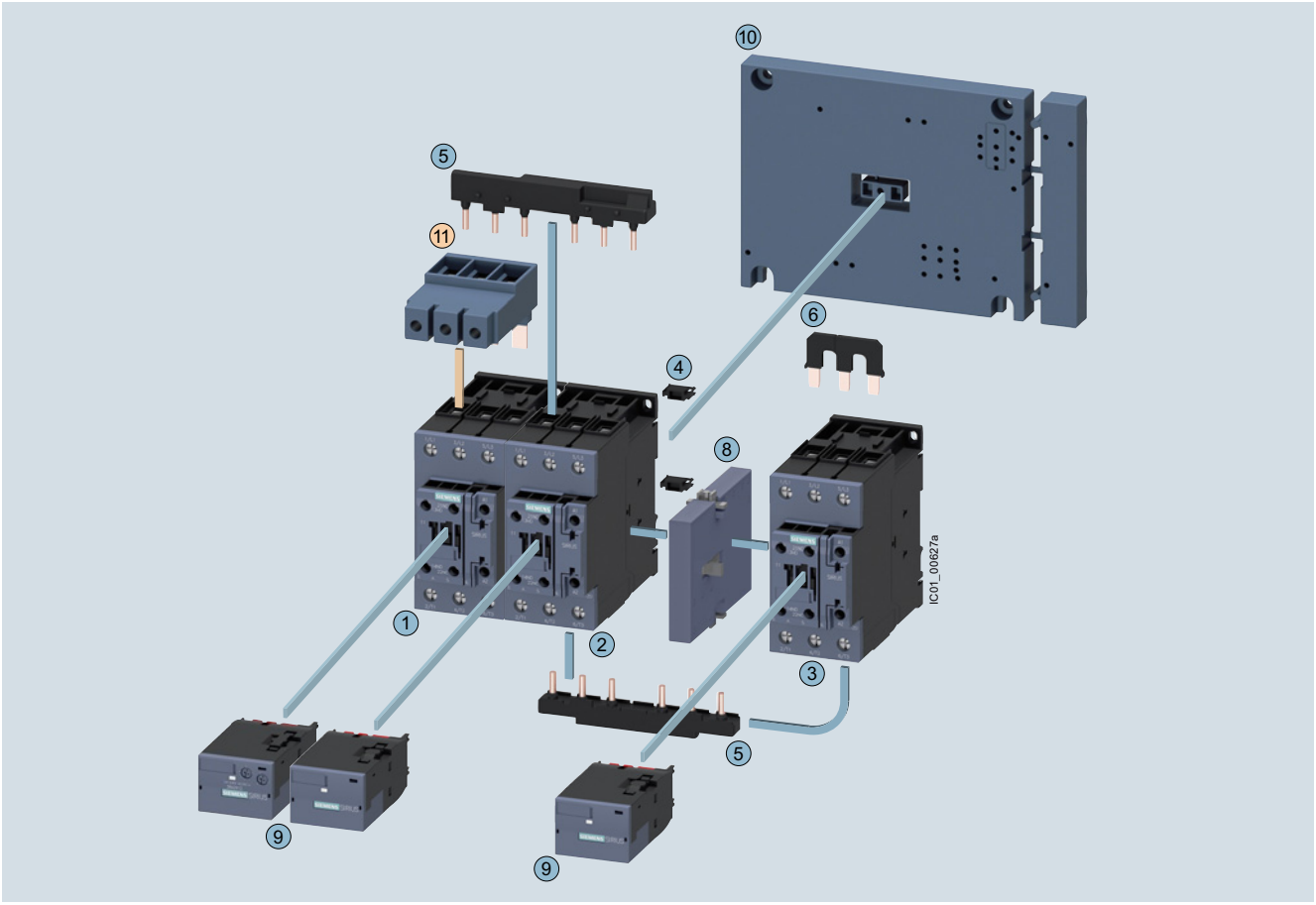
Complete contactor assemblies for star-delta (wye-delta) starting see page 3/175.

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SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S2-S2-S0[1] · Up to 45 kW and S2-S2-S2 · 55 kW

The figure shows the version with screw terminals in S2-S2-S2



Mountable accessories (optional)

To be ordered separately	Type	Page
11 Three-phase infeed terminal	3RV2935-5A	3/110

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts		Type Q11	Q13	Q12	Page
1 2 3	Contactors, 22/30 kW	3RT2035	3RT2035	3RT2026	3/53, 3/62
1 2 3	Contactors, 37 kW	3RT2035	3RT2035	3RT2027	3/53, 3/62
1 2 3	Contactors, 45 kW	3RT2036	3RT2036	3RT2028	3/53, 3/62
1 2 3	Contactors, 55 kW	3RT2037	3RT2037	3RT2035	3/53, 3/62
4 ... 7	Assembly kit S2-S2-S2 comprising:	3RA2933-2BB1			3/106
	4 Four connectors for three contactors (not required for fully pre-wired contactor assemblies for star-delta (wye-delta) starting)				
	5 Wiring modules on top and bottom for connecting the main and auxiliary circuits				
	6 Star jumper S2				
	7 Cable for connecting the A2 coil contact from the line contactor with the A2 coil contact of the delta contactor (not shown in the drawing)				
8	Mechanical interlock	3RA2934-2B			3/109
9	Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/101
10	Base plate star-delta (wye-delta)	3RA2932-2F			3/113

[1] Complete contactor assembly for star-delta (wye-delta) starting in size S2-S2-S0 (not shown): The 3RA2933-2C assembly kit is to be used here, see page 3/106.

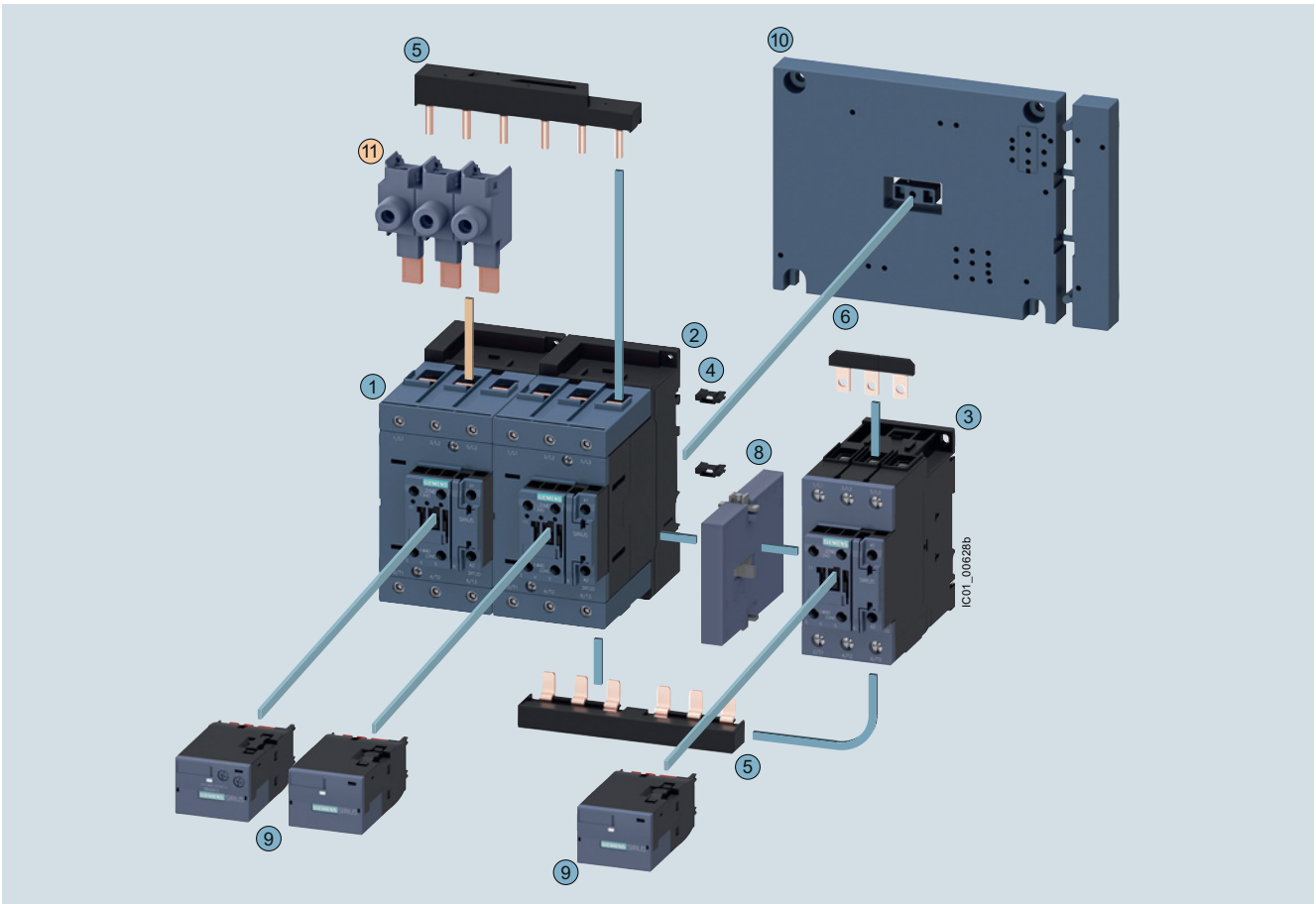
Complete contactor assemblies for star-delta (wye-delta) starting see page 3/176.

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Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S3-S3-S2[1] · Up to 90 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
(11) Single-phase infeed terminal (3 units are required)	3RA2943-3L	3/110

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts	Type			Page
	Q11	Q13	Q12	
(1)(2)(3) Contactors, 55 kW	3RT2045	3RT2045	3RT2035	3/54, 3/62
(1)(2)(3) Contactors, 75 kW	3RT2045	3RT2045	3RT2036	3/54, 3/62
(1)(2)(3) Contactors, 90 kW	3RT2046	3RT2046	3RT2037	3/54, 3/62
(4) ... (7) Assembly kit S3-S3-S2 comprising:	3RA2943-2C			3/106
(4) Two connectors for three contactors (not required for fully pre-wired contactor assemblies for star-delta (wye-delta) starting)				
(5) Wiring modules on top and bottom (S3-S2) for connecting the main and auxiliary circuits and a cable set for the auxiliary circuit				
(6) Star jumper S2				
(7) Cable for connecting the A2 coil contact from the line contactor with the A2 coil contact of the delta contactor (not shown in the drawing)				
(8) Mechanical interlock	3RA2934-2B			3/109
(9) Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/101
(10) Base plate star-delta (wye-delta)	3RA2942-2F			3/113

[1] Contactor assembly for star-delta (wye-delta) starting for customer assembly in size S3-S3-S3 (not shown): The 3RA2943-2BB. assembly kit is to be used here, see page 3/106.

Complete contactor assemblies for star-delta (wye-delta) starting see page 3/177.

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Technical specifications

More information

Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16150/td

FAQs see https://support.industry.siemens.com/cs/ww/en/ps/16150/faq

Manuals, see

- System Manual "SIRIUS Modular System – System Overview", https://support.industry.siemens.com/cs/WW/en/view/60311318
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557
- Application Manual "Controls with IE3/IE4 Motors", https://support.industry.siemens.com/cs/ww/en/view/94770820

Unless otherwise indicated, the technical specifications correspond to those of the 3RT individual contactors (see from page 3/18 onwards) and 3RU2 overload relays (see from page 7/84 onwards).

Type		3RA2415	3RA2416	3RA2417	3RA2423	3RA2425	3RA2426
Sizes		S00-S00-S00	S00-S00-S00	S00-S00-S00	S0-S0-S0	S0-S0-S0	S0-S0-S0
General data							
Dimensions (W x H x D) with function module							
• AC operation							
- Screw terminals	mm	135 x 68 x 145			135 x101 x 171		
- Spring-type terminals	mm	135 x 84 x 145			135 x114 x 171		
• DC operation							
- Screw terminals	mm	135 x 68 x 145			135 x101 x 181		
- Spring-type terminals	mm	135 x 84 x 145			135 x114 x 181		
Individual contactors							
• Q11 line contactor	Type	3RT2015	3RT2017	3RT2018	3RT2024	3RT2026	3RT2027
• Q13 delta contactor	Type	3RT2015	3RT2017	3RT2018	3RT2024	3RT2026	3RT2027
• Q12 star contactor	Type	3RT2015	3RT2015	3RT2016	3RT2024	3RT2024	3RT2026
Mechanical endurance	Operating cycles	3 million					
Unassigned auxiliary contacts of the individual contactors		Circuit diagrams for the control circuit, see Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/ww/en/view/60306557.					
Short-circuit protection							
Main circuit without overload relays							
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE with single or double infeed							
Greatest rated current of the fuse according to IEC 60947-4-1							
- Type of coordination "1"	A	35		63		100	125
- Type of coordination "2"	A	20		25		35	63
Auxiliary circuit							
Short-circuit test							
• With fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current I_k = 1 kA acc. to IEC 60947-5-1	A A	10 6 (up to I_k < 0.5 kA; ≤ 260 V), if the auxiliary contact of the overload relay is connected in the contactor coil circuit.					
• With miniature circuit breaker, C characteristic with short-circuit current I_k = 400 A	A A	10 6 (up to I_k < 0.5 kA; ≤ 260 V), if the auxiliary contact of the overload relay is connected in the contactor coil circuit					
Short-circuit protection with overload relay		See Configuration Manual "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188					

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SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Type			3RA2415	3RA2416	3RA2417	3RA2423	3RA2425	3RA2426
Sizes			S00-S00-S00	S00-S00-S00	S00-S00-S00	S0-S0-S0	S0-S0-S0	S0-S0-S0
Rated data of the main contacts								
Current-carrying capacity with reversing time up to 10 s								
• Rated operational current I_e	At 400 V	A	12	17	25		40	55
	690 V	A	6.9	9	20.8		22.5	35
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	3.3	4.7	7.2		12	16.6
	400 V	kW	5.8	8.2	12.5		21	30.1
	690 V	kW	5.8	7.5	18		20.4	33
• **Switching frequency** with overload relay		h^{-1}	15					
Current-carrying capacity with reversing time up to 15 s								
• Rated operational current I_e	At 400 V	A	12	17	25		31	44
	690 V	A	6.9	9	20.8		22.5	35
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	3.3	4.7	7.2		9.4	13.8
	400 V	kW	5.8	8.2	12.5		16.3	24
	690 V	kW	5.8	7.5	18		20.4	33
• **Switching frequency** with overload relay		h^{-1}	15					
Current-carrying capacity with reversing time up to 20 s								
• Rated operational current I_e	At 400 V	A	12	17	25		28	39
	690 V	A	6.9	9	20.8		22.5	35
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	3.3	4.7	7.2		8.5	12.2
	400 V	kW	5.8	8.2	12.5		14.7	21.3
	690 V	kW	5.8	7.5	18		20.4	33
• **Switching frequency** with overload relay		h^{-1}	15					

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SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Type			3RA2434	3RA2435	3RA2436	3RA2437	3RA2444	3RA2445	3RA2446
Sizes			S2-S2-S0	S2-S2-S0	S2-S2-S0	S2-S2-S2	S3-S3-S2	S3-S3-S2	S3-S3-S2
General data									
Dimensions (W x H x D) with function module									
• AC and DC operation									
- Screw terminals		mm	177.5 x 142 x 223				220 x 180 x 244		
Individual contactors									
• Q11 line contactor		Type	3RT2035	3RT2035	3RT2036	3RT2037	3RT2045	3RT2045	3RT2046
• Q13 delta contactor		Type	3RT2035	3RT2035	3RT2036	3RT2037	3RT2045	3RT2045	3RT2046
• Q12 star contactor		Type	3RT2026	3RT2027	3RT2028	3RT2035	3RT2035	3RT2036	3RT2037
Mechanical endurance	Operating cycles		1 million						
Unassigned auxiliary contacts of the individual contactors			Circuit diagrams for the control circuit, see Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/ww/en/view/60306557.						
Short-circuit protection									
Main circuit without overload relays									
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE with single or double infeed									
Greatest rated current of the fuse according to IEC 60947-4-1									
- Type of coordination "1"		A	160			250			
- Type of coordination "2"		A	80			125	160		
Auxiliary circuit									
Short-circuit test									
• With fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current I_k = 1 kA acc. to IEC 60947-5-1		A A	10 6 (up to I_k < 0.5 kA; ≤ 260 V), if the auxiliary contact of the overload relay is connected in the contactor coil circuit.						
• With miniature circuit breaker, C characteristic with short-circuit current I_k = 400 A		A A	10 6 (up to I_k < 0.5 kA; ≤ 260 V), if the auxiliary contact of the overload relay is connected in the contactor coil circuit						
Short-circuit protection with overload relay			See Configuration Manual "Configuring the SIRIUS Modular System – Selection data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188				On request		
Rated data of the main contacts									
Current-carrying capacity with reversing time up to 10 s									
• Rated operational current I_e	At 400 V	A	On request						
	690 V	A	On request						
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	On request						
	400 V	kW	On request						
	690 V	kW	On request						
• **Switching frequency** with overload relay		h^{-1}	15						
Current-carrying capacity with reversing time up to 15 s									
• Rated operational current I_e	At 400 V	A	On request						
	690 V	A	On request						
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	On request						
	400 V	kW	On request						
	690 V	kW	On request						
• **Switching frequency** with overload relay		h^{-1}	15						
Current-carrying capacity with reversing time up to 20 s									
• Rated operational current I_e	At 400 V	A	On request						
	690 V	A	On request						
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	On request						
	400 V	kW	On request						
	690 V	kW	On request						
• **Switching frequency** with overload relay		h^{-1}	15						

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SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW *IE3/IE4* ready

Selection and ordering data

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S00-S00-S00 · Up to 11 kW
AC operation ~ or DC operation ⎓

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



3RA241.-8XF31-1A.0



3RA241.-8XF31-2A.0



3RA241.-8XE31-2BB4

Rated data AC-3				Rated control supply voltage U_s	SD	**Screw terminals**	SD	**Spring-type terminals**
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No. / Price per PU		Article No. / Price per PU
400 V	230 V	**400 V**	690 V					
A	kW	**kW**	kW	V	d		d	
AC operation, 50/60 Hz								
12	3.3	**5.5**	9.2	24 AC	2	**3RA2415-8XF31-1AB0**	2	**3RA2415-8XF31-2AB0**
				110 AC	2	**3RA2415-8XF31-1AF0**	5	**3RA2415-8XF31-2AF0**
				230 AC	2	**3RA2415-8XF31-1AP0**	2	**3RA2415-8XF31-2AP0**
16	4.7	**7.5**	9.2	24 AC	2	**3RA2416-8XF31-1AB0**	5	**3RA2416-8XF31-2AB0**
				110 AC	2	**3RA2416-8XF31-1AF0**	5	**3RA2416-8XF31-2AF0**
				230 AC	2	**3RA2416-8XF31-1AP0**	2	**3RA2416-8XF31-2AP0**
25	5.5	**11**	11	24 AC	2	**3RA2417-8XF31-1AB0**	5	**3RA2417-8XF31-2AB0**
				110 AC	2	**3RA2417-8XF31-1AF0**	5	**3RA2417-8XF31-2AF0**
				230 AC	2	**3RA2417-8XF31-1AP0**	2	**3RA2417-8XF31-2AP0**
DC operation								
12	3.3	**5.5**	9.2	24 DC	2	**3RA2415-8XF31-1BB4**	2	**3RA2415-8XF31-2BB4**
16	4.7	**7.5**	9.2	24 DC	2	**3RA2416-8XF31-1BB4**	2	**3RA2416-8XF31-2BB4**
25	5.5	**11**	11	24 DC	2	**3RA2417-8XF31-1BB4**	2	**3RA2417-8XF31-2BB4**
For IO-Link connection								
12	3.3	**5.5**	9.2	24 DC	2	**3RA2415-8XE31-1BB4**	2	**3RA2415-8XE31-2BB4**
16	4.7	**7.5**	9.2	24 DC	2	**3RA2416-8XE31-1BB4**	2	**3RA2416-8XE31-2BB4**
25	5.5	**11**	11	24 DC	2	**3RA2417-8XE31-1BB4**	2	**3RA2417-8XE31-2BB4**
For AS-Interface connection								
12	3.3	**5.5**	9.2	24 DC	5	**3RA2415-8XH31-1BB4**	2	**3RA2415-8XH31-2BB4**
16	4.7	**7.5**	9.2	24 DC	2	**3RA2416-8XH31-1BB4**	5	**3RA2416-8XH31-2BB4**
25	5.5	**11**	11	24 DC	2	**3RA2417-8XH31-1BB4**	2	**3RA2417-8XH31-2BB4**

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/167.

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

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IE3/IE4 ready SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S0-S0-S0 · Up to 22 kW
AC operation or DC operation

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



3RA242.-8XF32-1A.2



3RA242.-8XF32-2A.2



3RA242.-8XE32-1BB4

Rated data AC-3				Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No. Price per PU		Article No. Price per PU
400 V	230 V	**400 V**	690 V					
A	kW	**kW**	kW	V	d		d	
AC operation, 50/60 Hz								
25	7.1	**11**	19	24 AC	2	**3RA2423-8XF32-1AC2**	2	**3RA2423-8XF32-2AC2**
				110 AC	2	**3RA2423-8XF32-1AG2**	5	**3RA2423-8XF32-2AG2**
				230 AC	5	**3RA2423-8XF32-1AL2**	5	**3RA2423-8XF32-2AL2**
32/40	11.4	**15/18.5**	19	24 AC	2	**3RA2425-8XF32-1AC2**	2	**3RA2425-8XF32-2AC2**
				110 AC	2	**3RA2425-8XF32-1AG2**	5	**3RA2425-8XF32-2AG2**
				230 AC	5	**3RA2425-8XF32-1AL2**	5	**3RA2425-8XF32-2AL2**
50	--	**22**	19	24 AC	2	**3RA2426-8XF32-1AC2**	5	**3RA2426-8XF32-2AC2**
				110 AC	2	**3RA2426-8XF32-1AG2**	5	**3RA2426-8XF32-2AG2**
				230 AC	5	**3RA2426-8XF32-1AL2**	5	**3RA2426-8XF32-2AL2**
DC operation								
25	7.1	**11**	19	24 DC	2	**3RA2423-8XF32-1BB4**	2	**3RA2423-8XF32-2BB4**
32/40	11.4	**15/18.5**	19	24 DC	2	**3RA2425-8XF32-1BB4**	2	**3RA2425-8XF32-2BB4**
50	--	**22**	19	24 DC	2	**3RA2426-8XF32-1BB4**	2	**3RA2426-8XF32-2BB4**
For IO-Link connection								
25	7.1	**11**	19	24 DC	2	**3RA2423-8XE32-1BB4**	5	**3RA2423-8XE32-2BB4**
32/40	11.4	**15/18.5**	19	24 DC	2	**3RA2425-8XE32-1BB4**	5	**3RA2425-8XE32-2BB4**
50	--	**22**	19	24 DC	2	**3RA2426-8XE32-1BB4**	5	**3RA2426-8XE32-2BB4**
For AS-Interface connection								
25	7.1	**11**	19	24 DC	5	**3RA2423-8XH32-1BB4**	2	**3RA2423-8XH32-2BB4**
32/40	11.4	**15/18.5**	19	24 DC	5	**3RA2425-8XH32-1BB4**	5	**3RA2425-8XH32-2BB4**
50	--	**22**	19	24 DC	2	**3RA2426-8XH32-1BB4**	5	**3RA2426-8XH32-2BB4**

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/168.

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

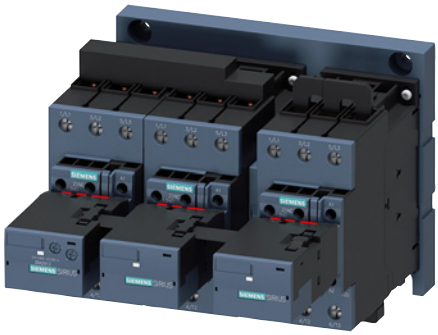
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Contactor Assemblies for Star-Delta (Wye-Delta) Starting

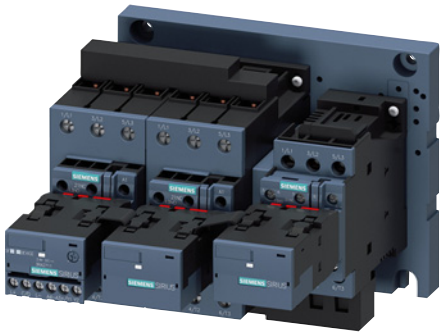
SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW IE3/IE4 ready

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S2-S2-S0 · Up to 45 kW and S2-S2-S2 · 55 kW
AC operation ~, AC/DC operation ≂ or DC operation ⎓

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



3RA2437-8XF32-1A.2



3RA243.-8XE32-1NB3

Rated data AC-3				Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No.	Price per PU		Article No.	Price per PU
400 V	230 V	**400 V**	690 V							
A	kW	**kW**	kW	V	d			d		
AC operation, 50/60 Hz										
50/65	19.6	**22/30**	34	24 AC	5	**3RA2434-8XF32-1AC2**			--	
				110 AC	5	**3RA2434-8XF32-1AG2**			--	
				230 AC	▶	**3RA2434-8XF32-1AL2**			--	
80	25	**37**	63	24 AC	2	**3RA2435-8XF32-1AC2**			--	
				110 AC	2	**3RA2435-8XF32-1AG2**			--	
				230 AC	▶	**3RA2435-8XF32-1AL2**			--	
86	27	**45**	63	24 AC	2	**3RA2436-8XF32-1AC2**			--	
				110 AC	2	**3RA2436-8XF32-1AG2**			--	
				230 AC	▶	**3RA2436-8XF32-1AL2**			--	
115	37	**55**	93	24 AC	5	**3RA2437-8XF32-1AC2**			--	
				110 AC	5	**3RA2437-8XF32-1AG2**			--	
				230 AC	▶	**3RA2437-8XF32-1AL2**			--	
AC/DC operation										
50/65	19.6	**22/30**	34	24 ... 33 AC/DC	▶	**3RA2434-8XF32-1NB3**			--	
80	25	**37**	63	24 ... 33 AC/DC	2	**3RA2435-8XF32-1NB3**			--	
86	27	**45**	63	24 ... 33 AC/DC	2	**3RA2436-8XF32-1NB3**			--	
115	37	**55**	93	24 ... 33 AC/DC	5	**3RA2437-8XF32-1NB3**			--	
DC operation										
For IO-Link connection										
50/65	19.6	**22/30**	34	24 DC	5	**3RA2434-8XE32-1NB3**			--	
80	25	**37**	63	24 DC	5	**3RA2435-8XE32-1NB3**			--	
86	27	**45**	63	24 DC	5	**3RA2436-8XE32-1NB3**			--	
115	37	**55**	93	24 DC	5	**3RA2437-8XE32-1NB3**			--	
For AS-Interface connection										
50/65	19.6	**22/30**	34	24 DC	5	**3RA2434-8XH32-1NB3**			--	
80	25	**37**	63	24 DC	5	**3RA2435-8XH32-1NB3**			--	
86	27	**45**	63	24 DC	5	**3RA2436-8XH32-1NB3**			--	
115	37	**55**	93	24 DC	5	**3RA2437-8XH32-1NB3**			--	

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/169.

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

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IE3/IE4 ready SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S3-S3-S2 · Up to 90 kW
AC operation ~, AC/DC operation ≂ or DC operation ⎓

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



3RA244..-8XF32-1A.2



3RA244..-8XE32-1NB3



3RA244..-8XH32-1NB3

Rated data AC-3				Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
Operational current I_e up to	Rating of three-phase motors at 50 Hz and					Article No.	Price per PU		Article No.	Price per PU
400 V	230 V	**400 V**	690 V							
A	kW	**kW**	kW	V	d			d		
AC operation, 50/60 Hz										
115	30	**55**	90	24 AC	X	**3RA2444-8XF32-1AC2**			--	
				110 AC	X	**3RA2444-8XF32-1AG2**			--	
				230 AC	X	**3RA2444-8XF32-1AL2**			--	
150	37	**75**	110	24 AC	X	**3RA2445-8XF32-1AC2**			--	
				110 AC	X	**3RA2445-8XF32-1AG2**			--	
				230 AC	X	**3RA2445-8XF32-1AL2**			--	
160	45	**90**	132	24 AC	X	**3RA2446-8XF32-1AC2**			--	
				110 AC	X	**3RA2446-8XF32-1AG2**			--	
				230 AC	X	**3RA2446-8XF32-1AL2**			--	
AC/DC operation										
115	30	**55**	90	24 ... 33 AC/DC	X	**3RA2444-8XF32-1NB3**			--	
150	37	**75**	110	24 ... 33 AC/DC	X	**3RA2445-8XF32-1NB3**			--	
160	45	**90**	132	24 ... 33 AC/DC	X	**3RA2446-8XF32-1NB3**			--	
DC operation										
For IO-Link connection										
115	30	**55**	90	24 DC	X	**3RA2444-8XE32-1NB3**			--	
150	37	**75**	110	24 DC	X	**3RA2445-8XE32-1NB3**			--	
160	45	**90**	132	24 DC	X	**3RA2446-8XE32-1NB3**			--	
For AS-Interface connection										
115	30	**55**	90	24 DC	X	**3RA2444-8XH32-1NB3**			--	
150	37	**70**	110	24 DC	X	**3RA2445-8XH32-1NB3**			--	
160	45	**90**	132	24 DC	X	**3RA2446-8XH32-1NB3**			--	

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/170.

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

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Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Overview

The individual parts for the contactor assemblies for star-delta (wye-delta) starting for customer assembly must be ordered separately.

- 3RT contactors: The operating times of the individual 3RT10 contactors are rated in such a way that no overlapping of the contact making and the arcing time between two contactors can occur on reversing, provided they are interlocked by way of their auxiliary switches (NC contact interlock) and the mechanical interlock.
  For assemblies with AC operation and 50/60 Hz, a dead interval of 50 ms must be provided when used with voltages over 500 V; a dead interval of 30 ms is recommended for use with voltages up to and including 400 V. These dead times do not apply to assemblies with DC operation.
  The operating times of the individual contactors are not affected by the mechanical interlock.
- Mechanical interlock
- Wiring kits: consisting of wiring modules or link rails and star jumpers
- Adapter for the mechanical interlock between S6 and S3
- Base plate

Additional components

- For momentary-contact operation: auxiliary switch (NO contact) for self-locking
- 3RB2 overload relays (from page 7/113 onwards), SIMOCODE pro 3UF7 motor management and control devices (from page 10/15 onwards) or 3RN thermistor motor protection evaluation units (page 10/164) can be used for overload protection.
  The overload relay can either be mounted onto the line contactor or separately fitted. It must be set to 0.58 times the rated motor current.
- Optional surge suppression for the S3 contactors; the contactors in sizes S6 to S12 are wired as standard with varistors.

The contactor assemblies for star-delta (wye-delta) starting for customer assembly are designed for standard applications.

Note:

Contactor assemblies for star-delta (wye-delta) starting in special applications such as very heavy starting[1] or star-delta (wye-delta) starting of special motors must be customized. Help with designing such special applications is available from our Technical Assistance,
Tel.: +49 (911) 895-5900
Email: technical-assistance@siemens.com.

More information

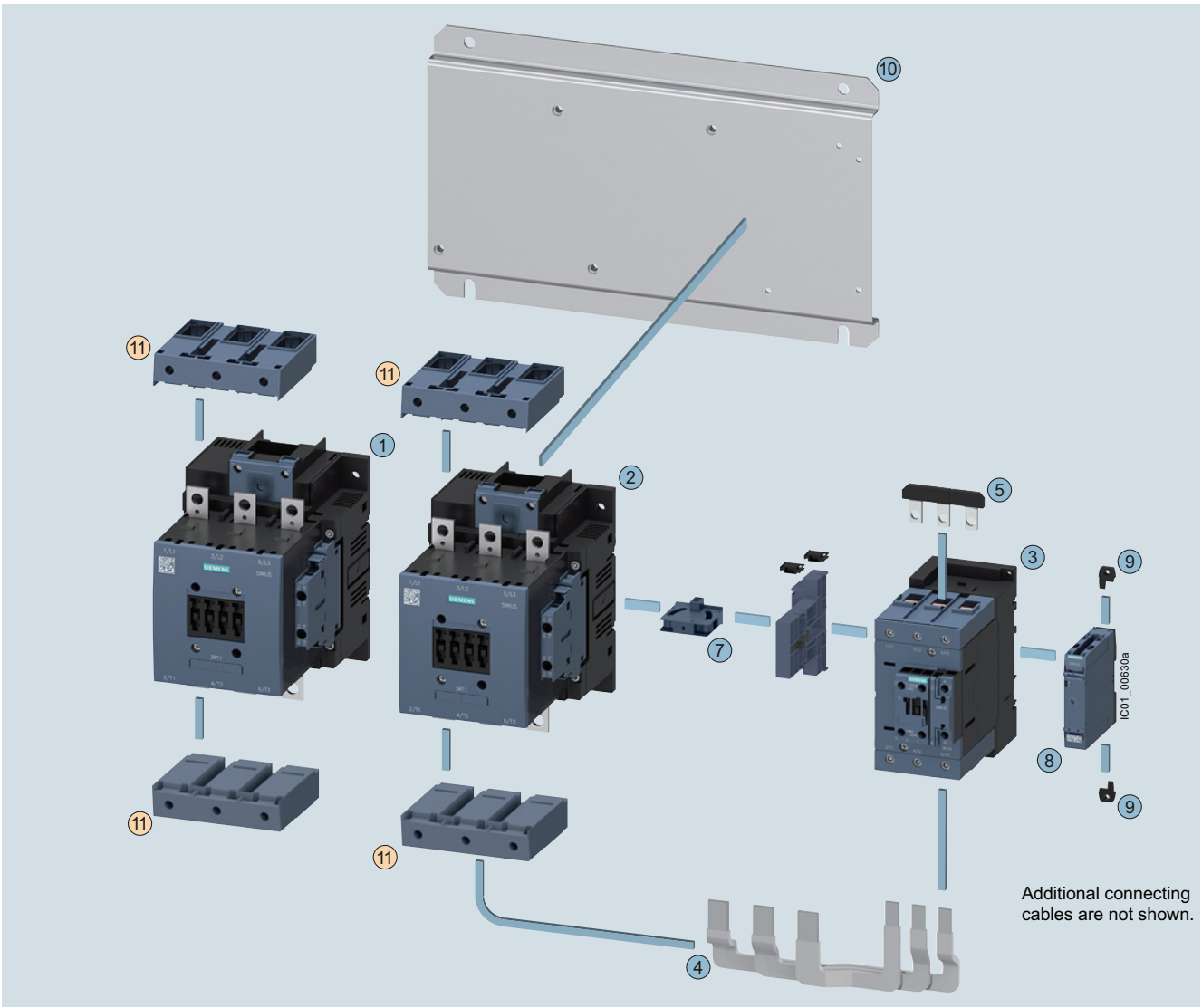
Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RA24_3RT

[1] For effective support from Technical Assistance you must provide the following details:
- Rated motor voltage
- Rated motor current
- Service factor, operating values
- Motor starting current factor
- Starting time
- Ambient temperature.

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Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Size S6-S6-S3 · Up to 160 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
(11) Box terminal blocks	3RT1955-4G	3/110

Contactor assemblies for star-delta (wye-delta) starting for customer assembly

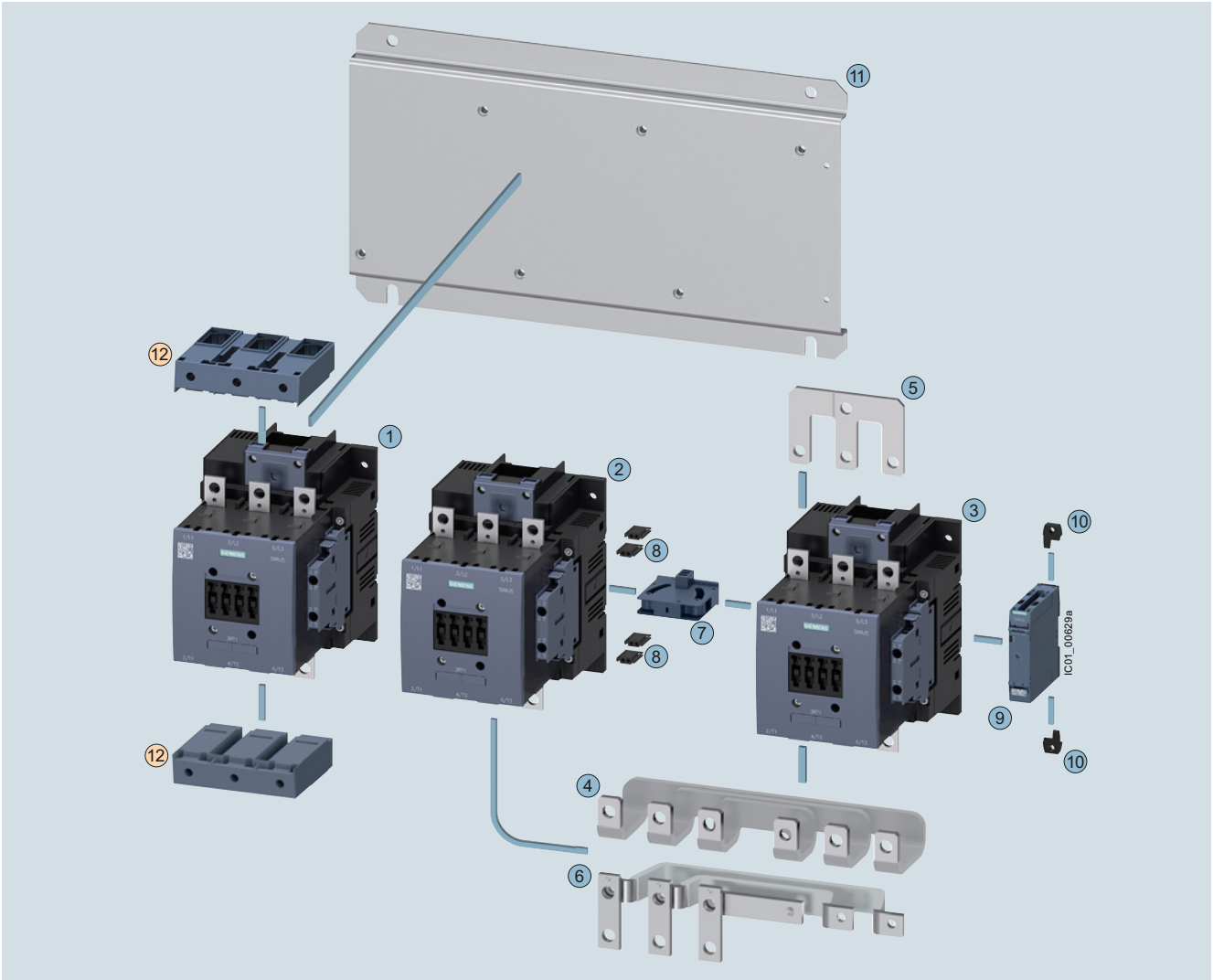
Individual parts		Type Q11	Type Q13	Type Q12	Page
(1)(2)(3)	Contactors, 110 kW	3RT1.54	3RT1.54	3RT2045	3/54, 3/62, 3/65 ... 3/68
(1)(2)(3)	Contactors, 132 kW	3RT1.55	3RT1.55	3RT2046	3/54, 3/62, 3/65 ... 3/68
(1)(2)(3)	Contactors, 160 kW	3RT1.56	3RT1.56	3RT2047	3/54, 3/62, 3/65 ... 3/68
(4)	Assembly kit S6-S6-S3 for contactors with box terminals consisting of: Wiring modules, bottom	3RA1953-3G			3/107
(5)	Star jumper S3	3RT1946-4BA31			3/108
(6)	Adapter for the mechanical interlock between S6 and S3 (including two connectors)	3RA1954-2G			3/109
(7)	Mechanical interlock between S6 and S3	3RA1954-2A			3/109
(8)	Timing relay with star-delta (wye-delta) function	3RP257.			10/48
(9)	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/49
(10)	Base plate star-delta (wye-delta)	3RA1952-2E			3/113

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Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Size S6-S6-S6 · Up to 160 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
(12) Box terminal blocks	3RT1955-4G	3/110

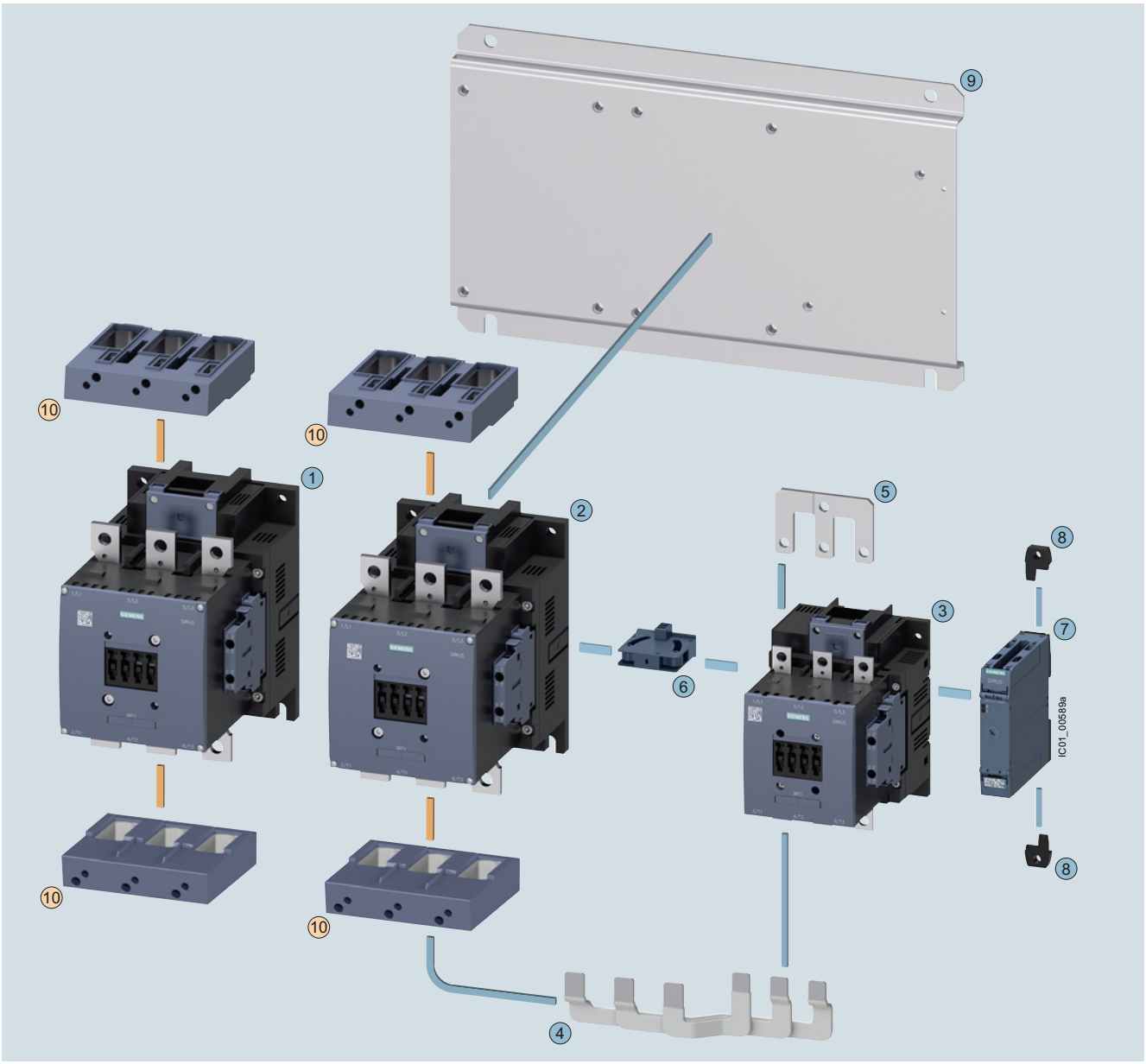
Contactor assemblies for star-delta (wye-delta) starting for customer assembly

Individual parts		Type			Page
		Q11	Q13	Q12	
(1)(2)(3)	Contactors, 110 kW	3RT1.54	3RT1.54	3RT1.54	3/66 ... 3/68
(1)(2)(3)	Contactors, 132 kW	3RT1.55	3RT1.55	3RT1.55	3/66 ... 3/68
(1)(2)(3)	Contactors, 160 kW	3RT1.56	3RT1.56	3RT1.56	3/66 ... 3/68
(4)(5)	Assembly kit S6-S6-S6 for contactors with box terminals consisting of:	3RA1953-2B			3/107
	(4) Link rails, bottom				
	(5) Star jumper S6				
(5)(6)	Assembly kit S6-S6-S6 for contactors without box terminals consisting of:	3RA1953-2N			3/107
	(6) Link rails, bottom				
	(5) Star jumper S6				
(7)	Mechanical interlock	3RA1954-2A			3/109
(8)	Four connectors	3RA1932-2D			3/109
(9)	Timing relay with star-delta (wye-delta) function	3RP257.			10/48
(10)	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/49
(11)	Base plate star-delta (wye-delta)	3RA1952-2F			3/113

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Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Size S10-S10-S6 · Up to 250 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
(10) Box terminal blocks	3RT1966-4G	3/110

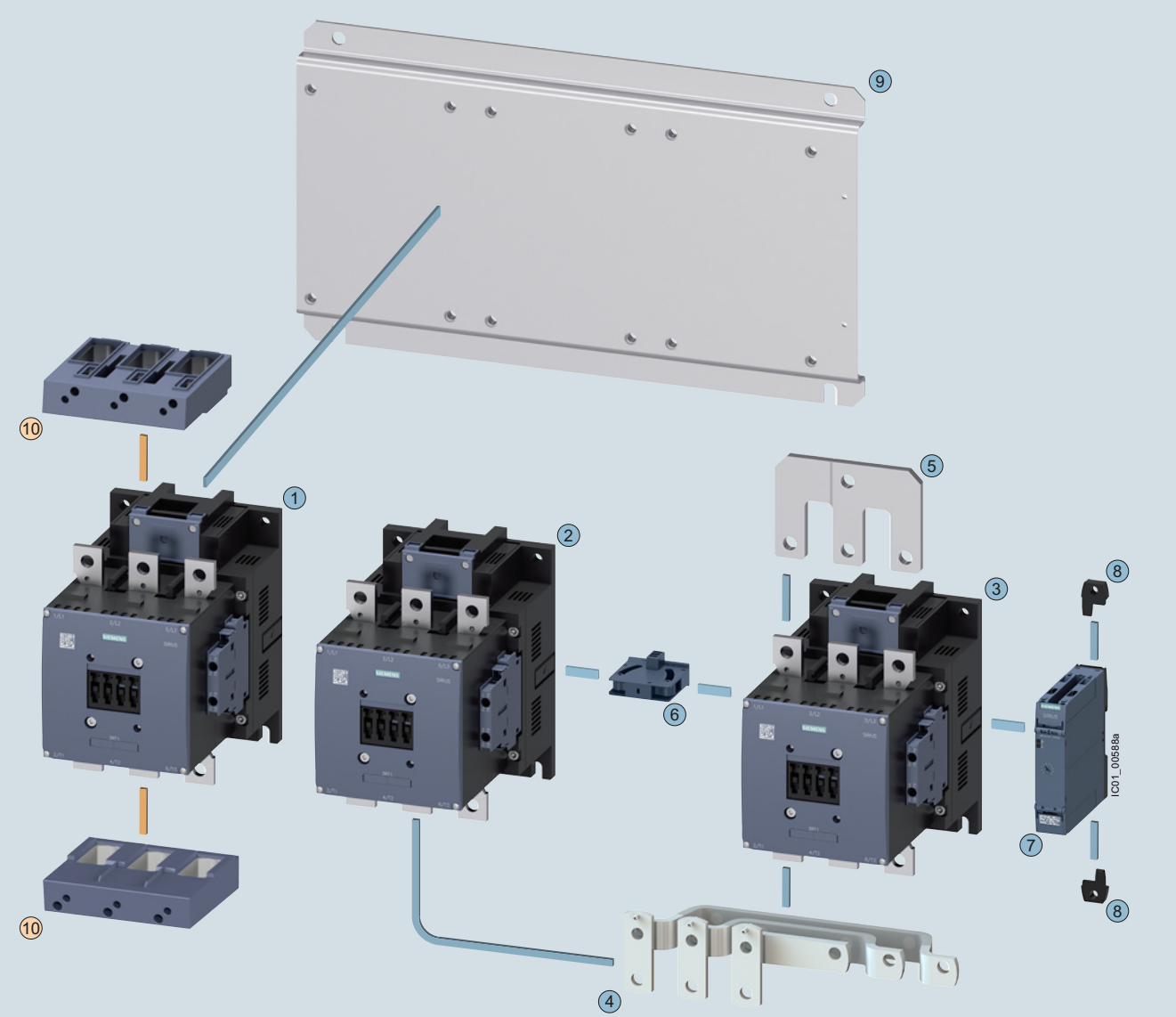
Contactor assemblies for star-delta (wye-delta) starting for customer assembly

Individual parts		Type			Page
		Q11	Q13	Q12	
(1)(2)(3)	Contactors, 200 kW	3RT1.64	3RT1.64	3RT1.54	3/66 ... 3/68, 3/129
(1)(2)(3)	Contactors, 250 kW	3RT1.65	3RT1.65	3RT1.55	3/66 ... 3/68, 3/129
(4)	Assembly kit S10-S10-S6 for contactors with box terminals consisting of: Wiring modules, bottom	3RA1963-3E			3/107
(5)	Star jumper S6	3RT1956-4BA31			3/108
(6)	Mechanical interlock between S10 and S6	3RA1954-2A			3/109
(7)	Timing relay with star-delta (wye-delta) function	3RP257.			10/48
(8)	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/49
(9)	Base plate star-delta (wye-delta)	3RA1962-2E			3/113

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Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Size S10-S10-S10 · Up to 250 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
10 Box terminal blocks	3RT1966-4G	3/110

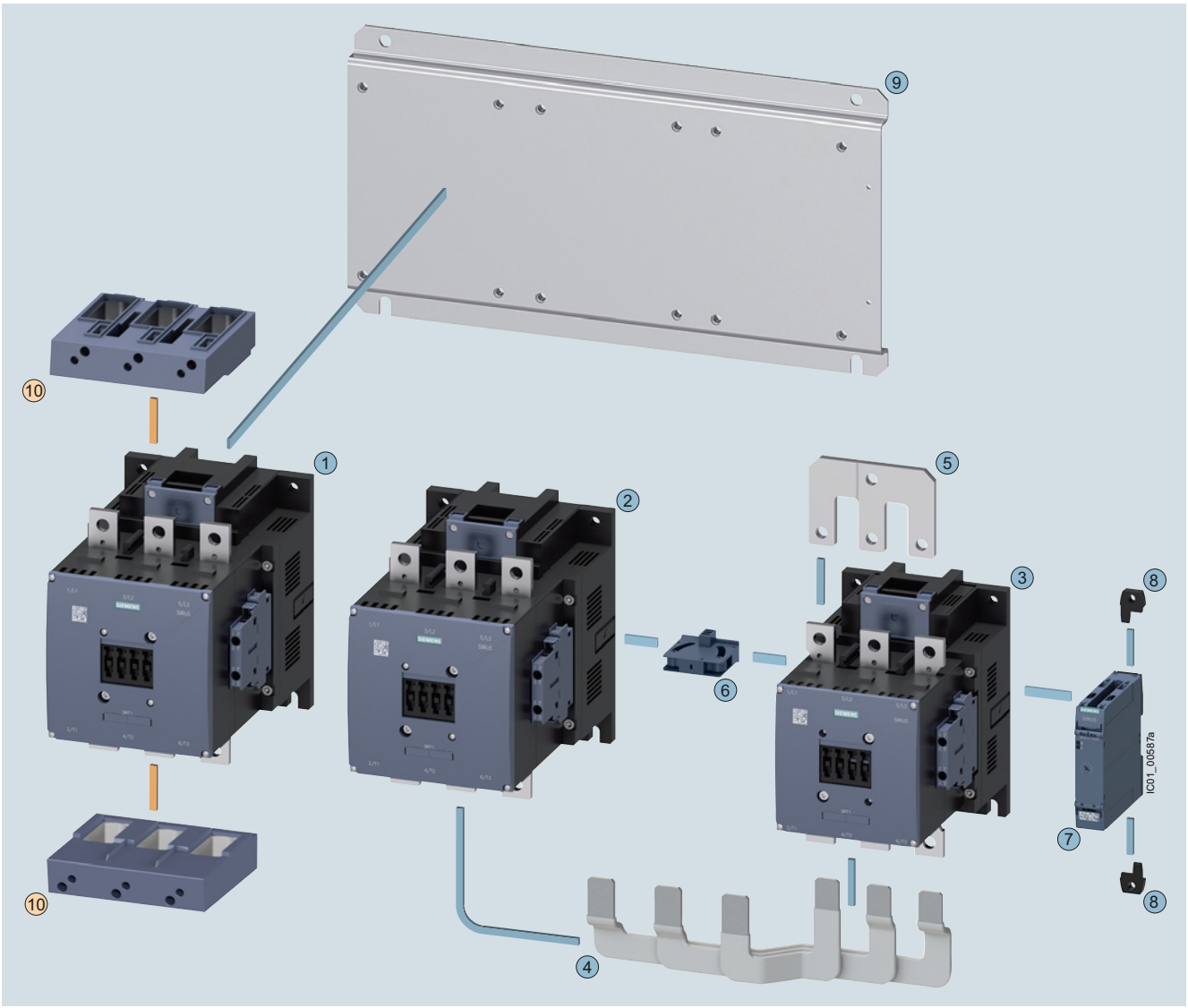
Contactor assemblies for star-delta (wye-delta) starting for customer assembly

Individual parts		Type			Page
		Q11	Q13	Q12	
1 2 3	Contactors, 200 kW	3RT1.64	3RT1.64	3RT1.64	3/66 ... 3/68, 3/129
1 2 3	Contactors, 250 kW	3RT1.65	3RT1.65	3RT1.65	3/66 ... 3/68, 3/129
4 5	Assembly kit S10-S10-S10 for contactors without box terminals consisting of:	3RA1963-2B			3/107
	4 Link rails, bottom				
	5 Star jumper S10				
6	Mechanical interlock	3RA1954-2A			3/109
7	Timing relay with star-delta (wye-delta) function	3RP257.			10/48
8	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/49
9	Base plate star-delta (wye-delta)	3RA1962-2F			3/113

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Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Size S12-S12-S10 · Up to 500 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
10 Box terminal blocks	3RT1966-4G	3/110

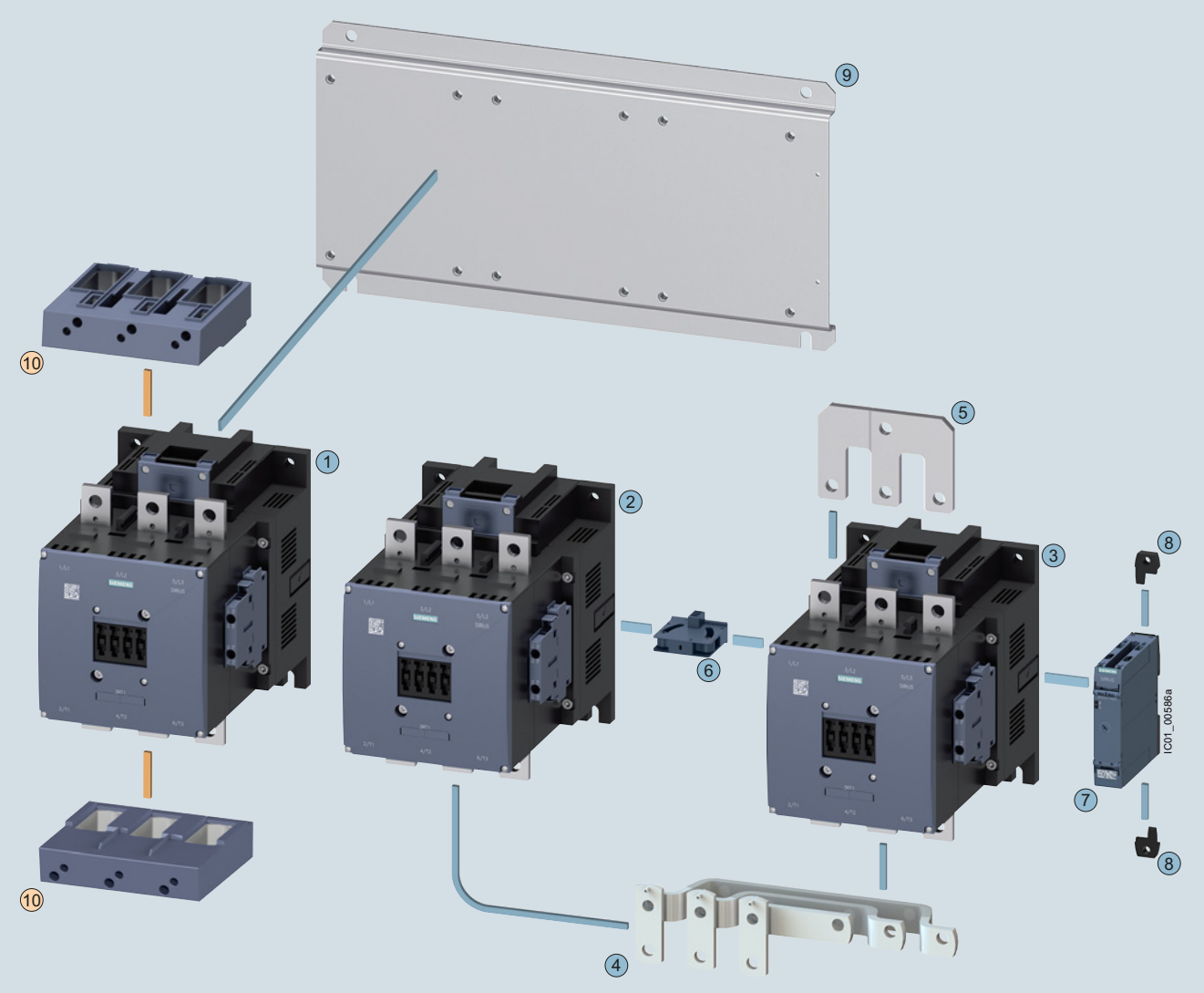
Contactor assemblies for star-delta (wye-delta) starting for customer assembly

Individual parts		Type Q11	Q13	Q12	Page
1 2 3	Contactors, 355 kW	3RT1.75	3RT1.75	3RT1.64	3/66 ... 3/68, 3/129
1 2 3	Contactors, 400 kW	3RT1.75	3RT1.75	3RT1.65	3/66 ... 3/68, 3/129
1 2 3	Contactors, 500 kW	3RT1.76	3RT1.76	3RT1.66	3/66 ... 3/68, 3/129
4	Assembly kit S12-S12-S10 for contactors with box terminals consisting of: Wiring modules, bottom	3RA1973-3E			3/107
5	Star jumper S10	3RT1966-4BA31			3/108
6	Mechanical interlock between S12 and S10	3RA1954-2A			3/109
7	Timing relay with star-delta (wye-delta) function	3RP257.			10/48
8	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/49
9	Base plate star-delta (wye-delta)	3RA1972-2E			3/113

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Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Size S12-S12-S12 · Up to 500 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
(10) Box terminal blocks	3RT1966-4G	3/110

Contactor assemblies for star-delta (wye-delta) starting for customer assembly

Individual parts		Type Q11	Q13	Q12	Page
(1)(2)(3)	Contactors, 400 kW	3RT1.75	3RT1.75	3RT1.75	3/66 ... 3/68, 3/129
(1)(2)(3)	Contactors, 500 kW	3RT1.76	3RT1.76	3RT1.76	3/66 ... 3/68, 3/129
(4)(5)	Assembly kit S12-S12-S12 for contactors without box terminals consisting of:	3RA1973-2B			3/107
	(4) Link rails, bottom				
	(5) Star jumper S12				
(6)	Mechanical interlock	3RA1954-2A			3/109
(7)	Timing relay with star-delta (wye-delta) function	3RP257.			10/48
(8)	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/49
(9)	Base plate star-delta (wye-delta)	3RA1972-2F			3/113