
| | |
|---|---|
| | **Price groups** |
| | PG 41B, 41E, 41H, 42F |
| 3/2 | **Introduction** |
| | **Power contactors for switching motors** |
| 3/8 | General data |
| 3/17 | SIRIUS 3RT contactors, 3-pole up to 250 kW NEW |
| | Accessories for SIRIUS 3RT contactors and SIRIUS 3RH2 contactor relays |
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| 3/102 | - Auxiliary switches, delayed |
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| | Spare parts for SIRIUS 3RT contactors and SIRIUS 3RH2 contactor relays |
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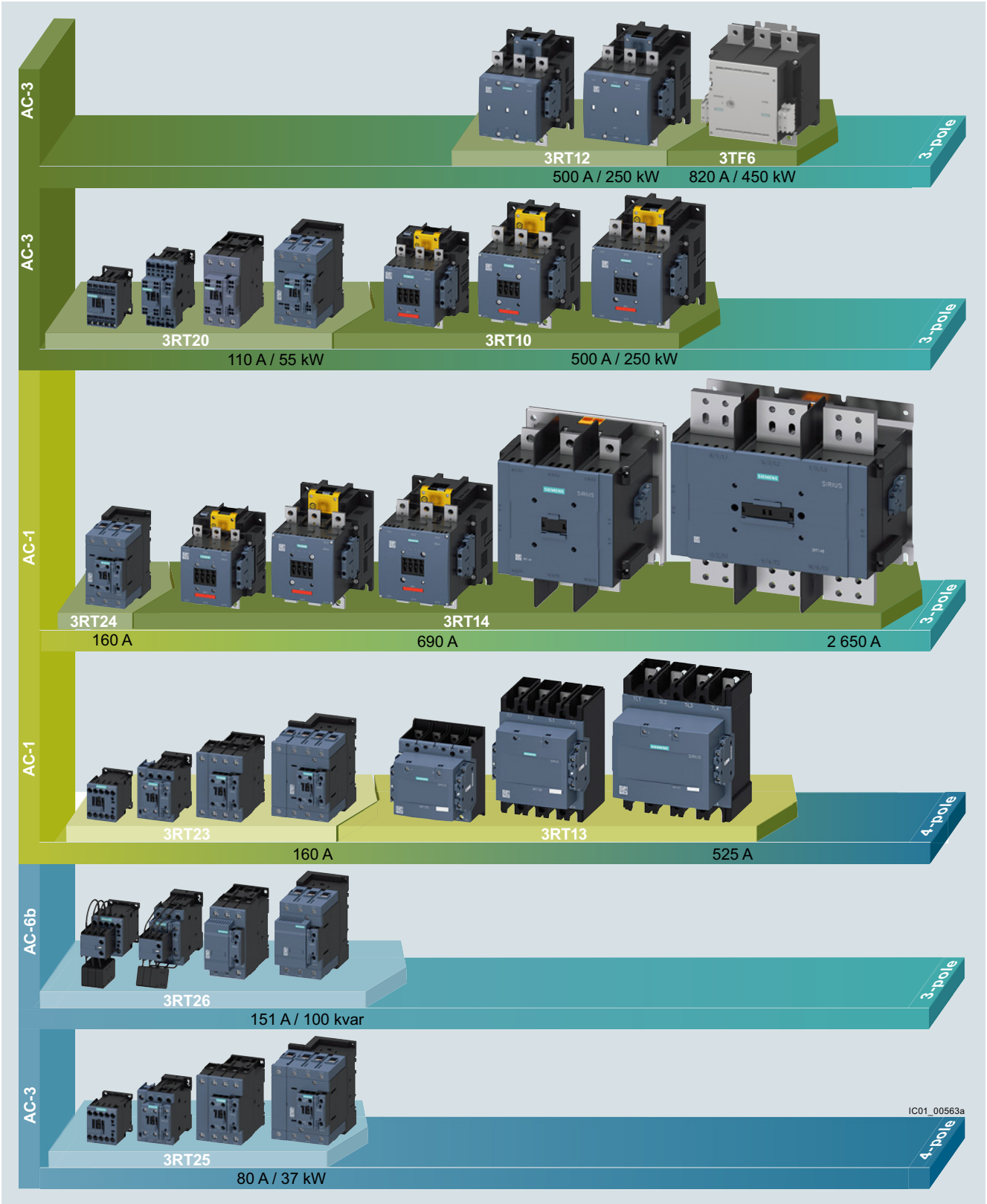
| 3/139 | Accessories and spare parts for SIRIUS 3RT12 and 3TF6 vacuum contactors |
| 3/143 | 3TG10 power relays/miniature contactors |
| | **Reversing contactor assemblies** |
| 3/147 | SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW |
| 3/158 | Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW |
| | **Contactor assemblies for star-delta (wye-delta) starting** |
| 3/162 | SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW |
| 3/175 | Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW |

## Overview




Overview of the 3RT and 3TF contactors

**More information**

Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RT_3TK_3TC

Conversion tool for article numbers, see www.siemens.com/sirius/conversion-tool
TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=Contactor

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Size | | **S00** | | | | **S0** | | | | | |
| Type | | 3RT201 | | | | 3RT202 | | | | | |
| **3RT20 contactors** | | | | | | | | | | | |
| Type | | **3RT2015** | **3RT2016** | **3RT2017** | **3RT2018** | **3RT2023** | **3RT2024** | **3RT2025** | **3RT2026** | **3RT2027** | **3RT2028** |
| AC, DC operation | | (p. 3/55, 3/60 ... 3/63) | | | | (p. 3/56, 3/57, 3/64 ... 3/66, 3/68) | | | | | |
| **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 switches** | • On front | **3RH29, 3RA28** (p. 3/95 ... 3/102) | | | | **3RH29, 3RA28** (p. 3/95 ... 3/102) | | | | | |
| | • Lateral | **3RH29** (p. 3/99) | | | | **3RH29** (p. 3/99) | | | | | |
| **Function modules** | • Direct-on-line starting, star-delta (wye-delta) starting | **3RA281.** (p. 3/107) | | | | **3RA281.** (p. 3/107) | | | | | |
| | • IO-Link, AS-Interface | **3RA271.-.AA00** (p. 3/108, 3/109) | | | | **3RA271.-.AA00** (p. 3/108, 3/109) | | | | | |
| **Surge suppressors** | | **3RT2916** (p. 3/104, 3/105) | | | | **3RT2926** (p. 3/104, 3/105) | | | | | |
| **3RU2 and 3RB3 overload relays** | | | | | | | | | | | |
| **3RU thermal overload relays** | | **3RU2116** 0.11 ... 16 A (p. 7/98) | | | | **3RU2126** 1.8 ... 40 A (p. 7/98) | | | | | |
| **3RB electronic overload relays** | | | | | | | | | | | |
| • For standard applications | | **3RB3016, 3RB3113** 0.1 ... 16 A (p. 7/111 ... 7/113) | | | | **3RB3026, 3RB3123** 0.1 ... 40 A (p. 7/111 ... 7/113) | | | | | |
| • For High-Feature applications | | **3RB22, 3RB23 and 3RB24** (p. 7/134, 7/142)<br>**with current measuring module 3RB2906-2.G1** (p. 7/146)<br>0.3 ... 25 A | | | | **3RB22, 3RB23 and 3RB24** (p. 7/134, 7/142)<br>**with current measuring module 3RB2906-2.G1** (p. 7/146)<br>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. 7/29) | | | | | |
| **Link modules** | | **3RA1921, 3RA2911** (p. 7/62) | | | | **3RA2921** (p. 7/62) | | | | | |
| **3RA23 reversing contactor assemblies** | | | | | | | | | | | |
| **Complete units** | Type | **3RA2315** | **3RA2316** | **3RA2317** | **3RA2318** | **--** | **3RA2324** | **3RA2325** | **3RA2326** | **3RA2327** | **3RA2328** |
| | | (p. 3/154) | | | | | (p. 3/155) | | | | |
| **400 V** | **kW** | **3** | **4** | **5.5** | **7.5** | | **5.5** | **7.5** | **11** | **15** | **18.5** |
| **Assembly kits, etc.** | | **3RA2913-2AA.** (p. 3/111) | | | | **--** | **3RA2923-2AA.** (p. 3/111) | | | | |
| **Function modules** | | **3RA271.-.BA00** (p. 3/108) | | | | **--** | **3RA271.-.BA00** (p. 3/108) | | | | |
| **3RA24 contactor assemblies for star-delta (wye-delta) starting** | | | | | | | | | | | |
| **Complete units** | Type | **3RA2415** | **3RA2416** | **3RA2417** | | **3RA2423** | | **3RA2425** | **3RA2426** | | |
| | | (p. 3/171) | | | | (p. 3/172) | | | | | |
| **400 V** | **kW** | **5.5** | **7.5** | **11** | | **11** | | **15/18.5** | **22** | | |
| **Assembly kits/wiring modules** | | **3RA2913-2BB.** (p. 3/112) | | | | **3RA2923-2BB.** (p. 3/112) | | | | | |
| **Function modules** | | **3RA271.-.CA00** (p. 3/108) | | | | **3RA271.-.CA00** (p. 3/108) | | | | | |

Note:

Safety characteristics for contactors,
see "Standards and approvals", page 16/7.

## Introduction

| Size | | S2 | | | | S3 | | | |
|---|---|---|---|---|---|---|---|---|---|
| Type | | 3RT203 | | | | 3RT204 | | | |
| **3RT20 contactors** | | | | | | | | | |
| Type | | **3RT2035** | **3RT2036** | **3RT2037** | **3RT2038** | **3RT2045** | **3RT2046** | **3RT2047** | |
| AC, DC operation | | (p. 3/58, 3/67, 3/69) | | | | (p. 3/59, 3/67, 3/71) | | | |
| **AC-3** | | | | | | | | | |
| $I_e$/AC-3/400 V | A | 41 | 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 $I_a = 6 \times I_e$) | | | | | | | | | |
| **400 V** | **kW** | **18.5** | **22** | **30** | **37** | **37** | **45** | **55** | |
| 400 V (200 000 operating cycles) | kW | 11.6 | 12.6 | 14.7 | 15.8 | 17.9 | 22 | 24.3 | |
| **AC-1** (40 °C, ≤ 690 V) | | | | | | | | | |
| **$I_e$** | **A** | **60** | **70** | **80** | **90** | **125** | **130** | **130** | |
| **Accessories for contactors** | | | | | | | | | |
| **Auxiliary switches** | • On front | **3RH29, 3RA28** | | | (p. 3/95 ... 3/102) | **3RH29, 3RA28** | | | (p. 3/95 ... 3/102) |
| | • Lateral | **3RH29** | | | (p. 3/99) | **3RH29** | | | (p. 3/99) |
| **Function modules** | • Direct-on-line starting | **3RA283.** | | | (p. 3/107) | **3RA283.** | | | (p. 3/107) |
| | • IO-Link, AS-Interface | **3RA271.-.AA00** | | | (p. 3/108, 3/109) | **3RA271.-.AA00** | | | (p. 3/108, 3/109) |
| **Surge suppressors** | | **3RT2936** | | | (p. 3/104, 3/105) | **3RT2936, 3RT2946** | | | (p. 3/104, 3/105) |
| **Terminal covers** | | **3RT2936-4EA2** | | | (p. 3/119) | **3RT2946-4EA2** | | | (p. 3/119) |
| **3RU2 and 3RB overload relays** | | | | | | | | | |
| **3RU thermal overload relays** | | **3RU2136** | 11 ... 80 A | | (p. 7/99) | **3RU2146** | 28 ... 100 A | | (p. 7/99) |
| **3RB electronic overload relays** | | | | | | | | | |
| • For standard applications | | **3RB3036, 3RB3133** | 12.5 ... 80 A | | (p. 7/111 ... 7/113) | **3RB3046, 3RB3143** | 12.5 ... 115 A | | (p. 7/111 ... 7/113) |
| • For High-Feature applications | | **3RB22, 3RB23 and 3RB24 with current measuring module 3RB2906-2JG1** | 10 ... 100 A | | (p. 7/134, 7/142) (p. 7/146) | **3RB22, 3RB23 and 3RB24 with current measuring module 3RB2906-2JG1** | 10 ... 100 A | | (p. 7/134, 7/142) (p. 7/146) |
| **3RV20 motor starter protectors** | | | | | | | | | |
| **Motor starter protectors** | | **3RV2031, 3RV2032** | | 9.5 ... 80 A | (p. 7/31) | **3RV2041, 3RV2042** | | 28 ... 100 A | (p. 7/31) |
| **Link modules** | | **3RA2931** | | | (p. 7/62) | **3RA1941** | | | (p. 7/62) |
| **3RA23 reversing contactor assemblies** | | | | | | | | | |
| **Complete units** | Type | **3RA2335** (p. 3/156) | **3RA2336** | **3RA2337** | **3RA2338** | **3RA2345** (p. 3/157) | **3RA2346** | **3RA2347** | |
| **400 V** | **kW** | **18.5** | **22** | **30** | **37** | **37** | **45** | **55** | |
| **Assembly kits/wiring modules** | | **3RA2933-2AA.** | | | (p. 3/111) | **3RA2943-2AA.** | | | (p. 3/111) |
| **Function modules** | | **3RA271.-.BA00** | | | (p. 3/108) | **3RA271.-.BA00** | | | (p. 3/108) |
| **Mechanical interlocks** | | **3RA2934-2B** | | | (p. 3/115) | **3RA2934-2B** | | | (p. 3/115) |
| **3RA24 contactor assemblies for star-delta (wye-delta) starting** | | | | | | | | | |
| **Complete units** | Type | **3RA2434** (p. 3/173) | **3RA2435** | **3RA2436** | **3RA2437** | **3RA2444** (p. 3/174) | **3RA2445** | **3RA2446** | |
| **400 V** | **kW** | **22/30** | **37** | **45** | **55** | **55** | **75** | **90** | |
| **Assembly kits/wiring modules** | | **3RA2933-2BB./-2C** | | | (p. 3/112) | **3RA2943-2BB./-2C** | | | (p. 3/112) |
| **Function modules** | | **3RA271.-.CA00** | | | (p. 3/108) | **3RA271.-.CA00** | | | (p. 3/108) |

Note:

Safety characteristics for contactors,
see "Standards and approvals", page 16/7.



| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| 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. 3/72 ... 3/74) | | | (p. 3/72 ... 3/74) | | | (p. 3/72 ... 3/74) | |
| Type | | | -- | -- | -- | **3RT1264** (p. 3/136) | **3RT1265** | **3RT1266** | **3RT1275** (p. 3/136) | **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 $I_a = 6 \times I_e$) | | | | | | | | | | |
| **400 V** | | **kW** | **55** | **75** | **90** | **110** | **132** | **160** | **200** | **250** |
| 400 V (200 000 operating cycles) | 3RT10/3RT12 | kW | 29 | 38 | 45 | 54/78 | 66/93 | 71/112 | 84/140 | 98/161 |
| **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. 4/19, 4/20) | | | **3RT1466** | **3RT1467** (p. 4/19, 4/20) | | **3RT1476** (p. 4/19, 4/20) | |
| **$I_e$/AC-1/40 °C/≤ 690 V** | | **A** | **275** | | | **400** | **500** | | **690** | |
| **Accessories for contactors** | | | | | | | | | | |
| **Auxiliary switches** | • On front | | **3RH19, 3RT1926** (p. 3/98, 3/103) | | | | | | | |
| | • Lateral | | **3RH19** (p. 3/100, 3/101) | | | | | | | |
| **Surge suppressors** | | | **3RT1956-1C** (RC element) (p. 3/105) | | | | | | | |
| **Terminal covers** | | | **3RT1956-4EA.** (p. 3/119) | | | **3RT1966-4EA.** (p. 3/119) | | | | |
| **Box terminal blocks** | | | **3RT1955-4G, 3RT1956-4G** (p. 3/117) | | | **3RT1966-4G** (p. 3/117) | | | | |
| **3RB2 overload relays** | | | | | | | | | | |
| **3RB electronic overload relays** | | | | | | | | | | |
| • For standard applications | | | **3RB2056** 50 ... 200 A (p. 7/123, 7/124)<br>**3RB2153** 50 ... 200 A (p. 7/125) | | | **3RB2066** 55 ... 250 A or 160 ... 630 A (p. 7/123, 7/124)<br>**3RB2163** 55 ... 250 A or 160 ... 630 A (p. 7/125) | | | | |
| • For High-Feature applications | | | **3RB22, 3RB23 and 3RB24** (p. 7/134, 7/142)<br>**with current measuring module 3RB2956-2TH2** (p. 7/146)<br>20 ... 200 A | | | **3RB22, 3RB23 and 3RB24** (p. 7/134, 7/142)<br>**with current measuring module 3RB2966-2WH2** (p. 7/146)<br>63 ... 630 A | | | | |
| **3RV10 molded case motor starter protectors** | | | | | | | | | | |
| **Molded case motor starter protectors** | | | **3RV1063** 40 ... 200 A (p. 7/81) | | | **3RV1073** 160 ... 400 A (p. 7/81) | | | **3RV1083** 252 ... 630 A (p. 7/81) | |
| **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. 3/111) | | | **3RA1963-2A** (p. 3/111) | | | **3RA1973-2A** (p. 3/111) | |
| **Mechanical interlocks** | | | **3RA1954-2A** (p. 3/115) | | | | | | | |
| **Contactor assemblies for star-delta (wye-delta) starting**[1] | | | | | | | | | | |
| **Complete units** | | Type | -- | | | | | | | |
| **400 V** | | **kW** | -- | | | | | | | |
| **Assembly kits/ wiring modules** | | | **3RA1953-2B** (p. 3/113) | | | **3RA1963-2B** (p. 3/113) | | | **3RA1973-2B** (p. 3/113) | |

[1] Contactor assemblies for customer assembly:
- Reversing contactor assemblies, see pages 3/159 to 3/161,
- Contactor assemblies for star-delta (wye-delta) starting, see pages 3/176 to 3/181.

Note:

Safety characteristics for contactors, see "Standards and approvals", page 16/7.

## Introduction



| | | | | |
|---|---|---|---|---|
| Size | | **14** | | |
| Type | | 3TF6 | | |
| **3TF68/3TF69 vacuum contactors** | | | | |
| Type | | **3TF68** (p. 3/137, 3/138) | | **3TF69** (p. 3/137, 3/138) |
| **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 switches** | | | | |
| • Lateral | | **3TY7561** | | (p. 3/139) |
| **Surge suppressors** | | **3TX7572** | | (p. 3/140) |
| **Terminal covers** | | **3TX7686, 3TX7696** | | (p. 3/140) |
| **3RB2 overload relays** | | | | |
| **3RB electronic overload relays** | | | | |
| • For standard applications | | **3RB2066, 3RB2163** 55 ... 250 A or 160 ... 630 A (p. 7/123, 7/124) (p. 7/125) | | **3RB22, 3RB23 and 3RB24 with current measuring module 3RB2906-2.G1 with 3UF series transformer up to 820 A** (p. 7/134, 7/142) (p. 7/146) |
| • For High-Feature applications | | **3RB22, 3RB23 and 3RB24 with current measuring module 3RB2966-2WH2** 63 ... 630 A (p. 7/134, 7/142) (p. 7/146) | | 63 ... 820 A |
| **3RV10 molded case motor starter protectors** | | | | |
| **Molded case motor starter protectors** | | **3RV1083** 252 ... 630 A | | (p. 7/81) |
| **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 16/7.

| | | | |
|---|---|---|---|
| Size | | | -- |
| Type | | | 3TG10 |
| **3TG10 power relays/miniature contactors** | | | |
| Type | | | **3TG10** |
| Number of main contacts | | | 4 |
| AC, DC operation | | | (p. 3/143) |
| **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-loaded terminals.

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

| | |
|---|---|
| | Screw terminals |
| | Spring-loaded terminals |
| | Flat connectors |
| | The connection method is indicated in the corresponding tables by the respective symbol shown on an orange background. |

***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.

For more information, see page 1/8.

## General data

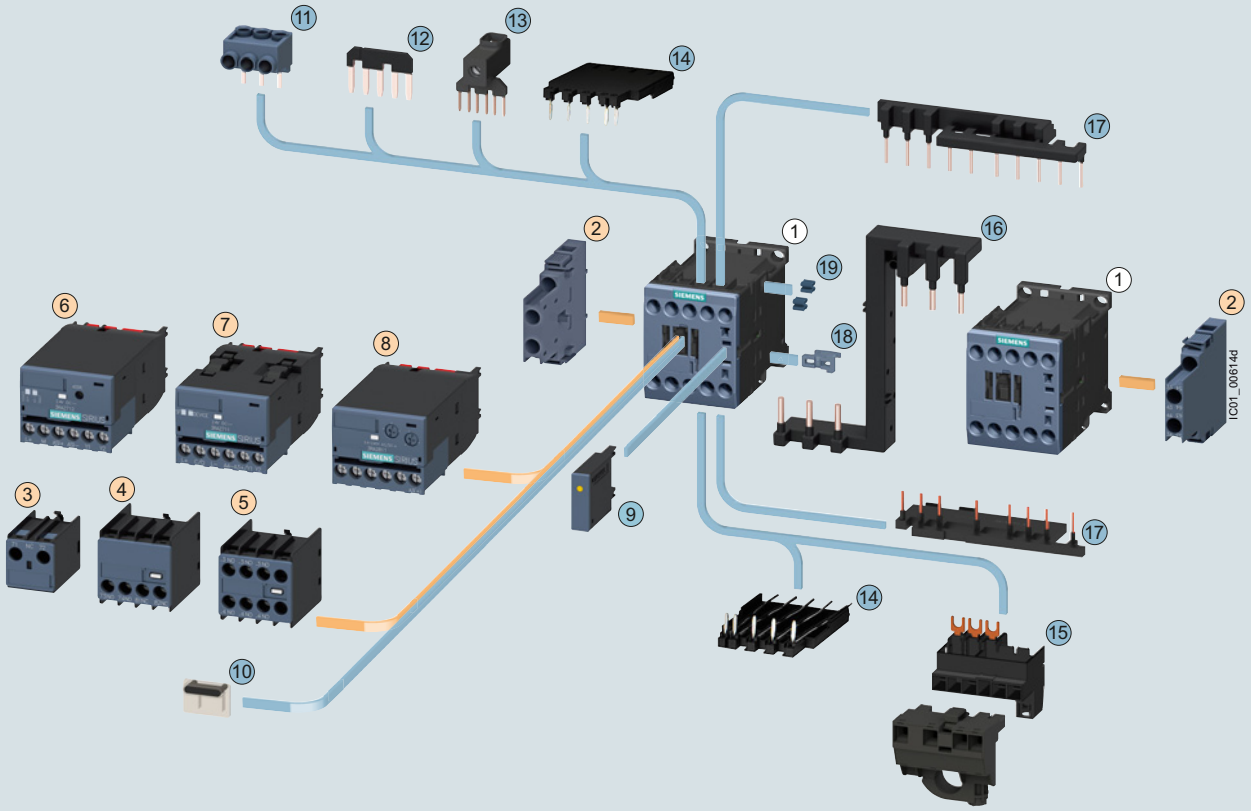
### Overview

***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.

***3RT2.1 contactors · Size S00 with mountable accessories***

The figure shows the version with screw terminals




(1) Contactor, size S00

(2) 2-pole auxiliary switch, laterally mountable
(3) 1-pole auxiliary switch, for snapping onto the front cable entry from the top
(4) 2-pole auxiliary switch, for snapping onto the front cable entry from the bottom
(5) 4-pole auxiliary switch, for snapping onto the front
(6) 3RA27 function module for AS-Interface
(7) 3RA27 function module for IO-Link
(8) 3RA28 function module
(9) Surge suppressor with/without LED
(10) Cover, sealable
(11) 3-phase infeed terminal
(12) Star jumper, 3-pole, without connecting terminal
(13) Link for paralleling, 3-pole, with connecting terminal
(14) Solder pin adapter
(15) Connection module (adapter and connector) for contactors with screw terminals
(16) Safety main current connector for two contactors

Assembly kit 3RA2913-2AA1
comprising:

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

For contactors
For contactors and coupling contactors

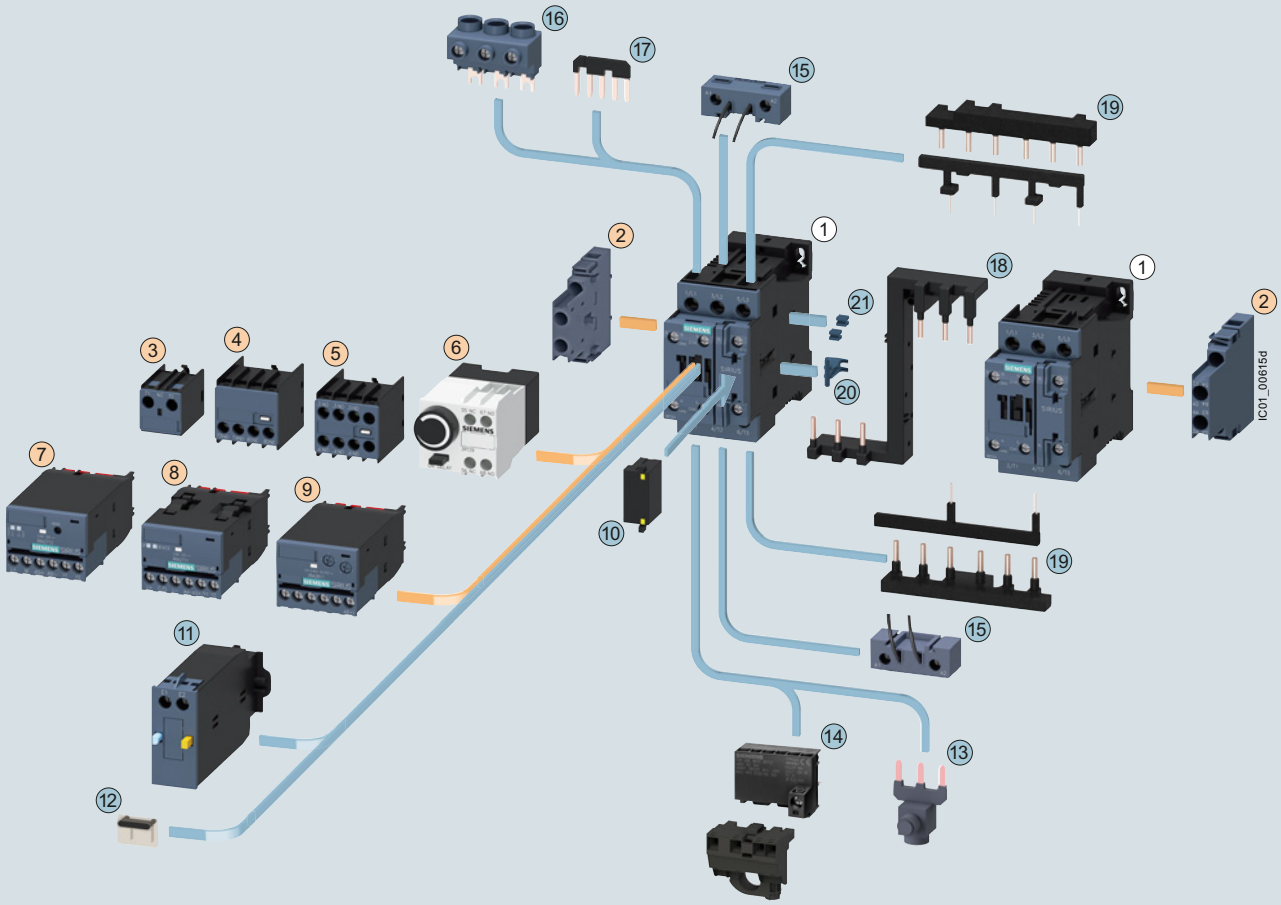
[1] 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

[2] The parts (18) and (19) can only be ordered together as 3RA2912-2H mechanical connectors.

Accessories and spare parts, see pages 3/77 to 3/126.

***3RT2.2 contactors · Size S0 with mountable accessories***

The figure shows the version with screw terminals




(1) Contactor, size S0

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

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

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

For contactors
For contactors and coupling contactors

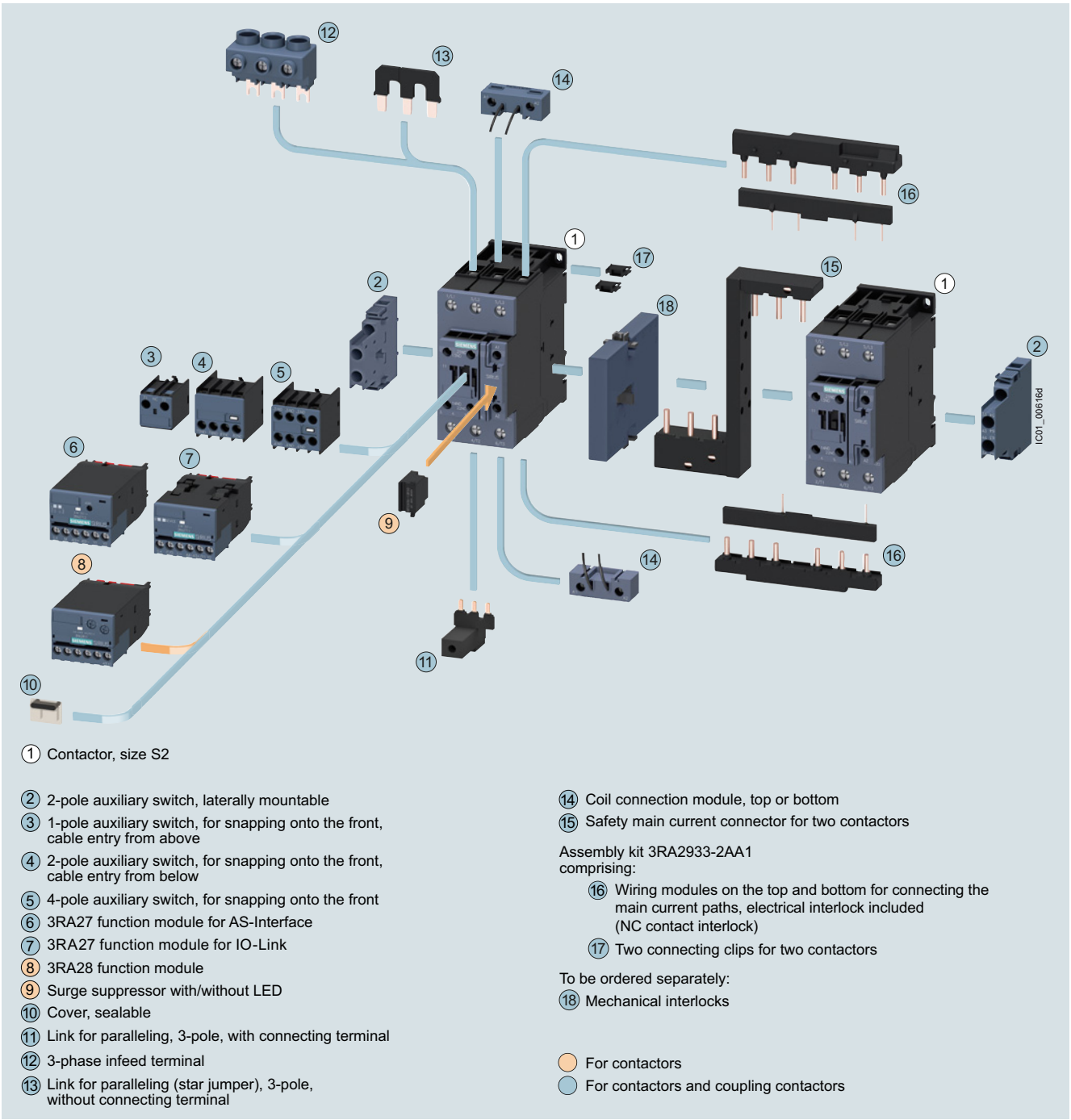
[1)] The parts (20) and (21) can only be ordered together as 3RA2922-2H mechanical connectors.

Accessories and spare parts, see pages 3/77 to 3/126.

## General data

***3RT2.3 contactors · Size S2 with mountable accessories***

The figure shows the version with screw terminals




① Contactor, size S2

② 2-pole auxiliary switch, laterally mountable
③ 1-pole auxiliary switch, for snapping onto the front, cable entry from above
④ 2-pole auxiliary switch, for snapping onto the front, cable entry from below
⑤ 4-pole auxiliary switch, for snapping onto the front
⑥ 3RA27 function module for AS-Interface
⑦ 3RA27 function module for IO-Link
⑧ 3RA28 function module
⑨ Surge suppressor with/without LED
⑩ Cover, sealable
⑪ Link for paralleling, 3-pole, with connecting terminal
⑫ 3-phase infeed terminal
⑬ Link for paralleling (star jumper), 3-pole, without connecting terminal
⑭ Coil connection module, top or bottom
⑮ Safety main current connector for two contactors

Assembly kit 3RA2933-2AA1 comprising:
⑯ Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included (NC contact interlock)
⑰ Two connecting clips for two contactors

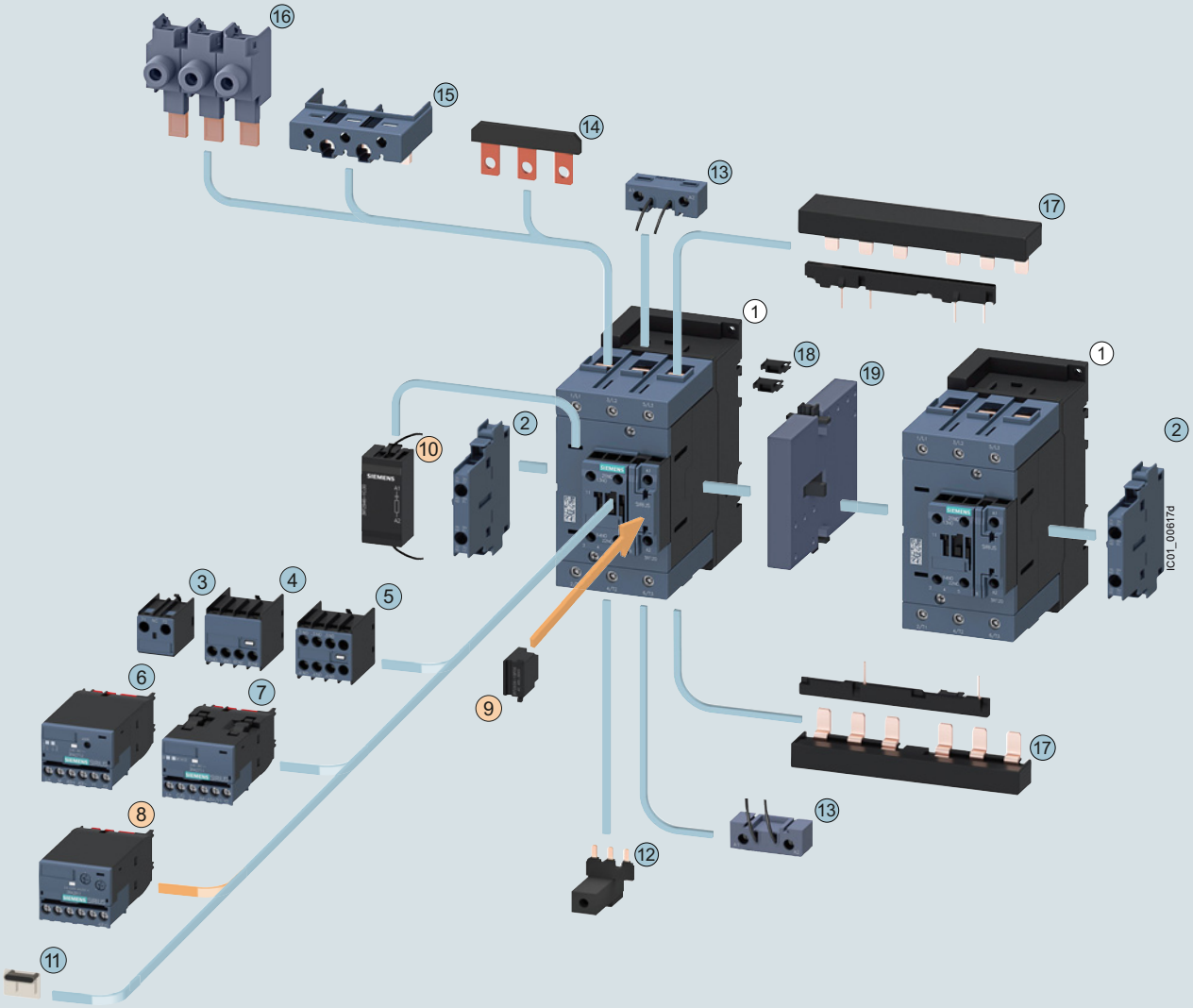
To be ordered separately:
⑱ Mechanical interlocks

For contactors
For contactors and coupling contactors

Accessories and spare parts, see pages 3/77 to 3/126.

***3RT2.4 contactors · Size S3 with mountable accessories***

The figure shows the version with screw terminals




(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) 2-pole auxiliary switch block, for snapping onto the front, cable entry from below
(5) 4-pole auxiliary switch block, for snapping onto the front
(6) 3RA27 function module for AS-Interface
(7) 3RA27 function module for IO-Link
(8) 3RA28 function module
(9) Surge suppressor with/without LED (Varistor, diode assembly), can be plugged in on the front
(10) Surge suppressor without LED (RC element), can be plugged in on the front in the recesses on the left next to the connection block
(11) Cover, sealable

(12) Links for paralleling, 3-pole, with connecting terminal
(13) Coil connection module, top or bottom
(14) Links for paralleling (star jumper), 3-pole without connecting terminal
(15) Auxiliary terminal, 3-pole
(16) Single-phase infeed terminals (3 units)

Assembly kit 3RA2943-2AA1
comprising:
(17) Wiring modules on the top and bottom for connecting the main, auxiliary and control current paths, electrical interlock[1] included, interruptible (NC contact interlock)
(18) Two connectors for two contactors

To be ordered separately:
(19) Mechanical interlock

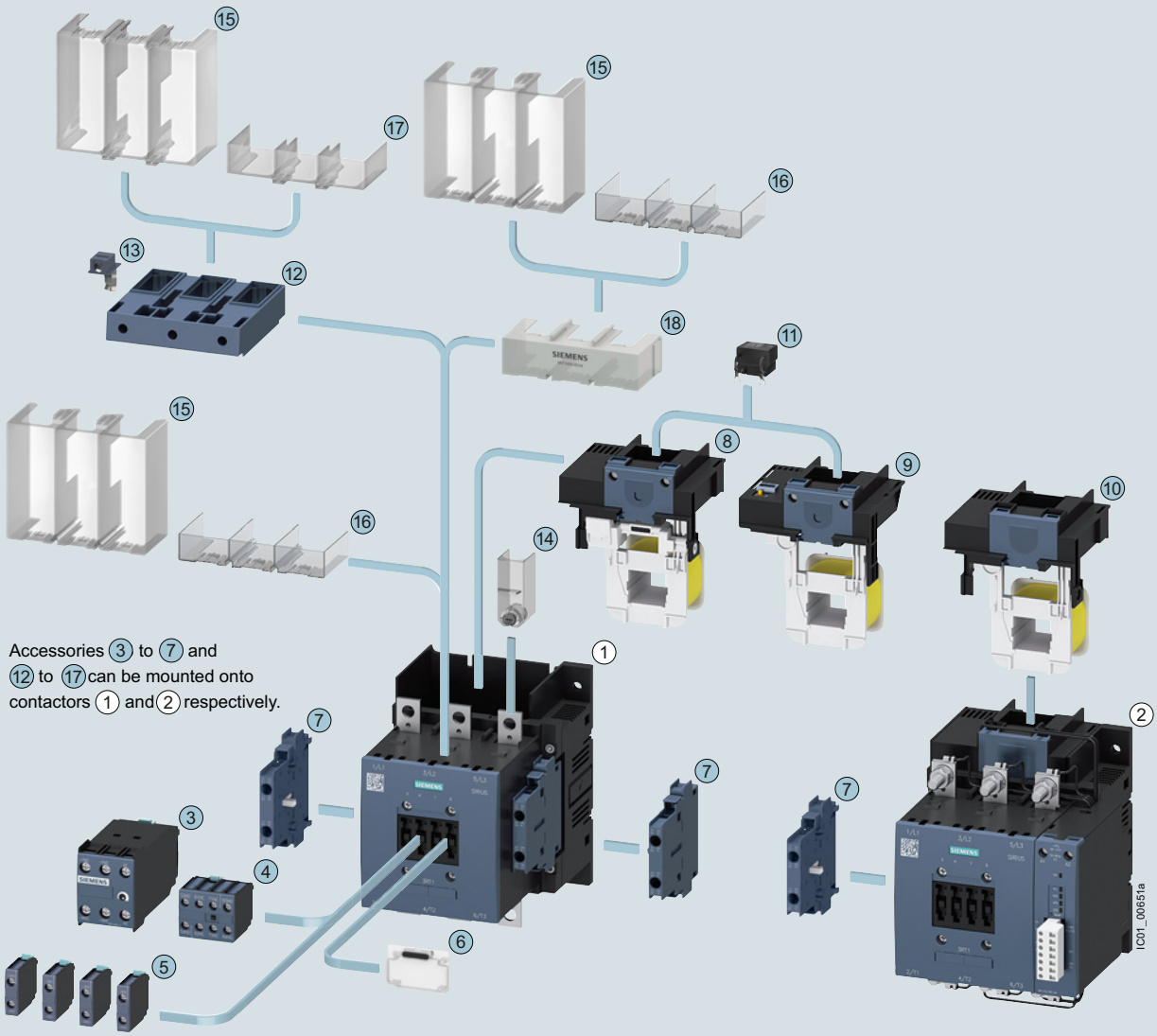
[1] 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

For contactors
For contactors and coupling contactors

Accessories and spare parts, see pages 3/77 to 3/126.

## General data

***3RT105 and 3RT145 contactors · Size S6 with mountable accessories***




1 3RT105 and 3RT145 air-break contactors, size S6 (version without withdrawable coil)

2 3RT105.-.P and 3RT145.-.P air-break contactors with solid-state operating mechanism and remaining lifetime indicator, size S6 (version with withdrawable coil and laterally mountable add-on module)

**Can be mounted onto the front of contactors 1 and 2**

3 3RT1926: Auxiliary switch block, electronically delayed (ON-delay or OFF-delay or star-delta (wye-delta) starting)

4 3RH192: 4-pole auxiliary switch

5 3RH192: 1-pole auxiliary switch (max. four can be snapped on)

6 3RT1926-4MA10: Cover, sealable

**Can be mounted onto the side of contactors 1 and 2**

7 3RH192: 2-pole auxiliary switch

**Can be inserted in top of contactors**

8 3RT1955-5A.3.: Withdrawable coil, standard operating mechanism

9 3RT1955-5N.3.: Withdrawable coil, solid-state operating mechanism

10 3RT1955-5P.3.: Withdrawable coil, solid-state operating mechanism and remaining lifetime indicator

**Can be plugged onto the top of contactor operating mechanisms 8 and 9**

11 3RT1956-1C: Surge suppressor (RC element)

**Can be mounted onto the top or bottom on busbars or box terminals of contactors 1 and 2**

12 3RT1956-4G: Box terminal block

13 3TX7500-0A: Auxiliary terminal, 1-pole

14 3TX6526-3B: Terminal cover (can be screwed on), covers one busbar connection

15 3RT1956-4EA1: Terminal cover for busbar connection and on box terminal

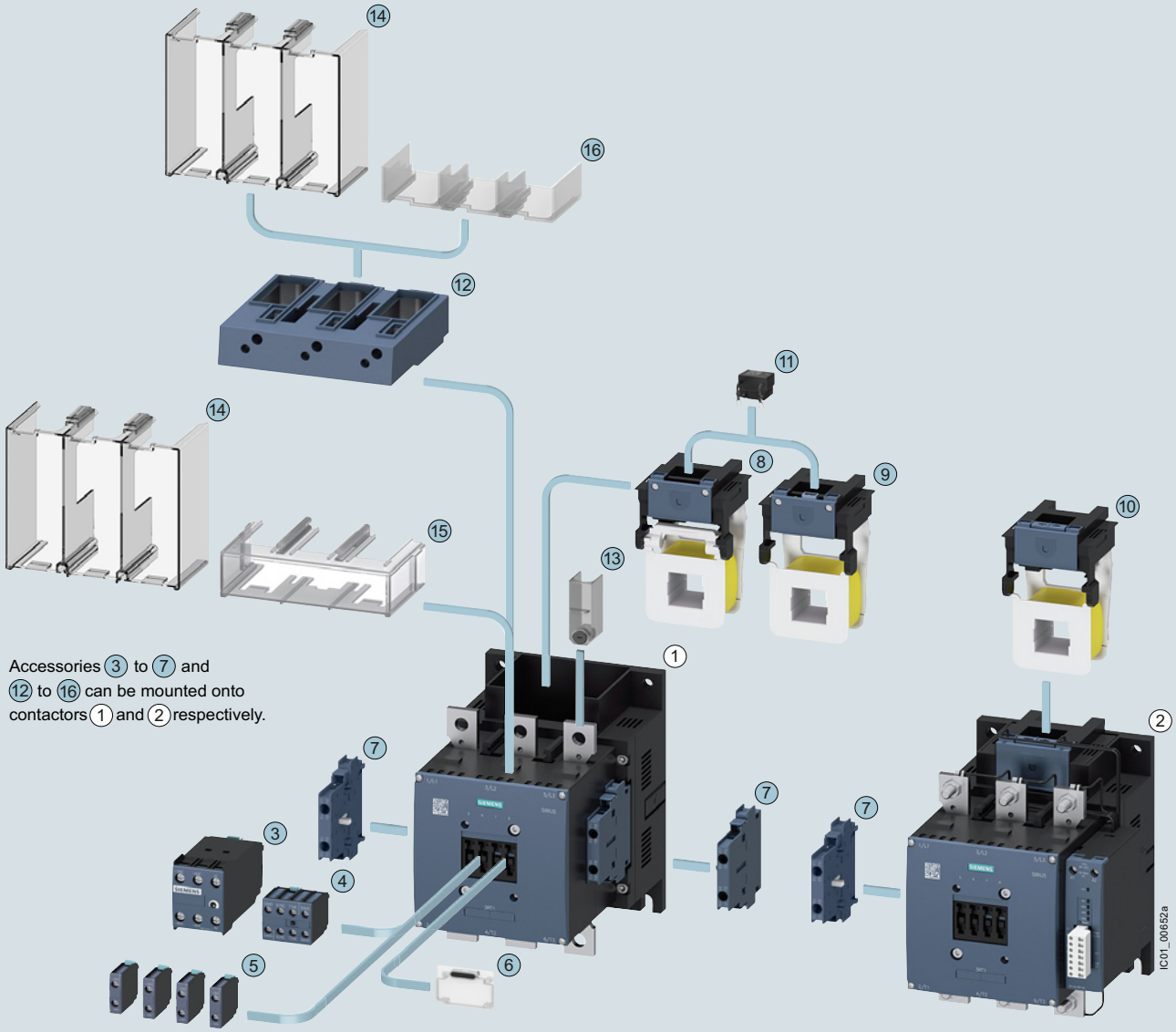
16 3RT1956-4EA3: Terminal cover for busbar connection

17 3RT1956-4EA2: Terminal cover on box terminal

18 3RT1956-4EA4: Terminal cover for busbar connection, covers 15, 16 and 18 can be mounted

Accessories and spare parts, see pages 3/77 to 3/126.

***3RT106 and 3RT146 contactors · Size S10 with mountable accessories***




1 3RT106 and 3RT146 air-break contactors, size S10 (version without withdrawable coil)

2 3RT106.-.P and 3RT146.-.P air-break contactors with solid-state operating mechanism and remaining lifetime indicator, size S10 (version with withdrawable coil and laterally mountable add-on module)

**Can be mounted onto the front of contactors 1 and 2**

3 3RT1926: Auxiliary switch, electronically delayed (ON-delay or OFF-delay or star-delta (wye-delta) starting)

4 3RH192: 4-pole auxiliary switch

5 3RH192: 1-pole auxiliary switch (max. four can be snapped on)

6 3RT1926-4MA10: Cover, sealable

**Can be mounted onto the side of contactors 1 and 2**

7 3RH192: 2-pole auxiliary switch

**Can be inserted in the top of contactors**

8 3RT1965-5A.3.: Withdrawable coil, standard operating mech.

9 3RT1965-5N.3.: Withdrawable coil, solid-state operating mech.

10 3RT1965-5P.3.: Withdrawable coil, solid-state operating mech. and remaining lifetime indicator

**Can be plugged onto the top of contactor operating mechanisms 8 and 9**

11 3RT1956-1C: Surge suppressor (RC element)

**Can be mounted at the top or bottom on busbars or box terminals of contactors 1 and 2**

12 3RT1966-4G: Box terminal block

13 3TX6546-3B: Terminal cover (can be screwed on), covers one busbar connection

14 3RT1966-4EA1: Terminal cover for busbar connection and on box terminal

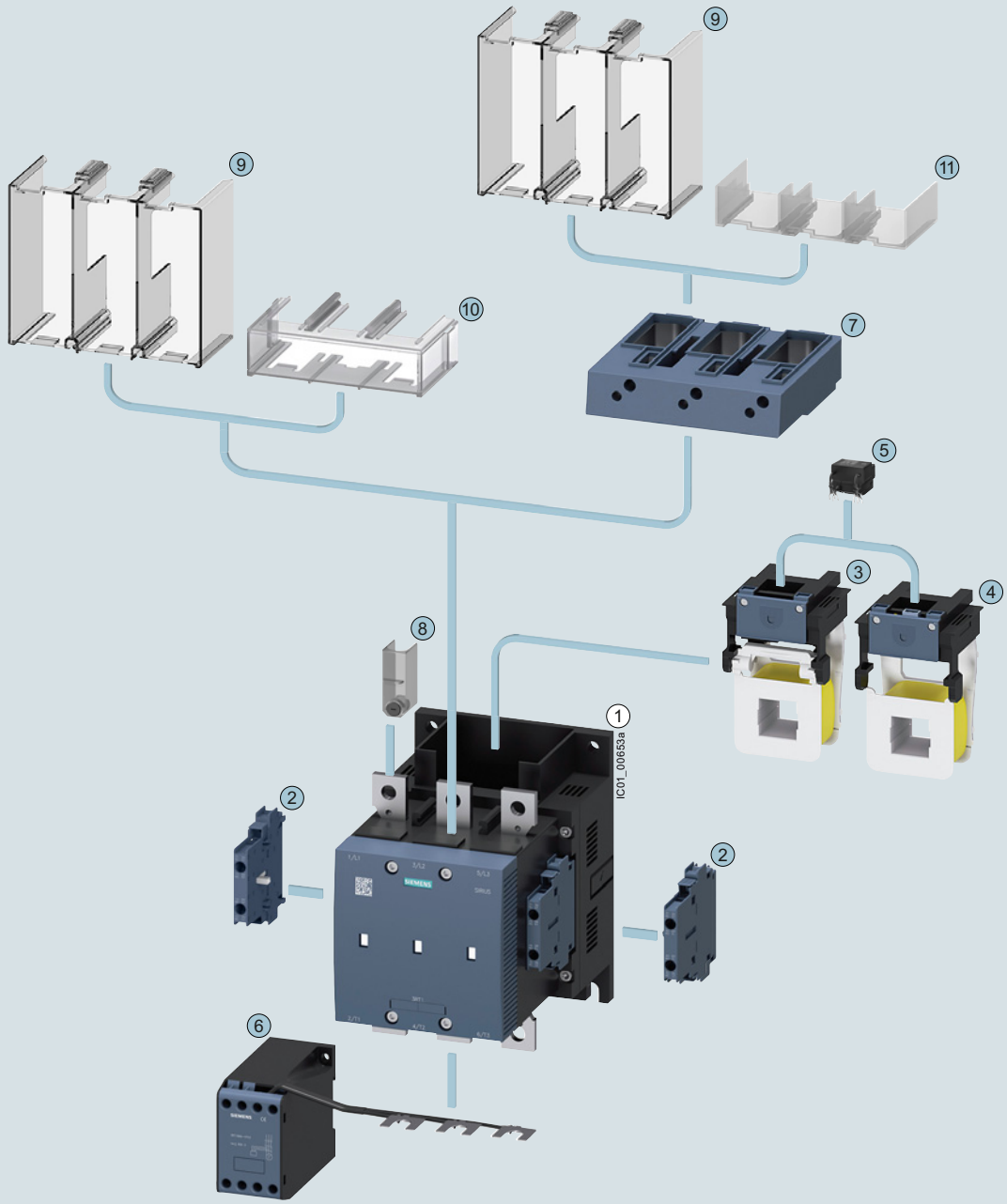
15 3RT1966-4EA3: Terminal cover for busbar connection

16 3RT1966-4EA2: Terminal cover on box terminal

Accessories and spare parts, see pages 3/77 to 3/126.

## General data

***3RT126 vacuum contactors · Size S10 with mountable accessories***




(1) 3RT126 vacuum contactor, size S10 (version without withdrawable coil)

**Can be mounted onto side of contactor**

(2) 3RH192: 2-pole auxiliary switch

**Can be inserted in top of contactor**

(3) 3RT1966-5A.3.: Withdrawable coil, standard operating mechanism

(4) 3RT1966-5N.3.: Withdrawable coil, solid-state operating mechanism

**Can be plugged onto top of contactor operating mechanisms**

(5) 3RT1956-1C: Surge suppressor (RC element)

**Can be mounted at bottom on busbars**

(6) 3RT1966-1PV.: Main current path surge suppression module

**Can be mounted onto the top or bottom on busbars or box terminals**

(7) 3RT1966-4G: Box terminal block

(8) 3TX6546-3B: Terminal cover (can be screwed on), covers one busbar connection

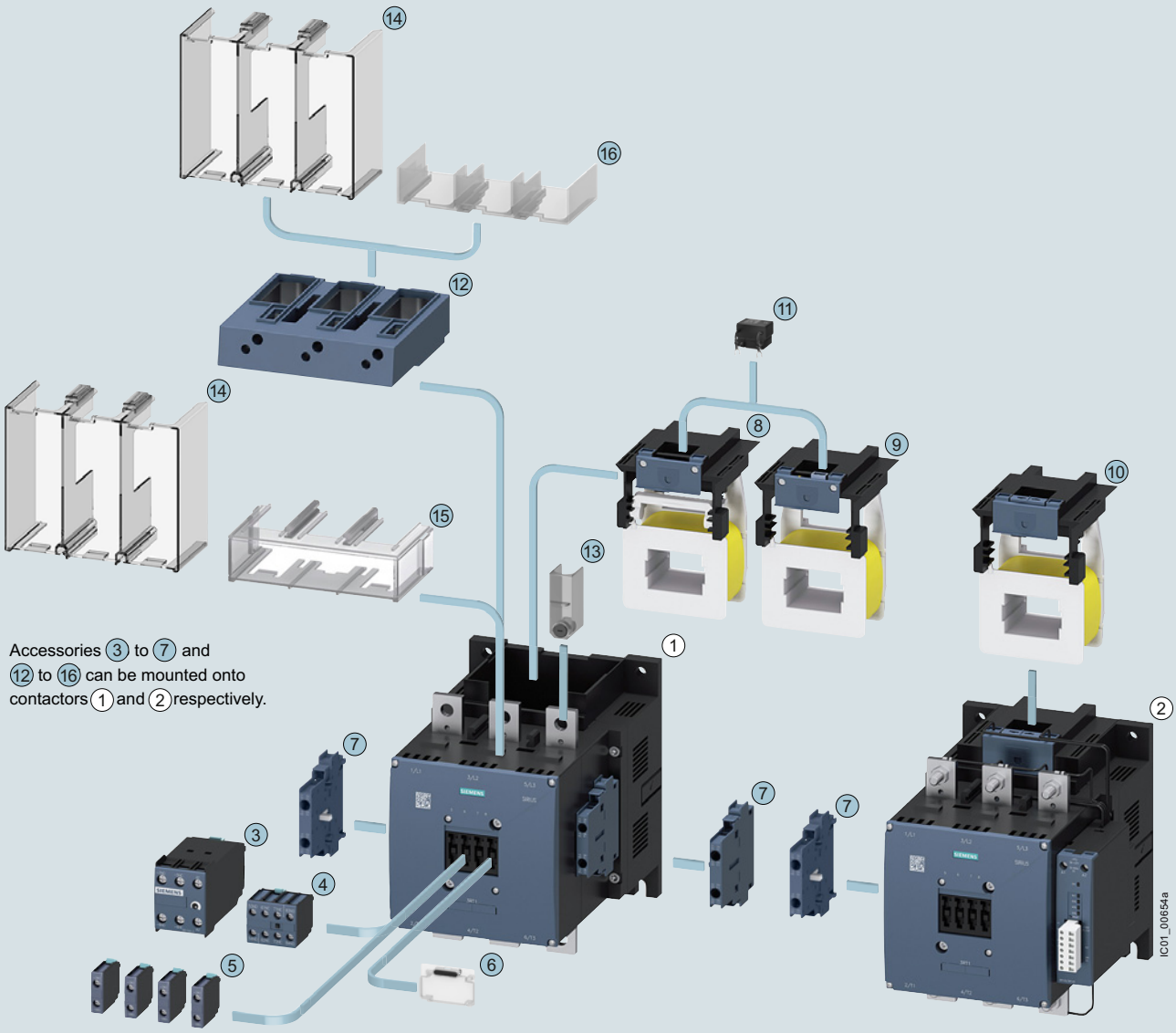
(9) 3RT1966-4EA1: Terminal cover for busbar connection and on box terminal

(10) 3RT1966-4EA3: Terminal cover for busbar connection

(11) 3RT1966-4EA2: Terminal cover on box terminal

Accessories and spare parts, see pages 3/77 to 3/126 and 3/139 to 3/142.

***3RT107 and 3RT147 contactors · Size S12 with mountable accessories***




(1) 3RT107 and 3RT147 air-break contactors, size S12 (version without withdrawable coil)

(2) 3RT107.-.P and 3RT147.-.P air-break contactors with solid-state operating mechanism and remaining lifetime indicator, size S12 (version with withdrawable coil and laterally mountable add-on module)

**Can be mounted onto the front of contactors (1) and (2)**

(3) 3RT1926: Auxiliary switch, electronically delayed (ON-delay or OFF-delay or star-delta (wye-delta) starting)

(4) 3RH192: 4-pole auxiliary switch

(5) 3RH192: 1-pole auxiliary switch (max. four can be snapped on)

(6) 3RT1926-4MA10: Cover, sealable

**Can be mounted onto the side of contactors (1) and (2)**

(7) 3RH192: 2-pole auxiliary switch

**Can be inserted in top of contactors**

(8) 3RT1975-5A.3.: Withdrawable coil, standard operating mech.

(9) 3RT1975-5N.3.: Withdrawable coil, solid-state operating mech.

(10) 3RT1975-5P.3.: Withdrawable coil, solid-state operating mech. and remaining lifetime indicator

**Can be plugged onto top of contactor operating mechanisms (8) and (9)**

(11) 3RT1956-1C: Surge suppressor (RC element)

**Can be mounted at the top or bottom on busbars or box terminals of contactors (1) and (2)**

(12) 3RT1966-4G: Box terminal block

(13) 3TX6546-3B: Terminal cover (can be screwed on), covers one busbar connection

(14) 3RT1966-4EA1: Terminal cover for busbar connection and on box terminal

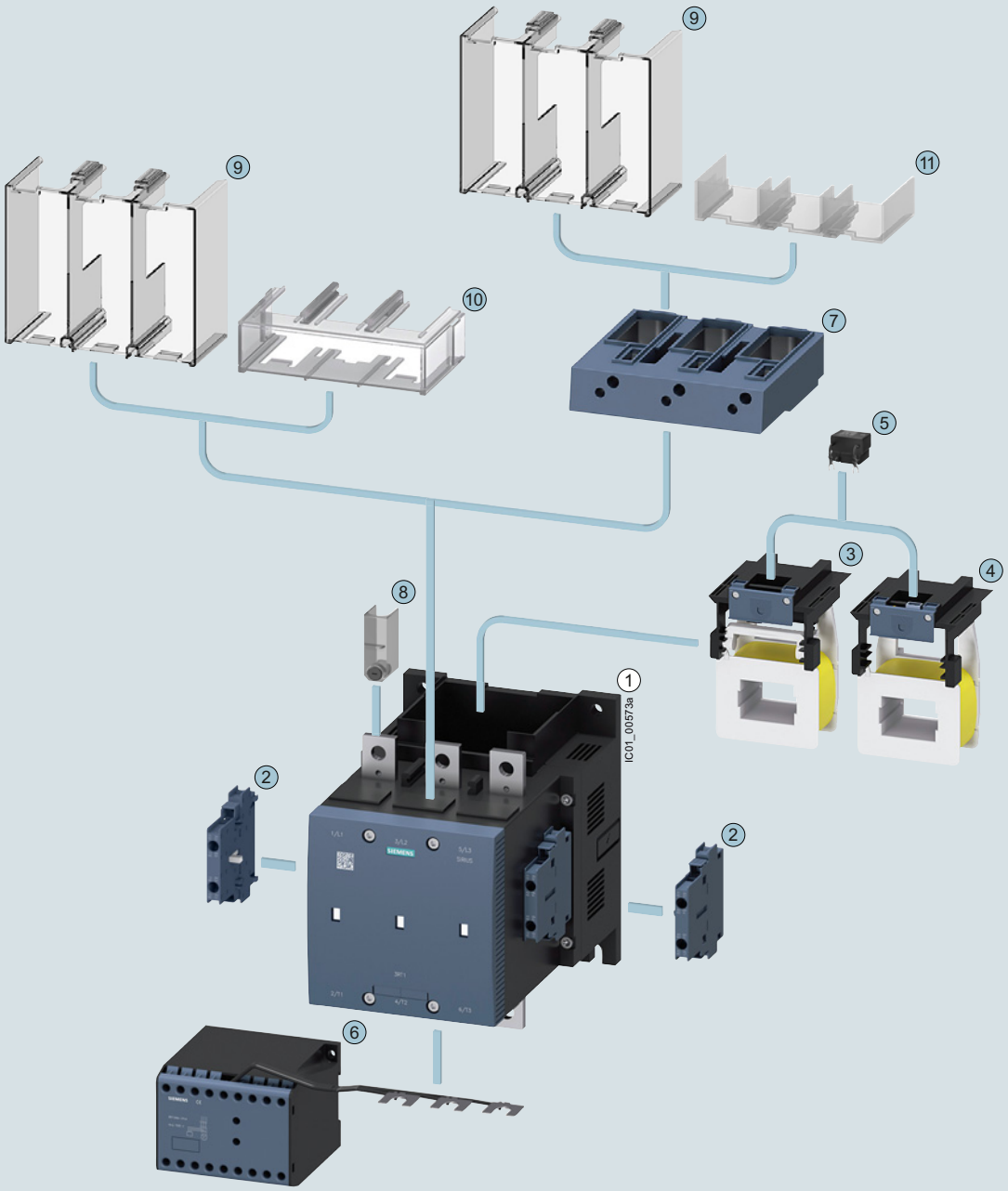
(15) 3RT1966-4EA3: Terminal cover for busbar connection

(16) 3RT1966-4EA2: Terminal cover on box terminal

Accessories and spare parts, see pages 3/77 to 3/126.

## General data

***3RT127 vacuum contactors · Size S12 with mountable accessories***




(1) 3RT127 Vacuum contactor, size S12 (version without withdrawable coil)

**Can be mounted onto the side of contactor**

(2) 3RH192: 2-pole auxiliary switch

**Can be inserted in top of contactors**

(3) 3RT1975-5A.3.: Withdrawable coil, standard operating mechanism

(4) 3RT1975-5N.3.: Withdrawable coil, solid-state operating mechanism

**Can be plugged onto the top of contactor operating mechanisms**

(5) 3RT1956-1C: Surge suppressor (RC element)

**Can be mounted at bottom on busbars**

(6) 3RT1966-1PV.: Main current path surge suppression module

**Can be mounted at the top or bottom on busbars or box terminals**

(7) 3RT1966-4G: Box terminal block

(8) 3TX6546-3B: Terminal cover (can be screwed on), covers one busbar connection

(9) 3RT1956-4EA1: Terminal cover for busbar connection and on box terminal

(10) 3RT1966-4EA3: Terminal cover for busbar connection

(11) 3RT1966-4EA2: Terminal cover on box terminal

Accessories and spare parts, see pages 3/77 to 3/126 and 3/139 to 3/142.

## Overview

| Version | Size | Ratings of three-phase motors at 50 Hz and 400 V<br>kW | Connection methods<br>Screw terminals | <br>Spring-loaded terminals | Type | Page |
|---|---|---|---|---|---|---|
| **Power contactors for switching motors** | | | | | | |
| ***AC operation*** | | | | | | |
| **Basic unit** | S00 | 3 ... 7.5 | ✓ | ✓ | 3RT201.-.A0. | 3/55 |
| • With permanently mounted auxiliary switch | | | ✓ | ✓ | 3RT201.-.AP04-3MA0 | 3/55 |
| • With permanently mounted auxiliary switch and varistor plugged into the front | | | ✓ | ✓ | 3RT201.-.CP04-3MA0 | 3/55 |
| **Basic unit** | S0 | 4 ... 18.5 | ✓ | ✓ | 3RT202.-.A.00 | 3/56 |
| • With removable auxiliary switch | | | ✓ | ✓ | 3RT202.-.A.04 | 3/57 |
| • With permanently mounted auxiliary switch and varistor plugged in | | | ✓ | ✓ | 3RT202.-.CL24-3MA0 | 3/57 |
| **Basic unit** | S2 | 18.5 ... 37 | ✓ | ✓ | 3RT203.-.A.00 | 3/58 |
| • With removable auxiliary switch | | | ✓ | -- | 3RT203.-1A.04 | 3/58 |
| • With permanently mounted auxiliary switch and integrated coil circuit | | | ✓ | ✓ | 3RT203.-.CL24-3MA0 | 3/58 |
| **Basic unit** | S3 | 37 ... 55 | ✓ | ✓ | 3RT20.-.A.00 | 3/59 |
| • With removable auxiliary switch | | | ✓ | -- | 3RT204.-1A.04 | 3/59 |
| • With permanently mounted auxiliary switch and integrated coil circuit | | | ✓ | -- | 3RT204.-1CL24-3MA0 | 3/59 |
| ***DC operation*** | | | | | | |
| **Basic unit** | S00 | 3 ... 7.5 | ✓ | ✓ | 3RT201.-.B.4. | 3/60 |
| • With integrated coil circuit | | | ✓ | ✓ | 3RT201.-..B4. | 3/60 |
| • With permanently mounted auxiliary switch | | | ✓ | ✓ | 3RT201.-.BB44-3MA0 | 3/61 |
| • With permanently mounted auxiliary switch and integrated coil circuit | | | ✓ | ✓ | 3RT201.-.FB44-3MA0 | 3/61 |
| • With voltage tap-off | | | ✓ | ✓ | 3RT201.-.BB4.-0CC0 | 3/61 |
| **Basic unit** | S0 | 4 ... 18.5 | ✓ | ✓ | 3RT202.-.B.40 | 3/64 |
| • With coil circuit plugged into front | | | ✓ | ✓ | 3RT202.-..B40 | 3/64 |
| • With removable auxiliary switch | | | ✓ | ✓ | 3RT202.-.BB44 | 3/64 |
| • With permanently mounted auxiliary switch and integrated coil circuit | | | ✓ | ✓ | 3RT202.-..B44-3MA0 | 3/65 |
| • With voltage tap-off | | | ✓ | ✓ | 3RT202.-.BB40-0CC0 | 3/65 |
| ***DC operation for direct control by PLC*** (coupling contactors) | | | | | | |
| **Basic unit** | S00 | 3 ... 5.5 | ✓ | ✓ | 3RT201.-..B4. | 3/62 |
| **Basic unit with integrated coil circuit** | S00 | 3 ... 5.5 | ✓ | ✓ | 3RT201.-..B4. | 3/62, 3/63 |
| | S0 | 4 ... 15 | ✓ | ✓ | 3RT202.-.KB40 | 3/66 |
| | S2 | 18.5 ... 37 | ✓ | ✓ | 3RT203.-.KB40 | 3/67 |
| | S3 | 37 and 45 | ✓ | ✓ | 3RT204.-.KB40 | 3/67 |
| ***AC/DC operation (50/60 Hz AC or DC)*** | | | | | | |
| **Basic unit with integrated coil circuit** | S0 | 5.5 ... 18.5 | ✓ | ✓ | 3RT202.-.N.30 | 3/68 |
| **Basic unit with integrated coil circuit** | S2 | 18.5 ... 37 | ✓ | ✓ | 3RT203.-.N.30 | 3/69 |
| • With removable auxiliary switch | | | ✓ | -- | 3RT203.-1N.34 | 3/69 |
| • With permanently mounted auxiliary switch | | | ✓ | ✓ | 3RT203.-.NB34-3MA0 | 3/69 |
| • With voltage tap-off | | | ✓ | ✓ | 3RT203.-.NB30-0CC0 | 3/69 |
| • With fail-safe 24 V DC control signal input for safety-related applications up to SIL CL 3 | | | ✓ | ✓ | 3RT203.-.S.30 | 3/70 |
| **Basic unit with integrated coil circuit** | S3 | 37 ... 55 | ✓ | ✓ | 3RT204.-.N.30 | 3/71 |
| • With removable auxiliary switch | | | ✓ | -- | 3RT204.-1N.34 | 3/71 |
| • With permanently mounted auxiliary switch | | | ✓ | ✓ | 3RT204.-.NB34-3MA0 | 3/71 |
| • With voltage tap-off | | | ✓ | ✓ | 3RT204.-.NB30-0CC0 | 3/71 |
| • With fail-safe 24 V DC control signal input for safety-related applications up to SIL CL 3 | | | ✓ | ✓ | 3RT204.-.S.30 | 3/70 |
| **Basic unit with integrated coil circuit** | | | | | | |
| • Standard operating mechanism with economy circuit for AC and DC operation | S6 ... S12 | 55 ... 250 | ✓[1] | ✓ | 3RT10..-.A.36 | 3/72 |
| • 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 | 3/73 |
| - Standard control signal input | | | ✓[1] | ✓ | 3RT10..-.N.36 | 3/74 |
| - Standard control signal input, with remaining lifetime indicator (RLT) | | | ✓[1] | -- | 3RT10..-.P.35 | 3/74 |

-- Version not possible

✓ Version possible

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

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

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 page 3/127 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 Support: www.siemens.com/support-request.

***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 contactors in sizes S00 and S0, can be expanded using auxiliary switches, see page 3/89 for the permitted selection of auxiliary switches.
- Sizes S6 to S12: These contactors are supplied with two laterally mounted auxiliary switches. 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 the fitting of auxiliary switches, see pages 3/89 to 3/94.

***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.

***Connection methods***

Main circuit

- Sizes S00 and S0: screw or spring-loaded terminals, spring-loaded 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-loaded 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 Equipment Manual must be observed, see "More information", page 3/23.

***Short-circuit protection***

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

- For 3RT2 contactors, see pages 3/28, 3/34, 3/38 and 3/43
- For 3RT1 contactors, see page 3/48

For short-circuit protection of contactors with overload relays or of load feeders, refer to the Configuration Manuals, see "More information" on page 3/23.

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

***Motor protection***

3RT2 contactors

For protection against overload, 3RU2 thermal overload relays (see page 7/98 onwards) or 3RB3 electronic overload relays (see page 7/111 onwards) can be mounted onto the 3RT2 contactors.

3RT1 contactors

For protection against overload, 3RB2 electronic overload relays (see page 7/123 onwards) can be mounted onto the 3RT1 contactors.

***Plant and application monitoring***

For monitoring and measuring in the application, 3RR2 monitoring relays can be mounted onto the 3RT2 contactors (see page 10/51).

***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 3/104 onwards.

- 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.
- Sizes S0 and S2: The surge suppressors (varistors, RC elements or diode combinations) can be plugged into the front of the contactors.
- Size S3: The varistors and diode combinations are plugged into the front of the contactors. The RC element is plugged into the two recesses on the front of the contactor to the left of the terminal block for the auxiliary switches.
- 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", page 3/23).

***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 page 3/81 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", page 2/1 onwards.

***Operating mechanism types***

3RT2 contactors

3RT2 contactors are available as standard versions with 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).

In addition, for sizes S2 and S3, variants with solid-state operating mechanism for AC or DC operation with a fail-safe PLC input are available.

Control takes place via the control supply voltage connection A1 - A2 with varying operating ranges (see relevant product data sheet for further details).

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

3RT1 contactors

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

- Standard operating mechanism with economy circuit for AC and DC operation (switchover from closing coil to holding coil)
- 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 $U_s$, 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 PLC input
  - As above, but additionally with remaining lifetime indicator (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.

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

***Contactors in safety-related 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.

Contactors with mirror contacts according to IEC 60947-4-1 are generally required for use in safety-related applications. Most of our contactors meet this requirement; a corresponding note can be found in the technical product data sheet.

***Contactors with increased tamper protection***

Increased tamper protection is ensured either by using our contactor versions with factory-installed, permanently mounted auxiliary switches protected against mechanical external actuation (e.g. 3RT2...-.....-3MA0 or 3RT1...-.....-3PA0 contactors), or by using the 3RT2916-4MA10 or 3RT1926-4MA10 sealable cover as an accessory (see page 3/119).

***Connection of contactors to fail-safe control modules***

While contactors with smaller power ratings can be connected directly to the outputs of fail-safe controllers, implementing safety-related applications with standard contactors with higher power is much more complicated and elaborate because of the necessary coupling links.

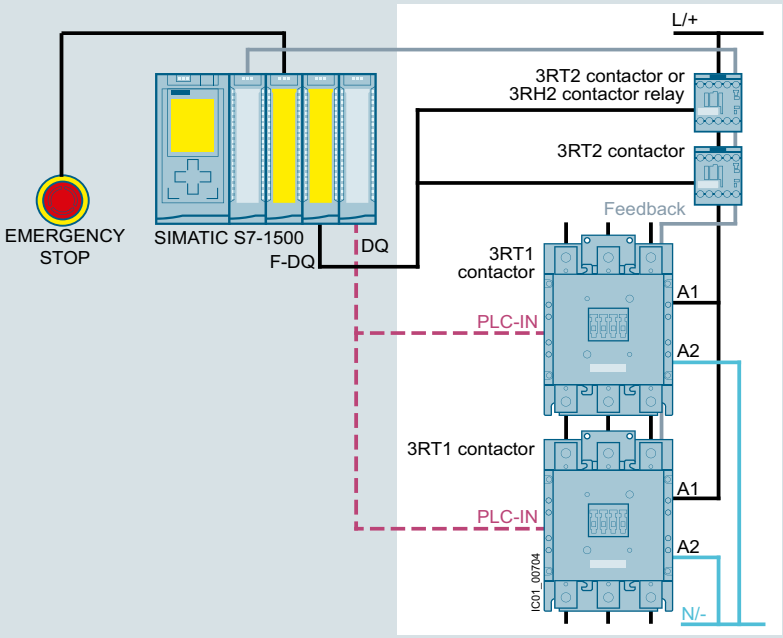
Due to their fail-safe control input, special contactors provide a much simpler way of doing this:

- 3RT20..-.S contactors in sizes S2 and S3
- 3RT10..-.S contactors in sizes S6 to S12

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



Example for SIL 2 and SIL 3 / PLe application - previously:

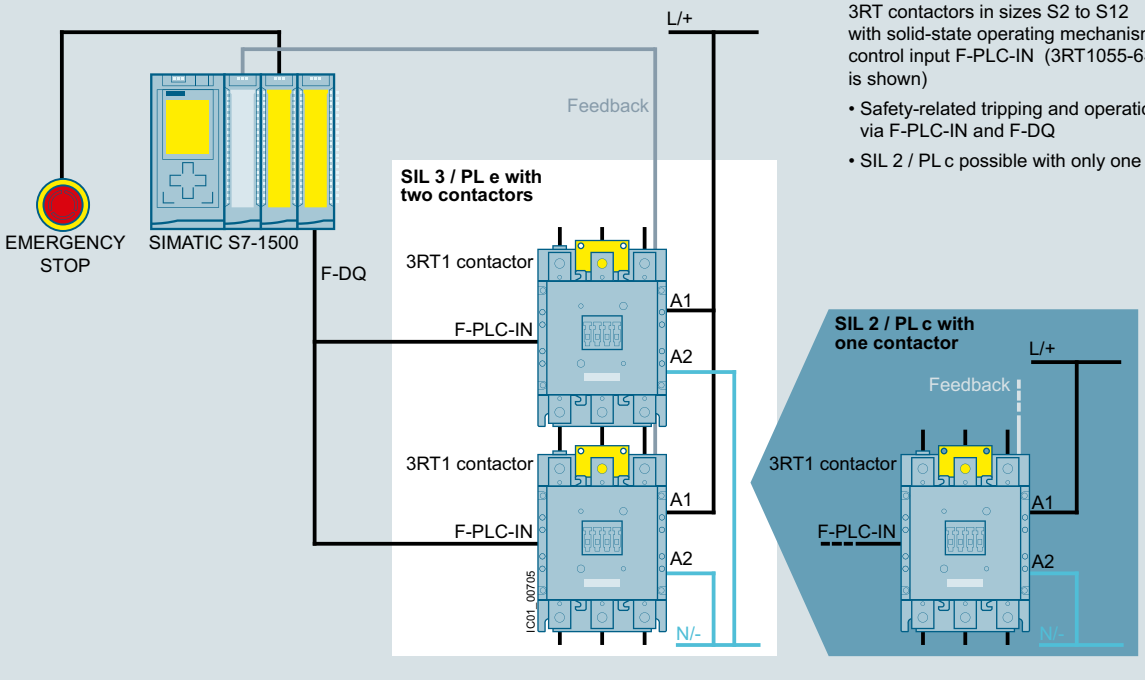



3RT contactors in sizes S2 to S12
with standard or solid-state operating mechanism
with PLC-IN (3RT105 contactor is shown)

- Safety-related tripping only possible via coupling links and F-DQ
- Standard operating mechanism: operational switching via coupling links and F-DQ
- Solid-state operating mechanism: operational switching with PLC-IN and DQ

Application with safety-related disconnection with standard contactors using the example of a 3RT105 contactor

Example for SIL 3 / PL e (left-hand side) and SIL 2 / PL c (right-hand side) application - new:




3RT contactors in sizes S2 to S12
with solid-state operating mechanism with fail-safe control input F-PLC-IN (3RT1055-6SP36 contactor is shown)

- Safety-related tripping and operational switching via F-PLC-IN and F-DQ
- SIL 2 / PL c possible with only one contactor

Application with safety-related disconnection with contactors with fail-safe control using the example of a 3RT105 contactor

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

***Contactors for special applications***

- SIRIUS 3RT.4 contactors for low or non-inductive loads (AC-1), 3-pole, see page 4/6 onwards
- SIRIUS 3RT20 and 3RT10 contactors with an extended application range, 3-pole (for rail applications), see page 4/55 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 | □ |
| Rating dependent on size | e.g. 5 = 37 kW for 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 = for 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.

## Technical specifications

| More information | |
|---|---|
| Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16134/td<br>FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16134/faq | System Manual for modular system, see https://support.industry.siemens.com/cs/ww/en/view/60311318<br>Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/60306557<br>Application Manual for controls with IE3/IE4 motors, see https://support.industry.siemens.com/cs/ww/en/view/94770820<br>Configuration Manual for load feeders, see https://support.industry.siemens.com/cs/ww/en/view/39714188<br>Configuration Manual for UL, see https://support.industry.siemens.com/cs/ww/en/view/53433538 |

| 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**<br>Data apply to integrated auxiliary contacts and conventional contacts in the auxiliary switches | | | | | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | | V | 690 | 1 000<br>(3RT20..-0CC0: 690) | -- |
| • For laterally mountable auxiliary switches | | V | 690 | 690 | 500 |
| • For front auxiliary switches | | 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** | | | | | |
| • At 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** | | | | | |
| • At 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** | | | | | |
| • At 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**<br>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) With laterally mountable auxiliary switches, only the currents for rated operational voltages up to 500 V apply.

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

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

| 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***

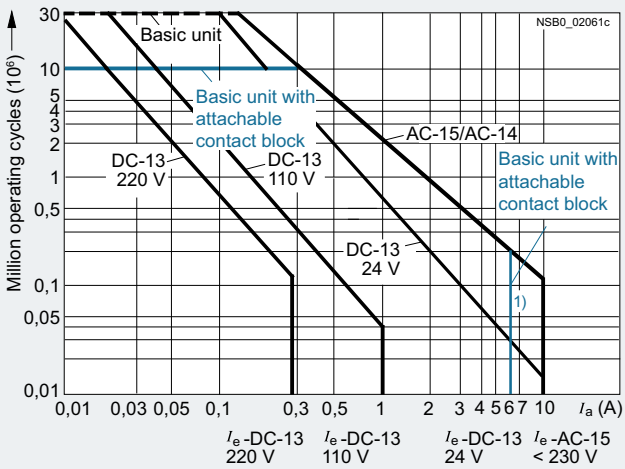



Diagram legend:
$I_a$ = Breaking current
$I_e$ = Rated operational current

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

***Sizes S6 to S12***

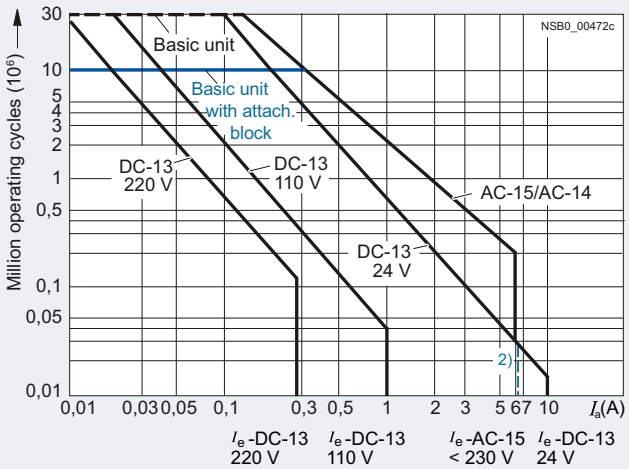



Diagram legend:
$I_a$ = Breaking current
$I_e$ = Rated operational current

The characteristic curves apply to:
- Integrated auxiliary contacts on 3RT10
- 3RH1911, 3RH1921 auxiliary switches[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 switches, DC-13/at 24 V: Max. 6 A.

[3)] With laterally mountable auxiliary switches, the currents for rated operational voltages up to 500 V apply.

| Type | **3RT2 contactors** |
|---|---|
| Size | **S00 and S0** |

## Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching low inductive or non-inductive AC loads (AC-1) and motor-driven 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 $I_e$ 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:

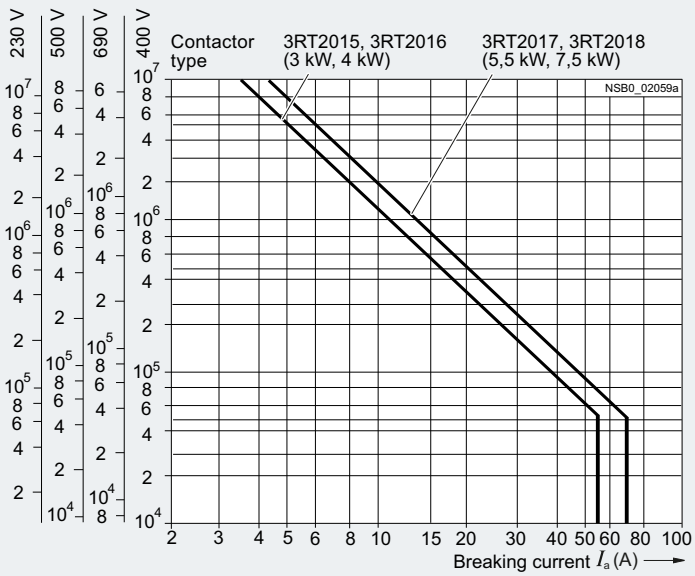
$$X = \frac{A}{1 + \frac{C}{100}\left(\frac{A}{B} - 1\right)}$$

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

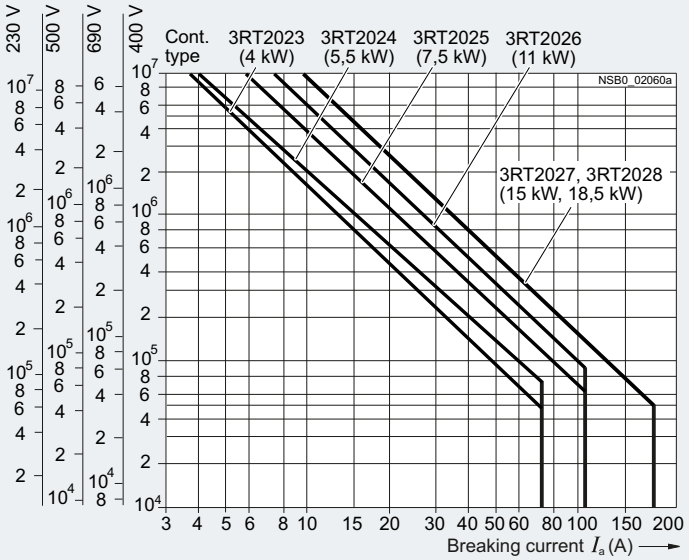
***Size S00***

Operating cycles at




***Size S0***

Operating cycles at



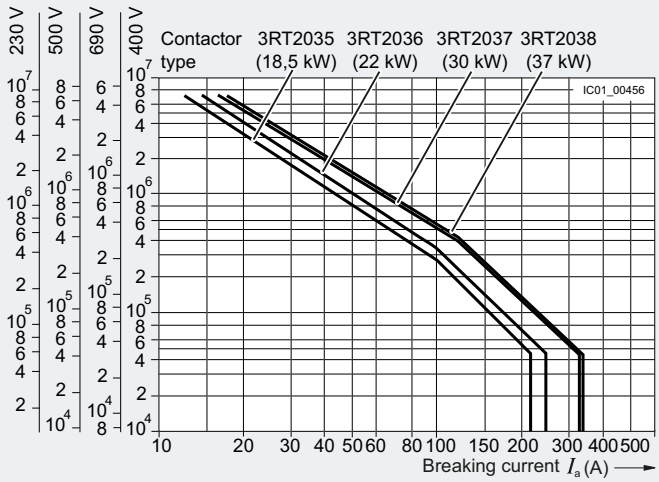
3

| Type | 3RT contactors |
|---|---|
| Size | S2 to S12 |

**Contact endurance of main contacts (continued)**

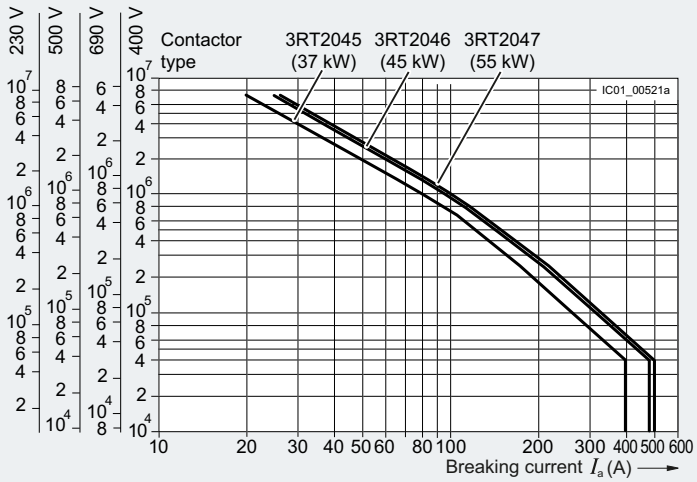
***Size S2***

Operating cycles at



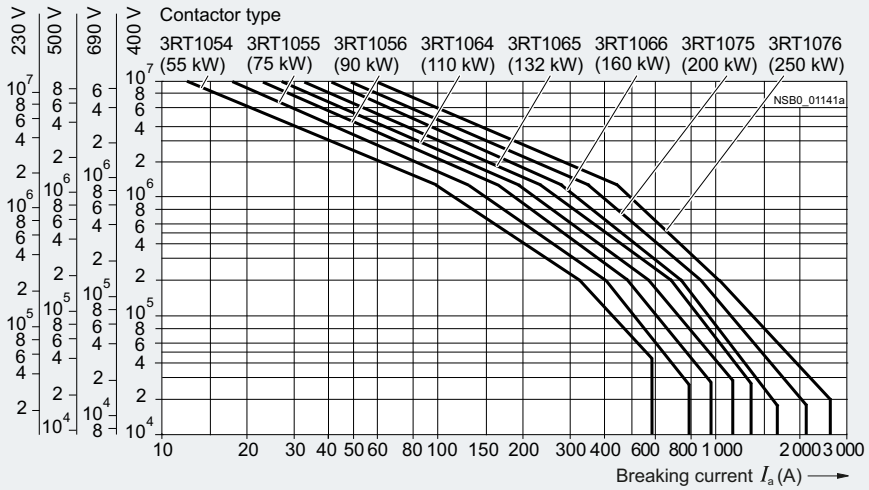

***Size S3***

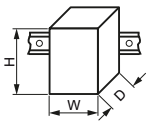
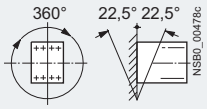
Operating cycles at




***Sizes S6 to S12***

Operating cycles at



| | | | | |
|---|---|---|---|---|
| | | | **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-loaded terminals | | mm | 45 x 70 x 73 | |
| • Basic unit with mounted auxiliary switch | | | | |
| - Screw terminals | | mm | 45 x 58 x 117 | |
| - Spring-loaded terminals | | mm | 45 x 70 x 121 | |
| • Basic unit with mounted function module or solid-state time-delay auxiliary switch | | | | |
| - Screw terminals | | mm | 45 x 58 x 147 | |
| - Spring-loaded terminals | | mm | 45 x 70 x 147 | |
| **Permissible mounting position** | | | | |
| The contactors are designed for operation on a vertical mounting surface. | | |  | |
| Upright mounting position | | |  Special version required | |
| **Mechanical endurance** | | | | |
| • Basic unit | | Operating cycles | 30 million | |
| - With mounted auxiliary switch | | Operating cycles | 10 million | |
| - With solid-state compatible auxiliary switch | | Operating cycles | 5 million | |
| **Electrical endurance** | | | For contact endurance of the main contacts, see page 3/25. | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | | V | 690 | |
| **Rated impulse withstand voltage $U_{imp}$** | | | | |
| • Auxiliary circuit | | kV | 6 | |
| • Main circuit | | 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) | | | Yes, this applies to both the basic unit as well as to between the basic unit and the mounted auxiliary switch according to IEC 60947-4-1 Appendix F | |
| • 3RH2919-.NF.. solid-state compatible auxiliary switches | | | No mirror contact for size S00 | |
| **Ambient temperature** | | | | |
| • During operation | | °C | -25 ... +60 | |
| • During storage | | °C | -55 ... +80 | |
| **Degree of protection IP on the front** acc. to IEC 60529 | | | IP20 (screw terminals and spring-loaded terminals) | |
| **Touch protection on the front** acc. to IEC 60529 | | | Finger-safe for vertical touching from the front (screw terminals and spring-loaded 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 |

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



| | | | 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 according 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 Configuration Manual for load feeders | |
| Short-circuit protection for fuseless load feeders | | | See 3RA2 load feeders, 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 3/121.

[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).

| | | | 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  | Integrated diode  | Integrated 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  | Integrated diode  | Integrated 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 |

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



| | | | | Contactors | | | |
|---|---|---|---|---|---|---|---|
| Type | | | | 3RT2015 | 3RT2016 | 3RT2017 | 3RT2018 |
| Size | | | | S00 | | | |
| **Rated data of the main contacts** | | | | | | | |
| ***Load rating with AC*** | | | | | | | |
| **Utilization category AC-1** | | | | | | | |
| • 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 cross-section in the main circuit for max. AC-1 rated value | | | $mm^2$ | 2.5 | 4 | | |
| **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.

| | | | | Contactors | |
|---|---|---|---|---|---|
| Type | | | | 3RT2015 | 3RT2016 to 3RT2018 |
| Size | | | | S00 | |
| **Rated data of the main contacts (continued)** | | | | | |
| ***Load rating with DC*** | | | | | |
| **Utilization category DC-1, (*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 | | 1/h | 10 000 | |
| • Switching frequency *z* during rated operation[1)] | | | | | |
| - $I_e$/AC-1 | At 400 V | | 1/h | 1 000 | |
| - $I_e$/AC-2 | At 400 V | | 1/h | 750 | |
| - $I_e$/AC-3 | At 400 V | | 1/h | 750 | |
| - $I_e$/AC-4 | At 400 V | | 1/h | 250 | |
| Contactors with overload relays | | | | | |
| • Mean value | | | 1/h | 15 | |

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

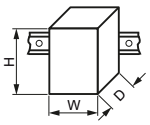
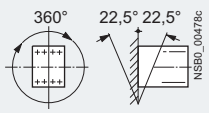
## SIRIUS 3RT contactors, 3-pole up to 250 kW



| | | Contactors |
|---|---|---|
| Type | | 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) | $mm^2$ | 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-loaded 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) | $mm^2$ | 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) | $mm^2$ | 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 conductor insulation: 3.6 mm. On spring-loaded terminals with conductor cross-sections ≤ 1 $mm^2$ an insulation stop is recommended, see page 3/122.

| | | 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-loaded terminals | mm | 45 x 102 x 97 | |
| • Basic unit with mounted auxiliary switch | | | |
| - Screw terminals | mm | 45 x 85 x 141 | |
| - Spring-loaded terminals | mm | 45 x 102 x 145 | |
| • Basic unit with mounted function module or solid-state time-delay auxiliary switch | | | |
| - Screw terminals | mm | 45 x 85 x 171 | |
| - Spring-loaded terminals | mm | 45 x 102 x 171 | |
| DC operation | | | |
| • Basic unit | | | |
| - Screw terminals | mm | 45 x 85 x 107 | |
| - Spring-loaded terminals | mm | 45 x 102 x 107 | |
| • Basic unit with mounted auxiliary switch | | | |
| - Screw terminals | mm | 45 x 85 x 151 | |
| - Spring-loaded terminals | mm | 45 x 102 x 155 | |
| • Basic unit with mounted function module or solid-state time-delay auxiliary switch | | | |
| - Screw terminals | mm | 45 x 85 x 181 | |
| - Spring-loaded 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 for 3RT202.-.K.40 coupling contactors | |
| **Mechanical endurance** | | | |
| • Basic unit and basic unit with mounted auxiliary switch | Operating cycles | 10 million | |
| • Basic unit with solid-state compatible auxiliary switch | Operating cycles | 5 million | |
| **Electrical endurance** | | For contact endurance of the main contacts, see page 3/25. | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | V | 690 | |
| **Rated impulse withstand voltage $U_{imp}$** | | | |
| • Auxiliary circuit | kV | 6 | |
| • Main circuit | 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) | | 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 IP on the front** acc. to IEC 60529 | | IP20 (screw terminals and spring-loaded terminals) | |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front (screw terminals and spring-loaded 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 | |

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

| Type | | | Contactors 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 acc. 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 Configuration Manual for load feeders | | |
| Short-circuit protection for fuseless load feeders | | | See 3RA2 load feeders, page 8/4 onwards | | |

| Type | | | Contactors 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 [3]/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 $U_s$ [4]** | | | | | | | |
| • 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] Value applies to 3RT2023 contactor 50 Hz AC.

[4] 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).

| | | | |
|---|---|---|---|
| | | | **Coupling contactors** |
| Type | | | **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** | | | Integrated 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 |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | **Contactors** | | | | | |
| Type | | | **3RT2023** | **3RT2024** | **3RT2025** | **3RT2026** | **3RT2027** | **3RT2028** |
| Size | | | **S0** | | | | | |
| **Rated data of the main contacts** | | | | | | | | |
| ***Load rating with AC*** | | | | | | | | |
| **Utilization category AC-1** | | | | | | | | |
| • 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 cross-section in the main circuit for max. AC-1 rated value | | $mm^2$ | 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 | 304 |
| **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).

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



| | | | | 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, (*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 | 1/h | | 5 000 | |
| | DC | 1/h | | 1 500 | |
| | AC/DC | 1/h | | 1 500 | |
| • Switching frequency *z* during rated operation[1)] | | | | | |
| - $I_e$/AC-1 | At 400 V | 1/h | | 1 000 | |
| - $I_e$/AC-2 | At 400 V | 1/h | | 1 000 | 750 |
| - $I_e$/AC-3 | At 400 V | 1/h | | 1 000 | 750 |
| - $I_e$/AC-4 | At 400 V | 1/h | | 300 | 250 |
| Contactors with overload relays | | | | | |
| • Mean value | | 1/h | | 15 | |

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

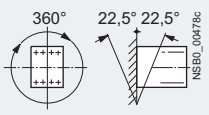
| | | |
|---|---|---|
| Type | | **Contactors**<br>**3RT2023 to 3RT2028** |
| Size | | **S0** |
| **Conductor cross-sections** | | |
| **Main conductors**<br>(1 or 2 conductors can be connected) | | **Screw terminals** |
| • Solid or stranded | $mm^2$ | 2 x (1 ... 2.5)[1]; 2 x (2.5 ... 10)[1] |
| • Finely stranded with end sleeve (DIN 46228) | $mm^2$ | 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<br>- Tightening torque | Nm | M4 (for Pozidriv size 2; ∅ 5 ... 6)<br>2 ... 2.5 (18 ... 22 lb.in) |
| **Auxiliary conductors**<br>(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) | $mm^2$ | 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<br>- Tightening torque | Nm | M3 (for Pozidriv size 2; ∅ 5 ... 6)<br>0.8 ... 1.2 (7 ... 10.3 lb.in) |
| **Main conductors**[2]<br>(1 or 2 conductors can be connected) | | **Spring-loaded 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) | $mm^2$ | 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]<br>(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) | $mm^2$ | 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 conductor insulation: 6.4 mm.
On spring-loaded terminals with conductor cross-sections ≤ 1 $mm^2$ an insulation stop is recommended, see page 3/122.

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



| | | Contactors | | | |
|---|---|---|---|---|---|
| Type | | 3RT2035 | 3RT2036 | 3RT2037 | 3RT2038 |
| Size | | S2 | | | |
| **General data** | | | | | |
| **Dimensions (W x H x D)** | | | | | |
| • Basic unit<br>- Screw/spring-loaded terminals | mm | 55 x 114 x 130 | | | |
| • Basic unit with mounted auxiliary switch<br>- Screw terminals<br>- Spring-loaded terminals | mm<br>mm | 55 x 114 x 174<br>55 x 114 x 178 | | | |
| • Basic unit with mounted function module or solid-state time-delay auxiliary switch<br>- Screw/spring-loaded terminals | mm | 55 x 114 x 204 | | | |
| **Permissible mounting position**<br>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 | Operating cycles | 10 million (3RT203.-.S.30: 5 million) | | | |
| • Basic units with solid-state compatible auxiliary switch | Operating cycles | 5 million | | | |
| **Electrical endurance** | | For contact endurance of the main contacts, see page 3/26. | | | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | V | 690 | | | |
| **Rated impulse withstand voltage $U_{imp}$** | | | | | |
| • Auxiliary circuit | kV | 6 | | | |
| • Main circuit | kV | 6 | | | |
| **Protective separation** between the coil and the main contacts (acc. to IEC 60947-1, Appendix N) | V | 400 | | | |
| **Mirror contacts**<br>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 60947-1, Appendix F | | | |
| • 3RT2.3. (removable auxiliary switch) | | Yes, acc. to IEC 60947-1, Appendix F | | | |
| **Permissible ambient temperature** | | | | | |
| • During operation | °C | -25 ... +60 | | | |
| • During storage | °C | -55 ... +80 | | | |
| **Degree of protection IP on the front** acc. to IEC 60529 | | IP20 (screw terminals and spring-loaded terminals) | | | |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front (screw terminals and spring-loaded terminals) | | | |
| **Shock resistance** | | | | | |
| • Rectangular pulse<br>- AC operation<br>- DC operation | <br>*g*/ms<br>*g*/ms | <br>11.8/5 and 7.4/10<br>7.7/5 and 4.5/10 | | | |
| • Sine pulse<br>- AC operation<br>- DC operation | <br>*g*/ms<br>*g*/ms | <br>18.5/5 and 11.6/10<br>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 Configuration Manual for load feeders | | | |
| Short-circuit protection for fuseless load feeders | | See 3RA2 load feeders, page 8/4 onwards | | | |

| | | | Contactors | | | Coupling contactors |
|---|---|---|---|---|---|---|
| Type | | | 3RT203.-.A.../ 3RT203.-.C... | 3RT203.-.N.3. | 3RT203.-.S.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 | 0.7 | -- |
| - Closing for DC operation | | VA | -- | 23[2] | 40 | -- |
| - Closed for DC operation | | VA | -- | 1 | 1.6 | -- |
| • DC operation | | | | | | |
| - Closing for DC operation | | W | -- | | | 21.5[3] |
| - Closed for DC operation | | W | -- | | | 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** | | | -- | Integrated varistor  U | | |
| **PLC control input** acc. to IEC 60947-1 | | | | | | |
| • Solid-state operating mechanism | | | -- | | Type 1 | -- |
| • Rated voltage | | V DC | -- | | 24 | -- |
| • Operating range | | V DC | -- | | 17 ... 30 | -- |
| • Power consumption | | mA | -- | | ≤ 30 | -- |
| • Recovery time after mains failure, typical | | s | -- | | 2 | -- |
| **Operating times at 0.8 ... 1.2 x $U_s$[4]** | | | | | | |
| Total break time = Opening delay + Arcing time | | | | | | |
| • DC operation | Closing delay | ms | -- | | | 35 ... 80 |
| | Opening delay | ms | -- | | | 30 ... 55 |
| **Operating times at 1.0 x $U_s$[4]** | | | | | | |
| • 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 |
| • AC/DC operation (fail-safe PLC input with PLC-IN or F-PLC-IN) | Closing delay | ms | -- | | 35 ... 80 | -- |
| | Opening delay | ms | -- | | 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 pickup currents (2.6 A on average) arise during the first 230 ms. For direct control by PLC, we therefore recommend special coupling contactors with reduced power consumption. The connection of one 3RT203.-.KB4. coupling contactor is possible per PLC output port with an output current of 2 A, see page 3/67.

3) In the case of DC coils, increased pickup currents (2.1 A on average) arise during the first 230 ms.

4) 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).

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



| | | | Contactors | | | |
|---|---|---|---|---|---|---|
| Type | | | 3RT2035 | 3RT2036 | 3RT2037 | 3RT2038 |
| Size | | | S2 | | | |
| **Rated data of the main contacts** | | | | | | |
| ***Load rating with AC*** | | | | | | |
| **Utilization category AC-1** | | | | | | |
| • 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 cross-section in the main circuit for max. AC-1 rated value | | $mm^2$ | 16 | 25 | | 35 |
| **Utilization categories AC-2 and AC-3** | | | | | | |
| • Rated operational currents $I_e$ | Up to 400 V | A | 41 | 50 | 65 | 80 |
| | 440 V | A | 41 | 50 | 65 | 80 |
| | 500 V | A | 41 | 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).

| | | | Contactors | | | |
|---|---|---|---|---|---|---|
| Type | | | 3RT2035 | 3RT2036 | 3RT2037 | 3RT2038 |
| Size | | | S2 | | | |
| **Rated data of the main contacts (continued)** | | | | | | |
| ***Load rating with DC*** | | | | | | |
| **Utilization category DC-1, (*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 | 1/h | 5 000 | | | |
| | DC | 1/h | 1 500 | | | |
| | AC/DC | 1/h | 1 500 (3RT203.-.S.30: 1 000) | | | |
| • Switching frequency *z* during rated operation[1)] | | | | | | |
| - $I_e$/AC-1 at 400 V | | 1/h | 1 200 (3RT203.-.S.30: 1 000) | 1 000 | 800 | 700 |
| - $I_e$/AC-2 at 400 V | | 1/h | 750 | 600 | 400 | 350 |
| - $I_e$/AC-3 at 400 V | | 1/h | 1 000 | 800 | 700 | 500 |
| - $I_e$/AC-4 at 400 V | | 1/h | 300 | 250 | 200 | 150 |
| Contactors with overload relays | | | | | | |
| • Mean value | | 1/h | 15 | | | |

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

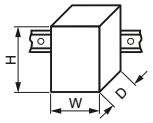
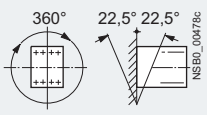
## SIRIUS 3RT contactors, 3-pole up to 250 kW



| | | Contactors |
|---|---|---|
| Type | | 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) | $mm^2$ | 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<br>- Tightening torque | Nm | Pozidriv size 2; ∅ 5 ... 6<br>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) | $mm^2$ | 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<br>- Tightening torque | Nm | M3 (for Pozidriv size 2; ∅ 5 ... 6)<br>0.8 ... 1.2 (7 ... 10.3 lb.in) |
| **Auxiliary and control conductors**[2] (1 or 2 conductors can be connected) | | Spring-loaded 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) | $mm^2$ | 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 conductor insulation: 3.6 mm. On spring-loaded terminals with conductor cross-sections ≤ 1 $mm^2$ an insulation stop is recommended, see page 3/122.

| | | Contactors | | |
|---|---|---|---|---|
| Type | | 3RT2045 | 3RT2046 | 3RT2047 |
| Size | | S3 | | |
| **General data** | | | | |
| **Dimensions (W x H x D)** |  | | | |
| • Basic unit<br>- Screw/spring-loaded terminals | mm | 70 x 140 x 152 | | |
| • Basic unit with mounted auxiliary switch<br>- Screw terminals<br>- Spring-loaded terminals | mm<br>mm | 70 x 140 x 196<br>70 x 140 x 200 | | |
| • Basic unit with mounted function module or solid-state time-delay auxiliary switch<br>- Screw/spring-loaded terminals | mm | 70 x 140 x 226 | | |
| **Permissible mounting position**<br>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 | Operating cycles | 10 million | | |
| • Basic units with solid-state compatible auxiliary switch | Operating cycles | 5 million | | |
| **Electrical endurance** | | For contact endurance of the main contacts, see page 3/26. | | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | V | 1 000 (3RT20..-.....-0CC0: 690) | | |
| **Rated impulse withstand voltage $U_{imp}$** | | | | |
| • Auxiliary circuit | kV | 6 | | |
| • Main circuit | kV | 8 | | |
| **Protective separation** between the coil and the main contacts (acc. to IEC 60947-1, Appendix N) | V | 690 | | |
| **Mirror contacts**<br>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 60947-1, Appendix F | | |
| • 3RT2.4. (removable auxiliary switch) | | Yes, acc. to IEC 60947-1, Appendix F | | |
| **Permissible ambient temperature** | | | | |
| • During operation | °C | -25 ... +60 | | |
| • During storage | °C | -55 ... +80 | | |
| **Degree of protection IP on the front** acc. to IEC 60529 | | IP20 (screw terminals and spring-loaded terminals) | | |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front (screw terminals and spring-loaded terminals) | | |
| **Shock resistance** | | | | |
| • Rectangular pulse<br>- AC operation<br>- DC operation | <br>*g*/ms<br>*g*/ms | <br>10.3/5 and 6.7/10<br>6.7/5 and 4.0/10 (3RT204.-.KB40: 6.3/5 and 3.6/10) | | |
| • Sine pulse<br>- AC operation<br>- DC operation | <br>*g*/ms<br>*g*/ms | <br>16.3/5 and 10.5/10<br>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<br>- Type of coordination "1"<br>- Type of coordination "2"<br>- Weld-free (test conditions acc. to IEC 60947-4-1) | <br>A<br>A<br>A | <br>250<br>160<br>On request | <br><br>160<br> | <br><br>200 |
| **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 Configuration Manual for load feeders | | |
| Short-circuit protection for fuseless load feeders | | See 3RA2 load feeders, page 8/4 onwards | | |

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



| | | | Contactors | | | Coupling contactors |
|---|---|---|---|---|---|---|
| Type | | | 3RT204.-.A..., 3RT204.-.C... | 3RT204.-.N.3. | 3RT204.-.S.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 | 130 | -- |
| - P.f. | | | -- | 0.95 | | -- |
| - Closed for AC operation | | VA | -- | 3.1 | 2.4 | -- |
| - P.f. | | | -- | 0.95 | 0.7 | -- |
| - Closing for DC operation | | VA | -- | 76[2] | 130 | -- |
| - Closed for DC operation | | VA | -- | 1.8 | | -- |
| • DC operation | | | | | | |
| - Closing for DC operation | | W | -- | | | 25[3] |
| - Closed for DC operation | | W | -- | | | 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** | | | -- | Integrated varistor  U | | |
| **PLC control input** acc. to IEC 60947-1 | | | | | | |
| • Solid-state operating mechanism | | | -- | | Type 1 | -- |
| • Rated voltage | | V DC | -- | | 24 | -- |
| • Operating range | | V DC | -- | | 17 ... 30 | -- |
| • Power consumption | | mA | -- | | ≤ 30 | -- |
| • Recovery time after mains failure, typical | | s | -- | | 2 | -- |
| **Operating times at 0.8 ... 1.2 x $U_s$[4]** | | | | | | |
| Total break time = Opening delay + Arcing time | | | | | | |
| • DC operation | Closing delay | ms | -- | | | 50 ... 70 |
| | Opening delay | ms | -- | | | 38 ... 57 |
| **Operating times at 1.0 x $U_s$[4]** | | | | | | |
| • AC operation | Closing delay | ms | 15 ... 25 | 50 ... 70 | -- | |
| | Opening delay | ms | 11 ... 20 | 38 ... 57 | -- | |
| • DC operation | Closing delay | ms | -- | 50 ... 70 | -- | 50 ... 70 |
| | Opening delay | ms | -- | 38 ... 57 | -- | 38 ... 57 |
| • AC/DC operation (fail-safe PLC input with PLC-IN or F-PLC-IN) | 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 pickup currents (6.5 A on average) arise during the first 150 ms. For direct control by PLC, we therefore recommend special coupling contactors with reduced power consumption. The connection of one 3RT204.-.KB4. coupling contactor is possible per PLC output port with an output current of 2 A, see page 3/67.

3) In the case of DC coils, increased pickup currents (2.1 A on average) arise during the first 150 ms.

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

| | | | Contactors | | |
|---|---|---|---|---|---|
| Type | | | **3RT2045** | **3RT2046** | **3RT2047** |
| Size | | | **S3** | | |
| **Rated data of the main contacts** | | | | | |
| ***Load rating with AC*** | | | | | |
| **Utilization category AC-1** | | | | | |
| • 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 cross-section in the main circuit for max. AC-1 rated value | | $mm^2$ | 50 | | |
| **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).

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



| | | | | | | |
|---|---|---|---|---|---|---|
| | | | | **Contactors** | | |
| Type | | | | **3RT2045** | **3RT2046** | **3RT2047** |
| Size | | | | **S3** | | |
| **Rated data of the main contacts (continued)** | | | | | | |
| ***Load rating with DC*** | | | | | | |
| **Utilization category DC-1, (*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 | 1/h | | 5 000 | | |
| | DC | 1/h | | 1 000 | | |
| | AC/DC | 1/h | | 1 000 | | |
| • Switching frequency *z* during rated operation[1)] | | | | | | |
| - $I_e$/AC-1 at 400 V | | 1/h | | 900 | | |
| - $I_e$/AC-2 at 400 V | | 1/h | | 400 | 350 | |
| - $I_e$/AC-3 at 400 V | | 1/h | | 1 000 | 850 | |
| - $I_e$/AC-4 at 400 V | | 1/h | | 300 | 250 | 200 |
| Contactors with overload relays | | | | | | |
| • Mean value | | 1/h | | 15 | | |

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

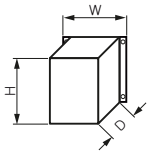
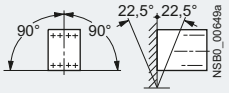
| | | |
|---|---|---|
| Type | | **Contactors**<br>**3RT2045 to 3RT2047** |
| Size | | **S3** |
| **Conductor cross-sections** | | |
| **Main conductors**<br>(1 or 2 conductors can be connected) | | **Screw terminals** |
| • Solid | $mm^2$ | 2 x (2.5 ... 16)[1] |
| • Stranded | $mm^2$ | 2 x (6 ... 16)[1]; 2 x (10 ... 50)[1]; 1 x (10 ... 70)[1] |
| • Finely stranded with end sleeve (DIN 46228) | $mm^2$ | 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<br>- Tightening torque | Nm | Hexagon socket, A/F 4<br>4.5 ... 6 (40 ... 53 lb.in) |
| **Auxiliary conductors and control conductors**<br>(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) | $mm^2$ | 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<br>- Tightening torque | Nm | M3 (for Pozidriv size 2; ∅ 5 ... 6)<br>0.8 ... 1.2 (7 ... 10.3 lb.in) |
| **Auxiliary and control conductors**[2]<br>(1 or 2 conductors can be connected) | | **Spring-loaded 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) | $mm^2$ | 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-loaded terminals with conductor cross-sections ≤ 1 $mm^2$ an insulation stop is recommended, see page 3/122.

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



| | | Contactors | | | | |
|---|---|---|---|---|---|---|
| Type | | 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 | 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 3/26. | | | | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | V | 1 000 | | | | |
| **Rated impulse withstand voltage $U_{imp}$** | | | | | | |
| • Auxiliary circuit | kV | 6 | | | | |
| • Main circuit | 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 IP on the front** acc. to IEC 60529 | | IP00 (IP20 with box terminal/cover) | | | | |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front with box terminal/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 3/19 | | | | |
| **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 | 250 | 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 Configuration Manual for load feeders | | | | |

| | | | 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 $U_{s\,min}$ ... $U_{s\,max}$) | | | | | |
| • Standard operating mechanism (3RT10..-.A) | | | | | |
| - 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 (3RT10..-.N/-.P/-.S) | | | | | |
| - 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 | | | | | |
| • 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) | | | | | |
| • Standard 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 | | |

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

| | | 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** | | | | | | | | | |
| • 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 cross-section in the main circuit for max. AC-1 rated value | $mm^2$ | 70 | 95 | | 150 | 185 | | 300 | 370 |
| **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).

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | **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, (*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 | | | | | | | | | | | |
| - Standard operating mechanism | 3RT10..-.A | 1/h | 2 000 | | | | | | | | |
| - Solid-state operating mechanism | 3RT10..-.N/-.P | 1/h | 1 000 | | | | | | | | |
| | 3RT10..-.S | 1/h | 1 000 | | | | | | 500 | | |
| • Switching frequency *z* during rated operation[1] | | | | | | | | | | | |
| - 3RT10..-.A standard operating mechanism and 3RT10..-.N/-.P solid-state operating mechanism | $I_e$/AC-1 at 400 V | 1/h | 800 | | | 750 | 800 | 750 | 700 | 500 | |
| | $I_e$/AC-2 at 400 V | 1/h | 400 | 300 | | 250 | | | 200 | 170 | |
| | $I_e$/AC-3 at 400 V | 1/h | 1 000 | 750 | | 500 | | | | 420 | |
| | $I_e$/AC-4 at 400 V | 1/h | 130 | | | | | | | | |
| - 3RT10..-.S solid-state operating mechanism | $I_e$/AC-1 at 400 V | 1/h | 750 | | | 500 | | | 200 | | |
| | $I_e$/AC-2 at 400 V | 1/h | 400 | 300 | | 250 | | | 200 | 170 | |
| | $I_e$/AC-3 at 400 V | 1/h | 750 | | | 500 | | | 200 | | |
| | $I_e$/AC-4 at 400 V | 1/h | 130 | | | | | | | | |
| Contactors with mounted overload relay | | | | | | | | | | | |
| • Mean value | | 1/h | 60 | | | | | | | | |

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

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



| | | 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 | 10 ... 12 | | 20 ... 22 |
| | lb.in | 90 ... 110 | | 180 ... 195 |
| Front clamping point connected | | | | |
|  NSB0_00479 | | | | |
| • Finely stranded with end sleeve (DIN 46228) | $mm^2$ | 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) | $mm^2$ | 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) | $mm^2$ | 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 | 10 ... 14 | | 14 ... 24 |
| | lb.in | 90 ... 124 | | 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) | $mm^2$ | 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 | 0.8 ... 1.2 | | |
| | lb.in | 7 ... 10.3 | | |
| **Auxiliary conductors**[4)] (1 or 2 conductors can be connected) | | Spring-loaded 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) | $mm^2$ | 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 DIN 46235, use the 3RT1956-4EA1 terminal cover for conductor cross-sections from 95 $mm^2$ to maintain the phase clearance; see page 3/119.

2) 3RT106. and 3RT107.: When connecting cable lugs according to DIN 46234 for conductor cross-sections larger than 240 $mm^2$ and according to DIN 46235 for conductor cross-sections larger than 185 $mm^2$, the 3RT1966-4EA1 terminal cover is required to maintain the phase clearance, see page 3/119.

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. On spring-loaded terminals with conductor cross-sections ≤ 1 $mm^2$ an insulation stop is recommended, see page 3/122.

***Data for North America***

| Type | | | Contactors 3RT2015 | 3RT2016 | 3RT2017 | 3RT2018 |
|---|---|---|---|---|---|---|
| Size | | | S00 | | | |
| **SIRIUS and UL rated data** | | | | | | |
| **Rated operational voltage** | | V AC | 600 | | | |
| **Uninterrupted current,** at 40 °C, open and enclosed | | A | 20 | | | |
| **Maximum horsepower ratings** (from SIRIUS and UL 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 | | | | | | |
| **SIRIUS and UL rated data** | | | | | | | | | |
| **Rated operational voltage** | | V AC | 600 | | | | | | |
| **Uninterrupted current,** at 40 °C, open and enclosed | | A | 30 | | | | | 42 | |
| **Maximum horsepower ratings** (from SIRIUS and UL 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 | | |
| **SIRIUS and UL 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 SIRIUS and UL 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 | | |

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



| | | | 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.<br>For the dimensioning of load feeders, see Configuration Manual. | | | | | | | |

| | | Contactors | | | |
|---|---|---|---|---|---|
| Type | | 3RT201 | 3RT202 to 3RT204 | | 3RT105 to 3RT107 |
| Size | | S00 | S0 to S3 | | S6 to S12 |
| | | Integrated or mountable auxiliary switch | Integrated | Mountable auxiliary switch | Mountable auxiliary switch |
| **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 | | | |

## 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 $U_s$ | SD | Screw terminals | | SD | Spring-loaded 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 | | 50/60 Hz AC | | Article No. | Price per PU | | Article No. | Price per PU |
| 400 V | **400 V** | 690 V | | | | | | | | | | |
| A | **kW** | A | | NO | NC | V | 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** | | | | | | | | | | | | |
| 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 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 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

## 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.00

3RT202.-2A.00

| Rated data | | | Auxiliary contacts | | | Rated control supply voltage $U_s$ | SD | **Screw terminals** | SD | **Spring-loaded 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 | | 50 Hz AC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | | | | | | | |
| A | **kW** | A | | NO | NC | V | 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** | ▶ | **3RT2023-2AB00** |
| | | | | | | 110 | ▶ | **3RT2023-1AF00** | ▶ | **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 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

***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 $U_s$ | SD | **Screw terminals** | SD | **Spring-loaded 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 | | 50 Hz AC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | V | | | | |
| A | **kW** | A | | | | | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S0*** | | | | | | | | | | |
| **With removable auxiliary switch** | | | | | | | | | | |
| 9 | **4** | 40 | **22** | 2 | 2 | 24 | 5 | **3RT2023-1AB04** | 5 | **3RT2023-2AB04** |
| | | | | | | 230 | ▶ | **3RT2023-1AP04** | ▶ | **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 and varistor plugged in** | | | | | | | | | | |
| 9 | **4** | 40 | **22** | 2 | 2 | 230 | 5 | **3RT2023-1CL24-3MA0** | 5 | **3RT2023-2CL24-3MA0** |
| 12 | **5.5** | 40 | **22** | 2 | 2 | 230 | ▶ | **3RT2024-1CL24-3MA0** | 2 | **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 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

***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 $U_s$ | SD | **Screw terminals** | SD | **Spring-loaded 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 | | 50 Hz AC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S2*** | | | | | | | | | | |
| 41 | **18.5** | 60 | **11** | 1 | 1 | 24 | ▶ | **3RT2035-1AB00** | 2 | **3RT2035-3AB00** |
| | | | | | | 110 | ▶ | **3RT2035-1AF00** | 2 | **3RT2035-3AF00** |
| | | | | | | 230 | ▶ | **3RT2035-1AP00** | ▶ | **3RT2035-3AP00** |
| 50 | **22** | 70 | **11** | 1 | 1 | 24 | ▶ | **3RT2036-1AB00** | 5 | **3RT2036-3AB00** |
| | | | | | | 110 | ▶ | **3RT2036-1AF00** | 2 | **3RT2036-3AF00** |
| | | | | | | 230 | ▶ | **3RT2036-1AP00** | ▶ | **3RT2036-3AP00** |
| 65 | **30** | 80 | **11** | 1 | 1 | 24 | ▶ | **3RT2037-1AB00** | 5 | **3RT2037-3AB00** |
| | | | | | | 110 | ▶ | **3RT2037-1AF00** | 2 | **3RT2037-3AF00** |
| | | | | | | 230 | ▶ | **3RT2037-1AP00** | ▶ | **3RT2037-3AP00** |
| 80 | **37** | 90 | **11** | 1 | 1 | 24 | 2 | **3RT2038-1AB00** | 5 | **3RT2038-3AB00** |
| | | | | | | 110 | ▶ | **3RT2038-1AF00** | 5 | **3RT2038-3AF00** |
| | | | | | | 230 | ▶ | **3RT2038-1AP00** | ▶ | **3RT2038-3AP00** |
| **With removable auxiliary switch** | | | | | | | | | | |
| 41 | **18.5** | 60 | **22** | 2 | 2 | 24 | 2 | **3RT2035-1AB04** | | -- |
| | | | | | | 110 | 2 | **3RT2035-1AF04** | | -- |
| | | | | | | 230 | ▶ | **3RT2035-1AP04** | | -- |
| 50 | **22** | 70 | **22** | 2 | 2 | 24 | 2 | **3RT2036-1AB04** | | -- |
| | | | | | | 110 | 2 | **3RT2036-1AF04** | | -- |
| | | | | | | 230 | ▶ | **3RT2036-1AP04** | | -- |
| 65 | **30** | 80 | **22** | 2 | 2 | 24 | 2 | **3RT2037-1AB04** | | -- |
| | | | | | | 110 | 2 | **3RT2037-1AF04** | | -- |
| | | | | | | 230 | ▶ | **3RT2037-1AP04** | | -- |
| 80 | **37** | 90 | **22** | 2 | 2 | 24 | 5 | **3RT2038-1AB04** | | -- |
| | | | | | | 110 | 2 | **3RT2038-1AF04** | | -- |
| | | | | | | 230 | ▶ | **3RT2038-1AP04** | | -- |
| **With permanently mounted auxiliary switch and integrated coil circuit (varistor plugged in at the factory)** | | | | | | | | | | |
| 41 | **18.5** | 60 | **22** | 2 | 2 | 230 | 5 | **3RT2035-1CL24-3MA0** | 5 | **3RT2035-3CL24-3MA0** |
| 50 | **22** | 70 | **22** | 2 | 2 | 230 | 2 | **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 | 2 | **3RT2038-1CL24-3MA0** | 2 | **3RT2038-3CL24-3MA0** |


Other voltages according to page 3/75 on request.
Accessories and spare parts, see pages 3/77 to 3/126.




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

***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 $U_s$ | SD | **Screw terminals** | | SD | **Spring-loaded 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 | | 50 Hz AC | | Article No. | Price per PU | | Article No. | Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | | | |
| A | **kW** | A | | | | V | d | | | d | | |
| **For screw fixing and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails** | | | | | | | | | | | | |
| ***Size S3*** | | | | | | | | | | | | |
| 80 | **37** | 125 | **11** | 1 | 1 | 24 | 2 | **3RT2045-1AB00** | | 5 | **3RT2045-3AB00** | |
| | | | | | | 110 | ▶ | **3RT2045-1AF00** | | 2 | **3RT2045-3AF00** | |
| | | | | | | 230 | ▶ | **3RT2045-1AP00** | | 2 | **3RT2045-3AP00** | |
| 95 | **45** | 130 | **11** | 1 | 1 | 24 | 2 | **3RT2046-1AB00** | | 5 | **3RT2046-3AB00** | |
| | | | | | | 110 | ▶ | **3RT2046-1AF00** | | 2 | **3RT2046-3AF00** | |
| | | | | | | 230 | ▶ | **3RT2046-1AP00** | | 2 | **3RT2046-3AP00** | |
| 110 | **55** | 130 | **11** | 1 | 1 | 24 | 5 | **3RT2047-1AB00** | | 5 | **3RT2047-3AB00** | |
| | | | | | | 110 | 5 | **3RT2047-1AF00** | | 5 | **3RT2047-3AF00** | |
| | | | | | | 230 | ▶ | **3RT2047-1AP00** | | 2 | **3RT2047-3AP00** | |
| **With removable auxiliary switch** | | | | | | | | | | | | |
| 80 | **37** | 125 | **22** | 2 | 2 | 24 | 5 | **3RT2045-1AB04** | | | **--** | |
| | | | | | | 110 | 2 | **3RT2045-1AF04** | | | **--** | |
| | | | | | | 230 | 2 | **3RT2045-1AP04** | | | **--** | |
| 95 | **45** | 130 | **22** | 2 | 2 | 24 | 5 | **3RT2046-1AB04** | | | **--** | |
| | | | | | | 110 | 2 | **3RT2046-1AF04** | | | **--** | |
| | | | | | | 230 | ▶ | **3RT2046-1AP04** | | | **--** | |
| 110 | **55** | 130 | **22** | 2 | 2 | 24 | 5 | **3RT2047-1AB04** | | | **--** | |
| | | | | | | 110 | 5 | **3RT2047-1AF04** | | | **--** | |
| | | | | | | 230 | ▶ | **3RT2047-1AP04** | | | **--** | |
| **With permanently mounted auxiliary switch and integrated coil circuit (varistor plugged in at the factory)** | | | | | | | | | | | | |
| 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 | 2 | **3RT2047-1CL24-3MA0** | | | **--** | |

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

## 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.-1B...

3RT201.-2B...

| Rated data | | | Auxiliary contacts | | | Rated control supply voltage $U_s$ | SD | Screw terminals | SD | Spring-loaded 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 | | DC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S00*** | | | | | | | | | | |
| 7 | **3** | 18 | **10** | 1 | -- | 24<br>220 | ▶<br>2 | **3RT2015-1BB41**<br>**3RT2015-1BM41** | ▶<br>5 | **3RT2015-2BB41**<br>**3RT2015-2BM41** |
| | | | **01** | -- | 1 | 24<br>220 | ▶<br>5 | **3RT2015-1BB42**<br>**3RT2015-1BM42** | ▶<br>5 | **3RT2015-2BB42**<br>**3RT2015-2BM42** |
| 9 | **4** | 22 | **10** | 1 | -- | 24<br>220 | ▶<br>5 | **3RT2016-1BB41**<br>**3RT2016-1BM41** | ▶<br>5 | **3RT2016-2BB41**<br>**3RT2016-2BM41** |
| | | | **01** | -- | 1 | 24<br>220 | ▶<br>5 | **3RT2016-1BB42**<br>**3RT2016-1BM42** | ▶<br>5 | **3RT2016-2BB42**<br>**3RT2016-2BM42** |
| 12 | **5.5** | 22 | **10** | 1 | -- | 24<br>220 | ▶<br>5 | **3RT2017-1BB41**<br>**3RT2017-1BM41** | ▶<br>5 | **3RT2017-2BB41**<br>**3RT2017-2BM41** |
| | | | **01** | -- | 1 | 24<br>220 | ▶<br>5 | **3RT2017-1BB42**<br>**3RT2017-1BM42** | ▶<br>5 | **3RT2017-2BB42**<br>**3RT2017-2BM42** |
| 16 | **7.5** | 22 | **10** | 1 | -- | 24<br>220 | ▶<br>5 | **3RT2018-1BB41**<br>**3RT2018-1BM41** | ▶<br>5 | **3RT2018-2BB41**<br>**3RT2018-2BM41** |
| | | | **01** | -- | 1 | 24<br>220 | ▶<br>5 | **3RT2018-1BB42**<br>**3RT2018-1BM42** | ▶<br>5 | **3RT2018-2BB42**<br>**3RT2018-2BM42** |
| **With integrated coil circuit (varistor integrated at the factory)** | | | | | | | | | | |
| 7 | **3** | 18 | **10** | 1 | -- | 24 | 5 | **3RT2015-1UB41** | 5 | **3RT2015-2UB41** |
| | | | **01** | -- | 1 | 24 | 5 | **3RT2015-1UB42** | 5 | **3RT2015-2UB42** |
| 9 | **4** | 22 | **10** | 1 | -- | 24 | 5 | **3RT2016-1UB41** | 5 | **3RT2016-2UB41** |
| | | | **01** | -- | 1 | 24 | 5 | **3RT2016-1UB42** | 5 | **3RT2016-2UB42** |
| 12 | **5.5** | 22 | **10** | 1 | -- | 24 | 5 | **3RT2017-1UB41** | 5 | **3RT2017-2UB41** |
| | | | **01** | -- | 1 | 24 | 5 | **3RT2017-1UB42** | 5 | **3RT2017-2UB42** |
| 16 | **7.5** | 22 | **10** | 1 | -- | 24 | 5 | **3RT2018-1UB41** | 5 | **3RT2018-2UB41** |
| | | | **01** | -- | 1 | 24 | 5 | **3RT2018-1UB42** | 5 | **3RT2018-2UB42** |
| **With integrated coil circuit (diode integrated at the factory)[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 3/7.

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

## *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-loaded 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 | | DC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S00*** | | | | | | | | | | |
| **With permanently mounted auxiliary switch** | | | | | | | | | | |
| 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 and integrated coil circuit (diode integrated at the factory)[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** | 2 | **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 3/7.

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

### *DC operation for direct control by PLC*

- Coupling contactors with adapted power consumption
- Suitable for electronic PLC/F-PLC outputs
- Cannot be expanded with auxiliary switches

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-loaded 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 | | DC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S00*** | | | | | | | | | | |
| (Cannot be expanded with auxiliary switches) | | | | | | | | | | |
| 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 integrated at the factory)**[1] | | | | | | | | | | |
| (Cannot be expanded with auxiliary switches) | | | | | | | | | | |
| 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 | 2 | **3RT2017-1JB41** | 5 | **3RT2017-2JB41** |
| | | | **01** | -- | 1 | 24 | 5 | **3RT2017-1JB42** | ▶ | **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 3/66.
For more information about dimensioning and configuring, see page 3/7.

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

3

### *DC operation for direct control by PLC* ⎓

- Coupling contactors with adapted power consumption
- Suitable for electronic PLC/F-PLC outputs
- Cannot be expanded with auxiliary switches

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-loaded 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 | | DC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S00*** | | | | | | | | | | |
| **With integrated coil circuit (suppressor diode integrated at the factory)[1)]** | | | | | | | | | | |
| (Cannot be expanded with auxiliary switches) | | | | | | | | | | |
| 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 | 2 | **3RT2017-1KB41** | ▶ | **3RT2017-2KB41** |
| | | | **01** | -- | 1 | 24 | 2 | **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 3/66.
For more information about dimensioning and configuring, see page 3/7.

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

## 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.-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-loaded 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 | | DC | | Article No. Price per PU | | Article No. Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | 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<br>220 | ▶<br>5 | **3RT2024-1BB40**<br>**3RT2024-1BM40** | ▶<br>5 | **3RT2024-2BB40**<br>**3RT2024-2BM40** |
| 17 | **7.5** | 40 | **11** | 1 | 1 | 24<br>220 | ▶<br>5 | **3RT2025-1BB40**<br>**3RT2025-1BM40** | ▶<br>5 | **3RT2025-2BB40**<br>**3RT2025-2BM40** |
| 25 | **11** | 40 | **11** | 1 | 1 | 24<br>220 | ▶<br>5 | **3RT2026-1BB40**<br>**3RT2026-1BM40** | ▶<br>5 | **3RT2026-2BB40**<br>**3RT2026-2BM40** |
| 32 | **15** | 50 | **11** | 1 | 1 | 24<br>220 | ▶<br>5 | **3RT2027-1BB40**<br>**3RT2027-1BM40** | ▶<br>5 | **3RT2027-2BB40**<br>**3RT2027-2BM40** |
| 38 | **18.5** | 50 | **11** | 1 | 1 | 24<br>220 | ▶<br>5 | **3RT2028-1BB40**<br>**3RT2028-1BM40** | ▶<br>5 | **3RT2028-2BB40**<br>**3RT2028-2BM40** |
| **With coil circuit plugged into front (varistor plugged in at the factory)** | | | | | | | | | | |
| 9 | **4** | 40 | **11** | 1 | 1 | 24 | 5 | **3RT2023-1DB40** | 5 | **3RT2023-2DB40** |
| 12 | **5.5** | 40 | **11** | 1 | 1 | 24 | 5 | **3RT2024-1DB40** | 5 | **3RT2024-2DB40** |
| 17 | **7.5** | 40 | **11** | 1 | 1 | 24 | 5 | **3RT2025-1DB40** | 5 | **3RT2025-2DB40** |
| 25 | **11** | 40 | **11** | 1 | 1 | 24 | 5 | **3RT2026-1DB40** | 5 | **3RT2026-2DB40** |
| 32 | **15** | 50 | **11** | 1 | 1 | 24 | 5 | **3RT2027-1DB40** | 5 | **3RT2027-2DB40** |
| 38 | **18.5** | 50 | **11** | 1 | 1 | 24 | 5 | **3RT2028-1DB40** | 5 | **3RT2028-2DB40** |
| **With coil circuit plugged into front (diode assembly plugged in at the factory)** | | | | | | | | | | |
| 9 | **4** | 40 | **11** | 1 | 1 | 24 | ▶ | **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 auxiliary switch** | | | | | | | | | | |
| 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 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

***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-loaded 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 | | DC | | Article No. | Price per PU | | Article No. | Price per PU |
| 400 V | **400 V** | 690 V | | | | | | | | | | |
| A | **kW** | A | | NO | NC | V | d | | | d | | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | | | |
| ***Size S0*** | | | | | | | | | | | | |
| **With permanently mounted auxiliary switch and integrated coil circuit (varistor integrated at the factory)** | | | | | | | | | | | | |
| 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 and integrated coil circuit (diode assembly plugged in at the factory)** | | | | | | | | | | | | |
| 9 | **4** | 40 | **22** | 2 | 2 | 24 | ▶ | **3RT2023-1FB44-3MA0** | | 5 | **3RT2023-2FB44-3MA0** | |
| 12 | **5.5** | 40 | **22** | 2 | 2 | 24 | 5 | **3RT2024-1FB44-3MA0** | | 2 | **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 | 5 | **3RT2023-1BB40-0CC0** | | 5 | **3RT2023-2BB40-0CC0** | |
| 12 | **5.5** | 40 | **11** | 1 | 1 | 24 | 2 | **3RT2024-1BB40-0CC0** | | 5 | **3RT2024-2BB40-0CC0** | |
| 17 | **7.5** | 40 | **11** | 1 | 1 | 24 | 5 | **3RT2025-1BB40-0CC0** | | 5 | **3RT2025-2BB40-0CC0** | |
| 25 | **11** | 40 | **11** | 1 | 1 | 24 | 5 | **3RT2026-1BB40-0CC0** | | 5 | **3RT2026-2BB40-0CC0** | |
| 32 | **15** | 50 | **11** | 1 | 1 | 24 | 5 | **3RT2027-1BB40-0CC0** | | 5 | **3RT2027-2BB40-0CC0** | |
| 38 | **18.5** | 50 | **11** | 1 | 1 | 24 | 5 | **3RT2028-1BB40-0CC0** | | 5 | **3RT2028-2BB40-0CC0** | |

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

***DC operation for direct control by PLC*** ⎓

- Coupling contactors with adapted power consumption
- Suitable for electronic PLC/F-PLC outputs
- Cannot be expanded with auxiliary switches

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-loaded 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 | DC | | Article No. / Price per PU | | Article No. / Price per PU |
| A | **kW** | A | | NO | NC | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S0*** | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** (Cannot be expanded with auxiliary switches) 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** | ▶ | **3RT2025-2KB40** |
| 25 | **11** | 40 | **11** | 1 | 1 | 24 | ▶ | **3RT2026-1KB40** | ▶ | **3RT2026-2KB40** |
| 32 | **15** | 50 | **11** | 1 | 1 | 24 | ▶ | **3RT2027-1KB40** | 5 | **3RT2027-2KB40** |

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

3

***DC operation for direct control by PLC***

- Coupling contactors with adapted power consumption
- Suitable for electronic PLC/F-PLC outputs with 2 A
- Can be expanded using front or lateral auxiliary switch (1 x left and 1 x right)

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-loaded 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 | | DC | | Article No. / Price per PU | | Article No. / Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S2*** | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| Operating range **0.8 ... 1.2 x $U_s$**, closing power of the solenoid coils **21.5 W** at 24 V | | | | | | | | | | |
| 41 | **18.5** | 60 | **11** | 1 | 1 | 24 | ▶ | **3RT2035-1KB40** | ▶ | **3RT2035-3KB40** |
| 50 | **22** | 70 | **11** | 1 | 1 | 24 | ▶ | **3RT2036-1KB40** | ▶ | **3RT2036-3KB40** |
| 65 | **30** | 80 | **11** | 1 | 1 | 24 | ▶ | **3RT2037-1KB40** | ▶ | **3RT2037-3KB40** |
| 80 | **37** | 90 | **11** | 1 | 1 | 24 | ▶ | **3RT2038-1KB40** | ▶ | **3RT2038-3KB40** |
| **For screw fixing and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails** | | | | | | | | | | |
| ***Size S3*** | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| Operating range **0.8 ... 1.2 x $U_s$**, closing power of the solenoid coils **25 W** at 24 V | | | | | | | | | | |
| 80 | **37** | 125 | **11** | 1 | 1 | 24 | ▶ | **3RT2045-1KB40** | ▶ | **3RT2045-3KB40** |
| 95 | **45** | 130 | **11** | 1 | 1 | 24 | ▶ | **3RT2046-1KB40** | ▶ | **3RT2046-3KB40** |

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

***AC/DC operation***

- 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-loaded 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 | 50/60 Hz AC or DC | | Article No. | Price per PU | | Article No. | Price per PU |
| A | **kW** | A | | NO | NC | V | d | | | d | | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | | | |
| ***Size S0*** | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | |
| 12 | **5.5** | 40 | **11** | 1 | 1 | 21 ... 28 | ▶ | **3RT2024-1NB30** | | 2 | **3RT2024-2NB30** | |
| | | | | | | 95 ... 130 | 2 | **3RT2024-1NF30** | | 2 | **3RT2024-2NF30** | |
| | | | | | | 200 ... 280 | 2 | **3RT2024-1NP30** | | 2 | **3RT2024-2NP30** | |
| 17 | **7.5** | 40 | **11** | 1 | 1 | 21 ... 28 | ▶ | **3RT2025-1NB30** | | 5 | **3RT2025-2NB30** | |
| | | | | | | 95 ... 130 | 2 | **3RT2025-1NF30** | | 5 | **3RT2025-2NF30** | |
| | | | | | | 200 ... 280 | 2 | **3RT2025-1NP30** | | 2 | **3RT2025-2NP30** | |
| 25 | **11** | 40 | **11** | 1 | 1 | 21 ... 28 | ▶ | **3RT2026-1NB30** | | 2 | **3RT2026-2NB30** | |
| | | | | | | 95 ... 130 | 2 | **3RT2026-1NF30** | | 5 | **3RT2026-2NF30** | |
| | | | | | | 200 ... 280 | 5 | **3RT2026-1NP30** | | 5 | **3RT2026-2NP30** | |
| 32 | **15** | 50 | **11** | 1 | 1 | 21 ... 28 | ▶ | **3RT2027-1NB30** | | 2 | **3RT2027-2NB30** | |
| | | | | | | 95 ... 130 | 2 | **3RT2027-1NF30** | | 5 | **3RT2027-2NF30** | |
| | | | | | | 200 ... 280 | 2 | **3RT2027-1NP30** | | 5 | **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 | 2 | **3RT2028-1NP30** | | 5 | **3RT2028-2NP30** | |


Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.




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

### *AC/DC operation*

- 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-loaded 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 | 50/60 Hz AC or DC | | Article No. / Price per PU | | Article No. / Price per PU |
| A | **kW** | A | | NO | NC | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S2*** | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| 41 | **18.5** | 60 | **11** | 1 | 1 | 20 ... 33 | ▶ | **3RT2035-1NB30** | ▶ | **3RT2035-3NB30** |
| | | | | | | 83 ... 155 | 5 | **3RT2035-1NF30** | 5 | **3RT2035-3NF30** |
| | | | | | | 175 ... 280 | 2 | **3RT2035-1NP30** | 5 | **3RT2035-3NP30** |
| 50 | **22** | 70 | **11** | 1 | 1 | 20 ... 33 | ▶ | **3RT2036-1NB30** | ▶ | **3RT2036-3NB30** |
| | | | | | | 83 ... 155 | 2 | **3RT2036-1NF30** | 5 | **3RT2036-3NF30** |
| | | | | | | 175 ... 280 | 2 | **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 | 2 | **3RT2037-1NP30** | 2 | **3RT2037-3NP30** |
| 80 | **37** | 90 | **11** | 1 | 1 | 20 ... 33 | ▶ | **3RT2038-1NB30** | ▶ | **3RT2038-3NB30** |
| | | | | | | 83 ... 155 | 2 | **3RT2038-1NF30** | X | **3RT2038-3NF30** |
| | | | | | | 175 ... 280 | 2 | **3RT2038-1NP30** | 2 | **3RT2038-3NP30** |
| **With removable auxiliary switch and integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| 41 | **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 | 2 | **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 and integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| 41 | **18.5** | 60 | **22** | 2 | 2 | 20 ... 33 | ▶ | **3RT2035-1NB34-3MA0** | 2 | **3RT2035-3NB34-3MA0** |
| 50 | **22** | 70 | **22** | 2 | 2 | 20 ... 33 | ▶ | **3RT2036-1NB34-3MA0** | 5 | **3RT2036-3NB34-3MA0** |
| 65 | **30** | 80 | **22** | 2 | 2 | 20 ... 33 | 2 | **3RT2037-1NB34-3MA0** | 5 | **3RT2037-3NB34-3MA0** |
| 80 | **37** | 90 | **22** | 2 | 2 | 20 ... 33 | 2 | **3RT2038-1NB34-3MA0** | 2 | **3RT2038-3NB34-3MA0** |
| **With voltage tap-off and integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| 41 | **18.5** | 60 | **11** | 1 | 1 | 20 ... 33 | 5 | **3RT2035-1NB30-0CC0** | 5 | **3RT2035-3NB30-0CC0** |
| 50 | **22** | 70 | **11** | 1 | 1 | 20 ... 33 | 5 | **3RT2036-1NB30-0CC0** | 5 | **3RT2036-3NB30-0CC0** |
| 65 | **30** | 80 | **11** | 1 | 1 | 20 ... 33 | 5 | **3RT2037-1NB30-0CC0** | 5 | **3RT2037-3NB30-0CC0** |
| 80 | **37** | 90 | **11** | 1 | 1 | 20 ... 33 | 5 | **3RT2038-1NB30-0CC0** | 5 | **3RT2038-3NB30-0CC0** |

Other voltages according to page 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

### *AC/DC operation*

- 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
- Solid-state 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

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


3RT203.-1S.30


3RT203.-3S.30


3RT204.-1S.30


3RT204.-3S.30

| Rated data | | | Auxiliary contacts | | | Rated control supply voltage $U_s$ | SD | **Screw terminals** | SD | **Spring-loaded 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 | | 50/60 Hz AC or DC | | Article No. / Price per PU | | Article No. / Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | | | | | |
| A | **kW** | A | | | | V | d | | d | |
| **For screw fixing and snap-on mounting onto TH 35 standard mounting rail** | | | | | | | | | | |
| ***Size S2*** | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| 41 | **18.5** | 60 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2035-1SB30** | 5 | **3RT2035-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2035-1SF30** | 5 | **3RT2035-3SF30** |
| | | | | | | 175 ... 280 | 5 | **3RT2035-1SP30** | 5 | **3RT2035-3SP30** |
| 50 | **22** | 70 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2036-1SB30** | 5 | **3RT2036-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2036-1SF30** | 5 | **3RT2036-3SF30** |
| | | | | | | 175 ... 280 | 5 | **3RT2036-1SP30** | 5 | **3RT2036-3SP30** |
| 65 | **30** | 80 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2037-1SB30** | 5 | **3RT2037-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2037-1SF30** | 5 | **3RT2037-3SF30** |
| | | | | | | 175 ... 280 | 5 | **3RT2037-1SP30** | 5 | **3RT2037-3SP30** |
| 80 | **37** | 90 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2038-1SB30** | 5 | **3RT2038-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2038-1SF30** | 5 | **3RT2038-3SF30** |
| | | | | | | 175 ... 280 | 5 | **3RT2038-1SP30** | 5 | **3RT2038-3SP30** |
| **For screw fixing and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails** | | | | | | | | | | |
| ***Size S3*** | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | |
| 80 | **37** | 125 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2045-1SB30** | 5 | **3RT2045-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2045-1SF30** | 5 | **3RT2045-3SF30** |
| | | | | | | 175 ... 280 | 3 | **3RT2045-1SP30** | 3 | **3RT2045-3SP30** |
| 95 | **45** | 130 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2046-1SB30** | 5 | **3RT2046-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2046-1SF30** | 5 | **3RT2046-3SF30** |
| | | | | | | 175 ... 280 | 3 | **3RT2046-1SP30** | 3 | **3RT2046-3SP30** |
| 110 | **55** | 130 | **01** | -- | 1 | 21 ... 33 | 5 | **3RT2047-1SB30** | 5 | **3RT2047-3SB30** |
| | | | | | | 83 ... 150 | 5 | **3RT2047-1SF30** | 5 | **3RT2047-3SF30** |
| | | | | | | 175 ... 280 | 3 | **3RT2047-1SP30** | 3 | **3RT2047-3SP30** |

Accessories and spare parts, see pages 3/77 to 3/126.



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

***AC/DC operation***

- 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-loaded 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 | | 50/60 Hz AC or DC | | Article No. | Price per PU | | Article No. | Price per PU |
| 400 V | **400 V** | 690 V | | NO | NC | V | | | | | | |
| A | **kW** | A | | | | | d | | | d | | |
| **For screw fixing and snap-on mounting onto TH 35-15 and TH 75-15 standard mounting rails** | | | | | | | | | | | | |
| ***Size S3*** | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | |
| 80 | **37** | 125 | **11** | 1 | 1 | 20 ... 33 | ▶ | **3RT2045-1NB30** | | 2 | **3RT2045-3NB30** | |
| | | | | | | 83 ... 155 | 2 | **3RT2045-1NF30** | | 5 | **3RT2045-3NF30** | |
| | | | | | | 175 ... 280 | 5 | **3RT2045-1NP30** | | 5 | **3RT2045-3NP30** | |
| 95 | **45** | 130 | **11** | 1 | 1 | 20 ... 33 | ▶ | **3RT2046-1NB30** | | 2 | **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 | ▶ | **3RT2047-1NB30** | | 2 | **3RT2047-3NB30** | |
| | | | | | | 83 ... 155 | 5 | **3RT2047-1NF30** | | 5 | **3RT2047-3NF30** | |
| | | | | | | 175 ... 280 | 5 | **3RT2047-1NP30** | | 5 | **3RT2047-3NP30** | |
| **With removable auxiliary switch and integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | |
| 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 | 2 | **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 and integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | |
| 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 integrated in electronics at the factory)** | | | | | | | | | | | | |
| 80 | **37** | 125 | **11** | 1 | 1 | 20 ... 33 | 5 | **3RT2045-1NB30-0CC0** | | 10 | **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 3/75 on request.

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

### *AC/DC operation* ≂

- Standard operating mechanism 3RT10..-.A
- For screw fixing
- Auxiliary and control conductors: Screw or spring-loaded terminals
- Main conductors: Busbar connections; a connection kit with screws, spring washers and nuts is enclosed.

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 Operational current $I_e$ up to 500 V A | Ratings of three-phase motors at 50 Hz and 400 V kW | 500 V kW | 690 V kW | AC-1, $t_u$: 40 °C Operational current $I_e$ up to 690 V A | Auxiliary contacts, lateral Version NO | NC | Rated control supply voltage $U_s$ 50/60 Hz AC or DC V | SD d | **Screw terminals** Article No. | Price per PU | SD d | **Spring-loaded terminals** Article No. | Price per PU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Standard operating mechanism with economy circuit for AC and DC operation (switchover from closing coil to holding coil)** | | | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated at the factory)** | | | | | | | | | | | | | | |
| **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** | | ▶ | **3RT1055-2AP36** | |
| | 185 | **90**[1] | 110 | 160 | 215 | 2 | 2 | 110 ... 127 | ▶ | **3RT1056-6AF36** | | 5 | **3RT1056-2AF36** | |
| | | | | | | | | 220 ... 240 | ▶ | **3RT1056-6AP36** | | ▶ | **3RT1056-2AP36** | |
| **S10** | 225 | **110** | 160 | 200 | 275 | 2 | 2 | 110 ... 127 | ▶ | **3RT1064-6AF36** | | 5 | **3RT1064-2AF36** | |
| | | | | | | | | 220 ... 240 | ▶ | **3RT1064-6AP36** | | ▶ | **3RT1064-2AP36** | |
| | 265 | **132** | 160 | 250 | 330 | 2 | 2 | 110 ... 127 | ▶ | **3RT1065-6AF36** | | 5 | **3RT1065-2AF36** | |
| | | | | | | | | 220 ... 240 | ▶ | **3RT1065-6AP36** | | ▶ | **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** | | ▶ | **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 3/74.
For more information about dimensioning and configuring, see page 3/7.

Other voltages according to page 3/76 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

***AC/DC operation***

- Solid-state 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
- For screw fixing
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections; a connection kit with screws, spring washers and nuts is enclosed.

For more information on safety systems, see 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 | Ratings of three-phase motors at 50 Hz and | Version | | 50/60 Hz AC or DC | | Article No. | Price per PU | | | |
| | 500 V | **400 V** | | | | | | | | | |
| | A | **kW** | NO | NC | V | d | | | | | |
| **Solid-state operating mechanism** | | | | | | | | | | | |
| ***With two removable laterally mounted auxiliary switches*** | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | |
| **S6** | 115 | **55** | 2 | 2 | 96 ... 127 | 5 | **3RT1054-6SF36** | | 1 | 1 unit | 41B |
| | | | | | 200 ... 277 | 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*** | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | |
| **S6** | 115 | **55** | 2 | 2 | 96 ... 127 | 5 | **3RT1054-6SF36-3PA0** | | 1 | 1 unit | 41B |
| | | | | | 200 ... 277 | 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 |

Accessories and spare parts, see pages 3/77 to 3/126.

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

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

***AC/DC operation*** ≂

- Solid-state operating mechanism
  - 3RT10..-.N with 24 V DC control signal input
  - 3RT10..-.P with 24 V DC control signal input and with remaining lifetime indicator (RLT)
- For screw fixing
- Auxiliary and control conductors: Screw or spring-loaded terminals
- Main conductors: Busbar connections; a connection kit with screws, spring washers and nuts is enclosed.

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


3RT105.-6N.36


3RT106.-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 A | Ratings of three-phase motors at 50 Hz and 400 V kW | 500 V kW | 690 V kW | AC-1, $t_u$: 40 °C Operational current $I_e$ up to 690 V A | Auxiliary contacts, lateral Version NO | NC | Rated control supply voltage $U_s$ 50/60 Hz AC or DC V | SD d | Screw terminals Article No. | Price per PU | SD d | Spring-loaded terminals Article No. | Price per PU |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Solid-state operating mechanism** | | | | | | | | | | | | | | |
| ***With 24 V DC control signal input e.g. for control by PLC*** | | | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | | | |
| **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 | 5 | **3RT1056-6NF36** | | 5 | **3RT1056-2NF36** | |
| | | | | | | | | 200 ... 277 | ▶ | **3RT1056-6NP36** | | 5 | **3RT1056-2NP36** | |
| **S10** | 225 | **110** | 160 | 200 | 275 | 2 | 2 | 96 ... 127 | 5 | **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 | ▶ | **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 | 5 | **3RT1076-6NF36** | | 5 | **3RT1076-2NF36** | |
| | | | | | | | | 200 ... 277 | 2 | **3RT1076-6NP36** | | 5 | **3RT1076-2NP36** | |
| ***For 24 V DC control signal input · with remaining lifetime indicator (RLT) e.g. for control by PLC*** | | | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | | | |
| **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 | 20 | **3RT1076-6PF35** | | | -- | |
| | | | | | | | | 200 ... 277 | 5 | **3RT1076-6PP35** | | | -- | |

Other voltages according to page 3/76 on request.

Accessories and spare parts, see pages 3/77 to 3/126.



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

## Options

***Rated control supply voltages for 3RT20 contactors, 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 / Size | 3RT201, 3RH2 S00 | 3RT202 S0 | 3RT203 S2 | 3RT204 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-loaded terminals; for rated control supply voltage 24 V DC. |
| | 3RT2025-2B**G4**0 | Contactor with spring-loaded 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 and Catalog KT 10.1.

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: 0.8 to 1.1 x $U_s$
  At 60 Hz: 0.85 to 1.1 x $U_s$.

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

| Rated control supply voltage $U_{s\,min}$ to $U_{s\,max}$[1] | Contactor type / Size | 3RT202.-.N S0 | Rated control supply voltage $U_{s\,min}$ to $U_{s\,max}$[1] | Contactor type / Size | 3RT203.-.N S2 | 3RT204.-.N 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 $U_{s\,max}$

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

***Rated control supply voltages for 3RT10 contactors, possible on request (change of the 10th and 11th digits of the Article No.)***

Delivery time on request

| Rated control supply voltage | **Contactor type** | **3RT105.-.A, 3RT106.-.A, 3RT107.-.A** | Rated control supply voltage | **Contactor type** | **3RT105.-.N, 3RT106.-.N, 3RT107.-.N** | **3RT105.-.P, 3RT105.-.S, 3RT106.-.P, 3RT106.-.S, 3RT107.-.P, 3RT107.-.S** |
|---|---|---|---|---|---|---|
| $U_{s\ min}$ to $U_{s\ max}$ | **Sizes** | **S6 to S12** | $U_{s\ min}$ to $U_{s\ max}$ | **Sizes** | **S6 to S12** | |
| **Sizes S6 to S12** | | | | | | |
| ***AC/DC operation (50/60 Hz AC or DC) and operating range 0.8 x $U_{s\ min}$ to 1.1 x $U_{s\ max}$*** | | | | | | |
| **Standard operating mechanism** | | | **Solid-state operating mechanism** | | | |
| 23 ... 26 V AC/DC | | B3 | 21 ... 27.3 V AC/DC | | B3 | -- |
| 42 ... 48 V AC/DC | | D3 | 96 ... 127 V AC/DC | | F3 | F3 |
| 110 ... 127 V AC/DC | | F3 | 200 ... 277 V AC/DC | | P3 | P3 |
| 200 ... 220 V AC/DC | | M3 | | | | |
| 220 ... 240 V AC/DC | | P3 | | | | |
| 240 ... 277 V AC/DC | | U3 | | | | |
| 380 ... 420 V AC/DC | | V3 | | | | |
| 440 ... 480 V AC/DC | | R3 | | | | |
| 500 ... 550 V AC/DC | | S3 | | | | |
| 575 ... 600 V AC/DC | | T3 | | | | |

## 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 3/8 to 3/11
- 3RT10, 3RT12 and 3RT14 contactors, see pages 3/12 to 3/16
- 3RH2 contactor relays, see page 5/4

**More information**

TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=Contactor

| Version | For contactors | | Selection and ordering data |
|---|---|---|---|
| | 3RT2, sizes S00 to S3; 3RH2, size S00 | 3RT105 to 3RT107, 3RT126 and 3RT127, 3RT145 to 3RT147; sizes S6 to S12 | Page |
| **Accessories for 3RT contactors and 3RH2 contactor relays** | | | |
| ***Auxiliary switches*** | | | |
| **Instantaneous** | 3RH29.1 | 3RH19.1 | 3/89 ... 3/101 |
| **Delayed** | | | |
| • Pneumatic time-delay auxiliary switches | 3RT2926-2P..1 | -- | 3/102 |
| • Solid-state time-delay auxiliary switches | 3RA2813, 3RA2814, 3RA2815 | 3RT1926-2E/-2F/-2G | 3/102, 3/103 |
| ***Surge suppressors*** | | | |
| • Without LED | 3RT29.6-1B/-1C/-1D/-1E | 3RT1956-1C | 3/104, 3/105 |
| • With LED | 3RT29.6-1J/-1L/-1M | -- | 3/105 |
| ***Modules for contactor control*** | | | |
| **Coupling links for control by PLC** | 3RH29.4-.GP11 | -- | 3/106 |
| **3RA28 function modules** | | | |
| • For direct on-line starting: ON delay or OFF-delay | 3RA2811, 3RA2812, 3RA2831, 3RA2832 | -- | 3/107 |
| • For star-delta (wye-delta) starting | 3RA2816 | -- | 3/107 |
| **3RA27 function modules for IO-Link or AS-Interface** | | | |
| • For direct-on-line, reversing or star-delta (wye-delta) starting | 3RA271.-.A/.B/.C | -- | 3/108, 3/109 |
| **Mechanical latching blocks** | 3RT2926-3A.31 | -- | 3/110 |
| **OFF-delay devices for contactors with AC/DC and DC operation** | 3RT2916-2B.01 | -- | 3/110 |
| ***Link modules*** | | | |
| **Link modules from motor starter protector to contactor** | 3RA.9.1 | -- | 7/62 |
| **Safety main current connectors for two contactors** | 3RA29.6-1A | -- | 3/111 |
| **Assembly kits** | | | |
| • For reversing contactor assemblies | 3RA29.3-2AA. | 3RA19.3-2A | 3/111 |
| • For contactor assemblies for star-delta (wye-delta) starting | 3RA29..-2BB., 3RA29.3-2C | 3RA1953-3G, 3RA19.3-2./-3. | 3/112, 3/113 |
| **Single wiring modules** | 3RA.9.3-3.A. | 3RA19.3-3. | 3/114 |
| **Star jumpers (links for paralleling), 3-pole** | 3RT.9.6-4BA3. | 3RT19.6-4BA31 | 3/114 |
| **Mechanical interlock kits for two contactors** | 3RA29.2-2H | -- | 3/115 |
| **Mechanical interlocks for contactor assemblies** | 3RA2934-2B | 3RA1954-2. | 3/115 |
| **Mechanical connectors for contactor assemblies** | 3RA29.2-2. | 3RA1932-2D | 3/115 |
| ***Connection modules/adapters*** | | | |
| **Links for paralleling for main circuits** | 3RT.9.6-4BB.1 | -- | 3/116 |
| **1-phase infeed terminals** | 3RA2943-3L | -- | 3/117 |
| **3-phase infeed terminals** | 3RA2913-3K, 3RV29.5-5A. | -- | 3/117 |
| • With increased clearances and creepage distances | 3RV2935-5E | -- | 3/117 |
| **3-phase busbars** | 3RV1915-1AB | -- | 3/117 |
| **Terminal blocks for connecting auxiliary conductors to main terminals** | | | |
| • Box terminal blocks | 3RT2946-4G | 3RT19..-4G | 3/117 |
| • Box terminal for auxiliary conductor connection, 1-pole | -- | 3TX7500-0A | 3/117 |
| • Auxiliary terminals, 3-pole | 3RT2946-4F | -- | 3/117 |
| **Solder pin adapters for mounting contactors onto printed circuit boards** | 3RT1916-4KA. | -- | 3/118 |
| **Coil connection modules for connections from top or from bottom** | 3RT2926-4R.1. | -- | 3/118 |
| **Connection module (adapter and plug) for contactors with screw terminals** | | | |
| • Adapters | 3RT19.6-4RD01 | -- | 3/118 |
| • Motor feeder connector | 3RT1900-4RE01 | -- | 3/118 |

| Version | For contactors | | Selection and ordering data |
|---|---|---|---|
| | 3RT2, sizes S00 to S3; 3RH2, size S00 | 3RT105 to 3RT107, 3RT126 and 3RT127, 3RT145 to 3RT147; sizes S6 to S12 | Page |
| **Accessories for 3RT contactors and 3RH2 contactor relays (continued)** | | | |
| ***Covers*** | | | |
| **Terminal covers** | 3RT1946-4EA1, 3RT29.6-4EA. | 3RT1956-4EA., 3RT1966-4EA., 3TX65.6-3B | 3/119 |
| **Sealable covers** | 3RT2916-4MA10 | 3RT1926-4MA10 | 3/119 |
| ***Miscellaneous accessories*** | | | |
| **Base plates** | | | |
| • For reversing contactor assemblies | -- | 3RT19.2-2A | 3/120 |
| • For contactor assemblies for star-delta (wye-delta) starting | 3RA29.2-2F | 3RA19.2-2. | 3/120 |
| **Adapters for screw fixing** | 3RT1926-4P | -- | 3/120 |
| **Connection kit for one complete contactor** | -- | 3RT19..-4PA00 | 3/120 |
| **EMC suppression modules** | 3RT2916-1P . . | -- | 3/120 |
| **Additional load modules** | 3RT2916-1GA00 | -- | 3/121 |
| **LED modules for displaying contactor operation** | 3RT2926-1QT00 | 3RT1926-1QT00 | 3/121 |
| **Control kit** | 3RT29.6-4MC00 | -- | 3/121 |
| **Insulation stop for securely holding back the conductor insulation for conductors up to 1 mm²** | 3RT2916-4JA02 | 3RT1916-4JA02 | 3/122 |
| **Tools for opening spring-loaded terminals** | 3RA2908-1A | 3RA2908-1A | 3/122 |
| **Blank labels** | 3RT2900-1SB.0 | 3RT2900-1SB.0 | 3/122 |
| **Spare parts for 3RT2 contactors** | | | |
| **Solenoid coils** | 3RT29..-5...1 | -- | 3/123, 3/124 |
| **Withdrawable coils** | -- | 3RT19..-5.... | 3/125 |
| **Contacts with fixing parts** | 3RT29..-6. | 3RT19..-6. | 3/126 |
| **Arc chutes** | -- | 3RT19..-7. | 3/126 |

***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 3/84, and in the selection and ordering data, page 3/89 onwards.

***Solid-state time-delay auxiliary switches for mounting onto 3RT2 contactors and 3RH2 contactor relays***

See pages 3/84 and 3/102

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 onto the contactor is not permitted.

***Surge suppressors***

- Without LED (also for spring-loaded terminals)
  Sizes S00 to S3, see page 3/104
- With LED (also for spring-loaded terminals)
  Sizes S00 to S3, see page 3/105

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 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.

Varistors, RC elements or diode assemblies can be plugged onto the front of size S0 to S3 contactors. Exception: For size S3, the RC element is inserted on the front into the recesses to the left of the connection block.

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 3/86 and 3/106

- 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.

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

See pages 3/87 and 3/107

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 3/153.

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-loaded 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-loaded connection and for all the contactor sizes S00 to S3
- Mechanical interlocking (with wiring kit for the main circuit)

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

See pages 3/88 and 3/108

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 e.g. timing and interlocking, required for the particular feeder, and can be connected to the control system via either IO-Link or AS-Interface.

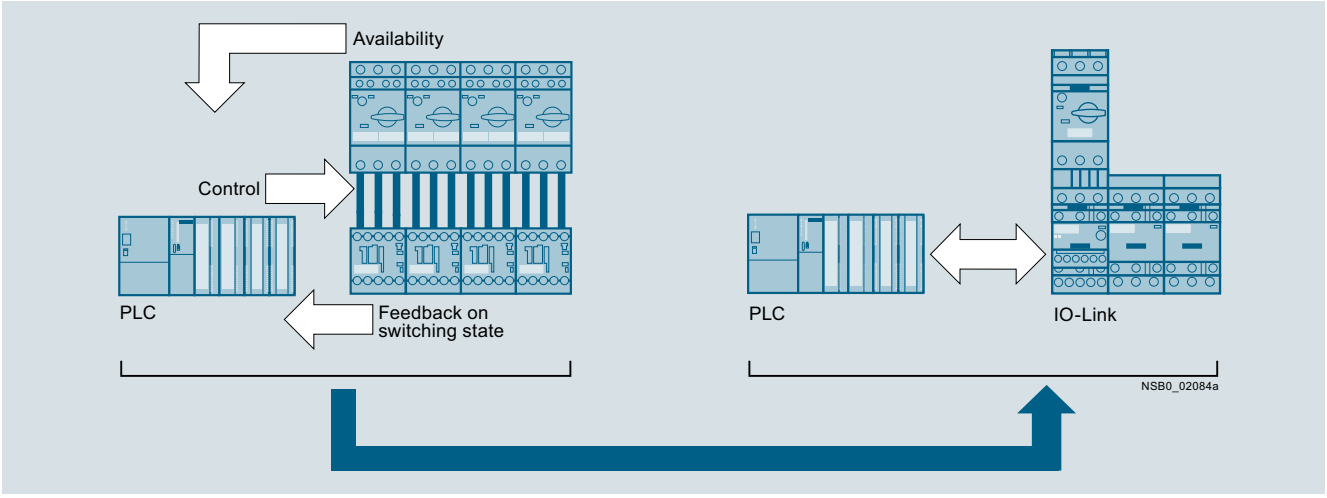
The electrical and mechanical connection to the contactor is established by snapping on and locking the respective modules. An additive protection circuit for the individual contactors can be dispensed with completely because a varistor is integrated in the modules. Feedback from the contactor contacts 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.

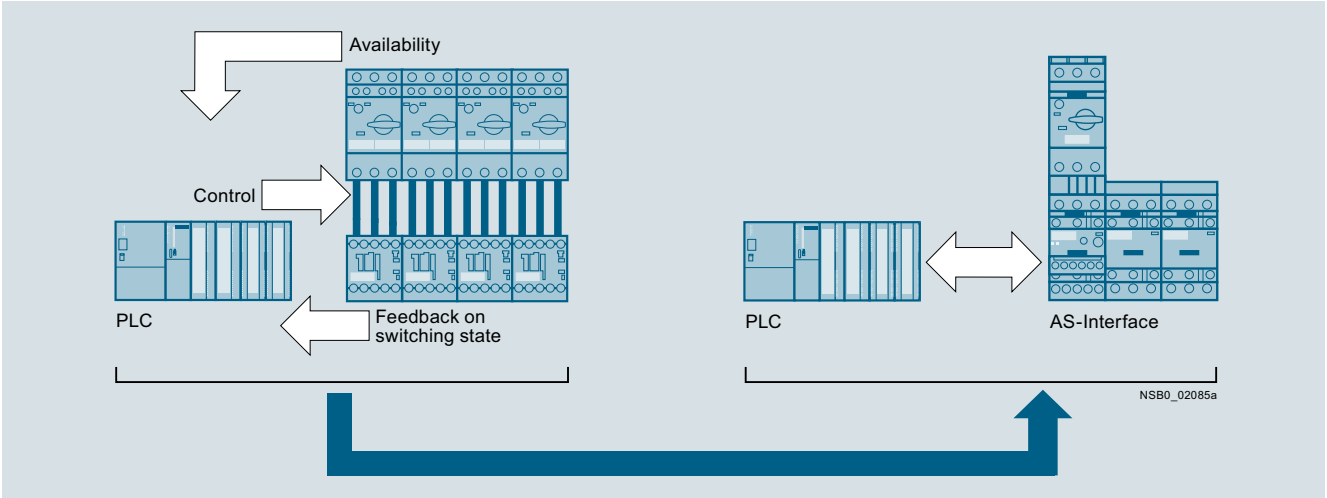
Through this type of connection to the control system, a maximum of wiring is saved. In the case of AS-Interface, the wiring amounts to the control supply voltage and the two individual wires for AS-Interface.

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



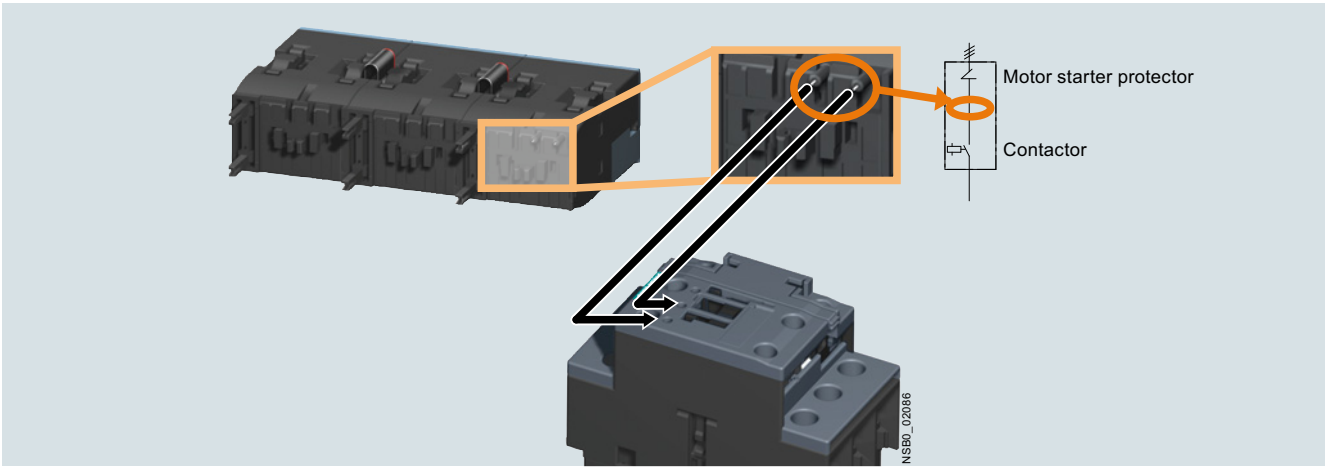

Signal transmission through IO-Link




Signal transmission through AS-Interface

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 3RT20..-.....-0CC0 contactors with voltage tap-off (see pages 3/61, 3/65, 3/69 and 3/71).




Availability signal through voltage tap-off

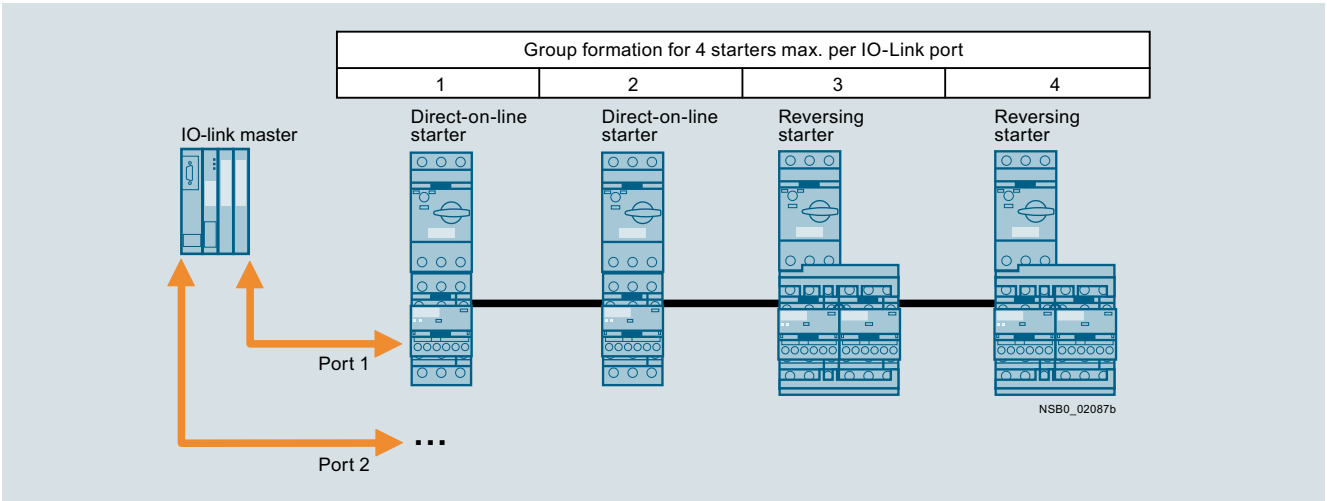
The following benefits result from the use of SIRIUS 3RA27 function modules:

- 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", page 2/1 onwards.

SIRIUS 3RA2711 function modules for IO-Link for mounting onto 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 further reduced 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:

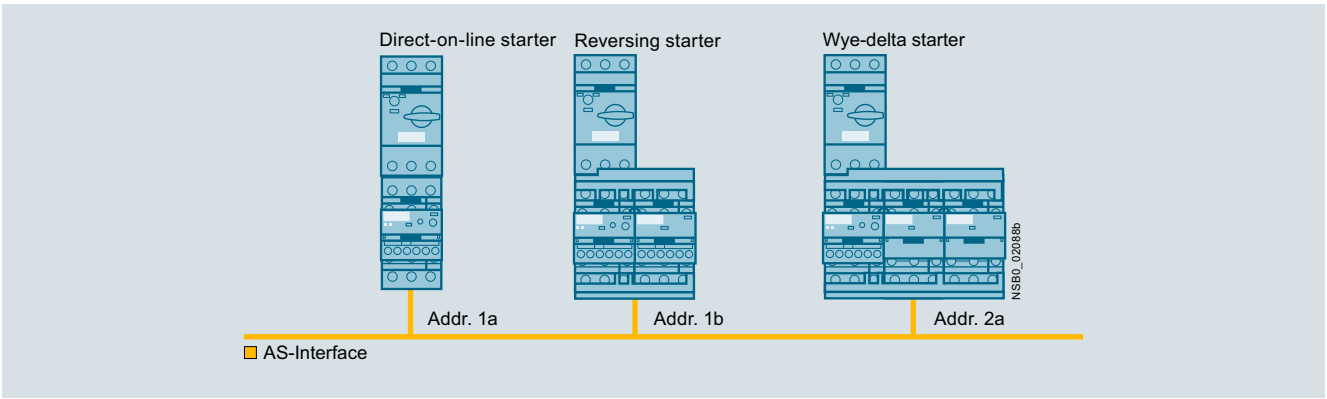
- Switching element defective
- No main voltage (motor starter protector tripped)
- No control supply voltage
- Limit position on the right/on the left
- Manual mode
- Process image fault

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 onto 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.

3

## Technical specifications

**More information**

TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=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

System Manual for modular system, see https://support.industry.siemens.com/cs/ww/en/view/60311318

Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/60306557

### *Solid-state time-delay auxiliary switches for mounting onto 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) | | | See 3RT2 contactors (pages 3/27, 3/33, 3/38, 3/43) 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 IP on the front** acc. to IEC 60529 | | | IP20 | | |
| **Touch protection on the front** acc. to IEC 60529 | | | Finger-safe for vertical touching from the front | | |
| **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 3/27, 3/33, 3/38, 3/43; 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 | $10 \times 10^6$ | | |
| **Electrical endurance** at AC-15, 250 V, 3 A | | Operating cycles | 100 000 | | |
| **Switching frequency** for load | | | | | |
| • With $I_e$ at 230 V AC | | 1/h | 2 500 | | |
| • With 3RT2 contactor at 230 V AC | | 1/h | 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 | | |

| 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) | $mm^2$ | 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-loaded terminals** | | |
| • Solid | $mm^2$ | 2 x (0.25 ... 1.5) | | |
| • Finely stranded with end sleeve (DIN 46228) | $mm^2$ | 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 switches, 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 IP on the front** acc. to IEC 60529 | | IP20 |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front |
| **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 3/48) |
| **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 x $10^6$ |
| **Switching frequency** for load | | |
| • With $I_e$ at 230 V AC | 1/h | 2 500 |
| • With 3RT2016 contactor at 230 V AC | 1/h | 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 |

***Coupling links for control by PLC***

| Type | | 3RH2924-1GP11 | 3RH2914-.GP11 |
|---|---|---|---|
| Mounting onto 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 IP on the front** acc. to IEC 60529 | | IP20 | |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front | |
| **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** | 1/h | 5 000 | |
| **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) | $mm^2$ | 2 x (0.5 ... 1.5) | |
| • Terminal screws | | M3 | |
| **Connection type** (1 or 2 conductors can be connected) | | **Spring-loaded terminals** | |
| • Solid | $mm^2$ | -- | 2 x (0.25 ... 1.5) |
| • Finely stranded with end sleeve (DIN 46228) | $mm^2$ | -- | 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 |

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

| Type | | | 3RA2811 | 3RA2831 | 3RA2812 | 3RA2832 | 3RA2816 |
|---|---|---|---|---|---|---|---|
| Mounting onto 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 3/27, 3/33, 3/38, 3/43) and 3RH2 contactor relays (page 5/7) | | | | |
| **Rated insulation voltage $U_i$**<br>Pollution degree 3<br>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**<br>With reference to upper limit of scale | Typ. | | ± 15% | | | | |
| **Repeat accuracy** | Max. | | ± 1% | | | | |
| **Degree of protection IP on the front** acc. to IEC 60529 | | | IP20 | | | | |
| **Touch protection on the front** acc. to IEC 60529 | | | Finger-safe for vertical touching from the front | | | | |
| **Permissible ambient temperature** | | | | | | | |
| • During operation | | °C | -25 ... +60 | | | | |
| • During storage | | °C | -40 ... +80 | | | | |
| **Shock resistance**<br>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<br>(for the mounting position of 3RT2 contactors, see pages 3/27, 3/33, 3/38, 3/43; for the mounting position of 3RH2 contactor relays, see page 5/6) | | | | |
| **Control side** | | | | | | | |
| **Operating range of excitation** | | | 0.85 ... 1.1 x $U_s$,<br>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 | | 1/h | 2 500 | | | | -- |
| • With 3RT2 contactor at 230 V AC | | 1/h | 2 500 | | | | -- |
| **Residual current** | Max. | mA | 5 | -- | | | -- |
| **Voltage drop**<br>With conducting output | Max. | VA | 3.5 | -- | | | -- |
| **DIAZED fuse protection** | Operational class gG | A | -- | | | | 4 |
| **Conductor cross-sections** | | | | | | | |
| **Connection type**<br>(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) | | $mm^2$ | 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**<br>(1 or 2 conductors can be connected) | | | **Spring-loaded 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) | | $mm^2$ | 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 IO-Link for mounting onto 3RT2 contactors*

| Type | | | **3RA2711** |
|---|---|---|---|
| **General data** | | | |
| **Dimensions** | | | See 3RT2 contactors: pages 3/27, 3/33, 3/38 and 3/43 |
| **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 IP on the front** acc. to IEC 60529 | | | IP20 |
| **Touch protection on the front** acc. to IEC 60529 | | | Finger-safe for vertical touching from the front |
| **Operating voltage $U_{Hi}$** | | V DC | 24 ± 20% |
| **Max. length of the cables for the input Y1-Y2** | | 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) | | $mm^2$ | 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-loaded 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) | | $mm^2$ | 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 onto 3RT2 contactors*

| Type | | | **3RA2712** |
|---|---|---|---|
| **General data** | | | |
| **Dimensions** | | | See 3RT2 contactors: pages 3/27, 3/33, 3/38 and 3/43 |
| **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 IP on the front** acc. to IEC 60529 | | | IP20 |
| **Touch protection on the front** acc. to IEC 60529 | | | Finger-safe for vertical touching from the front |
| **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 pickup/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** | | 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) | | $mm^2$ | 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-loaded 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) | | $mm^2$ | 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) |

## Overview

### *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 switches for power contactors and contactor relays*

The auxiliary switches of the 3RH29 series for mounting onto 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 can be found in the tables, see the following pages.

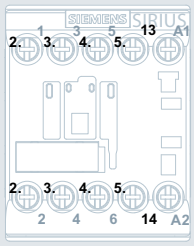
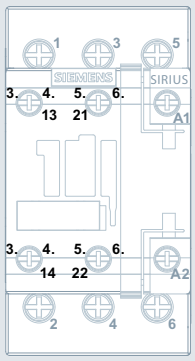
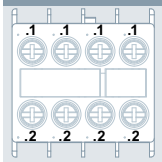
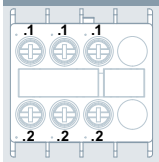
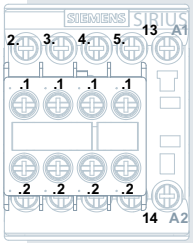
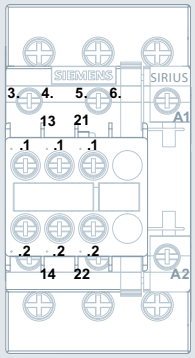
Where the columns and lines intersect (blue and green in the example) you will find the identification number for the combination of basic unit (column) and auxiliary switch (line).

| Additional auxiliary switch | | | 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 switches without NO contact** | | | | | |
| 3RH2911-☐HA01 | -- | 1 | 11 | 02 | 12 |
| 3RH2911-☐HA02 | -- | 2 | 12 | 03 | 13 |
| 3RH2911-☐HA03 | -- | 3 | 13 | 04 | 14 |
| 3RH2911-☐FA04 | -- | 4 | 14 | -- | -- |
| **Auxiliary switch with 1 NO contact** | | | | | |
| 3RH2911-☐HA10 | 1 | -- | 20 | 11 | 21 |

IC01_00716

1 For screw terminals
2 For spring-loaded 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* | *Example 2* |
|---|---|---|
| Type | 3RT20 motor contactor, S00 with 1 NO | 3RT20 motor contactor, S00 with 1 NO + 1 NC |
| |  |  |
| Sequence digit | 2. 3. 4. 5. | 3. 4. 5. 6. |
| Type | Auxiliary switch with 4 NC, 3RH2911-.FA04 | Auxiliary switch with 3 NC, 3RH2911-.HA03 |
| |  |  |
| Function digit | 1. 1. 1. 1.<br>2. 2. 2. 2. | 1. 1. 1.<br>2. 2. 2. |
| Combination | 3RT20 motor contactor, S00 with aux. switch | 3RT20 motor contactor, S0 with aux. switch |
| |  |  |
| Terminal designation | 13 21 31 41 51<br>14 22 32 42 52 | 13 21 31 41 51<br>14 22 32 42 52 |
| Result | Ident. No. 14 | Ident. No. 14 |

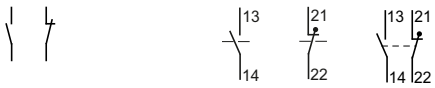
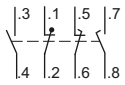
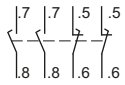
IC01_00717

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

Example 2
Basic unit: 3-pole 3RT2023 motor contactor with 1 NO + 1 NC
Required: 1 NO + 4 NC (Ident. No. 14)
Result: 3RH2911-.HA03 auxiliary switch

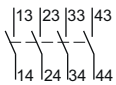
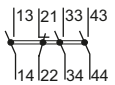
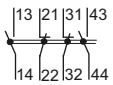
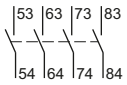
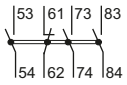
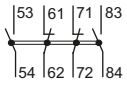
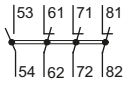
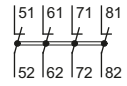
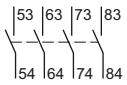
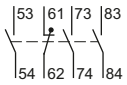
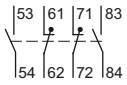
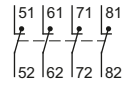
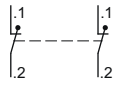
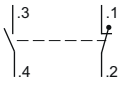
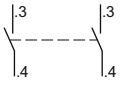
| Additional auxiliary switches | | | 3-pole contactors | | | 4-pole contactors | | | | Contactor relays | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Article number | Auxiliary contacts | | S00 | | S0 to S3 | S00 | | S0 to S3 | | S00 | | |
| | Version | | 3RT201 | | 3RT202, 3RT203, 3RT204, 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 switches, 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.

| Additional auxiliary switches | | | 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 switches, 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 |

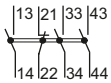
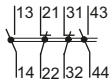
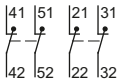
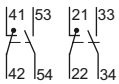
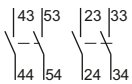
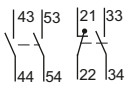
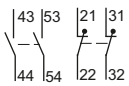
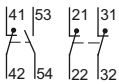
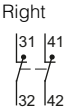
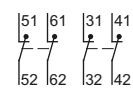
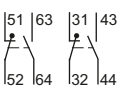
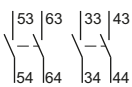
[1)] Contacts with make-before-break have no mirror contact function.

3

| Additional auxiliary switches | | | 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 |
| | | |  |  |  | | |  |  |  |  |  |
| | | | 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 switches, front (continued)** | | | | | | | | | | | | |
| ***With complete inscription (for contactor relays)***[2] | | | | | | | | | | | | |
| **3RH2911-□GA40** | 4 | -- |  | -- | -- | -- | -- | -- | -- | -- | **80E** | -- | -- |
| **3RH2911-□GA31** | 3 | 1 |  | -- | -- | -- | -- | -- | -- | -- | **71E** | -- | -- |
| **3RH2911-□GA22** | 2 | 2 |  | -- | -- | -- | -- | -- | -- | -- | **62E** | -- | -- |
| **3RH2911-□GA13** | 1 | 3 |  | -- | -- | -- | -- | -- | -- | -- | **53E** | -- | -- |
| **3RH2911-□GA04** | -- | 4 |  | -- | -- | -- | -- | -- | -- | -- | **44E** | -- | -- |
| ***Complete inscription*** | | | | | | | | | | | | | |
| **3RH2911-□XA40 -0MA0** | 4 | -- |  | 50 | 41 | 51 | 40 | 40 | 51 | 51 | **80E** | **71X** | **62X** |
| **3RH2911-□XA31 -0MA0** | 3 | 1 |  | 41 | 32 | 42 | 31 | 31 | 42 | 42 | **71E** | **62X** | 53 |
| **3RH2911-□XA22 -0MA0** | 2 | 2 |  | 32 | 23 | 33 | 22 | 22 | 33 | -- | **62E** | 53 | **44X** |
| **3RH2911-□XA04 -0MA0** | -- | 4 |  | 14 | -- | -- | -- | -- | -- | -- | **44E** | -- | -- |
| ***Solid-state compatible*** | | | | | | | | | | | | | |
| **3RH2911-□NF02** | -- | 2 |  | 12 | 03 | 13 | 02 | 02 | 13 | -- | 42 | 33 | 24 |
| **3RH2911-□NF11** | 1 | 1 |  | 21 | 12 | 22 | 11 | 11 | 22 | 22 | 51 | 42 | 33 |
| **3RH2911-□NF20** | 2 | -- |  | 30 | 21 | 31 | 20 | 20 | 31 | 31 | 60 | 51 | 42 |

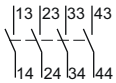
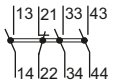
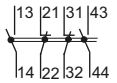
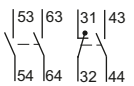
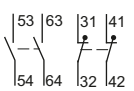
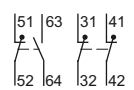
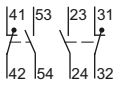
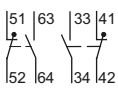
[1] Combinations according to EN 50011 and IEC 60947-5-1 are in **bold** print.
All combinations comply with EN 50005.

[2] For selection and ordering data, see page 3/97.

| Additional auxiliary switches | | | 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 switches** | | | | | | | | | | | | |
| ***For size S00*** | | | Left | Right | | | | | | | | |
| **3RH2911-□DA02** | -- | 2 | |  | **12** | -- | -- | 02 | 02 | -- | -- | -- | -- |
| **3RH2911-□DA02** + **3RH2911-□DA02** | -- | 2 |  | | 14 | -- | -- | -- | -- | -- | -- | -- | -- |
| **3RH2911-□DA02** + **3RH2911-□DA02** | -- | 2 | | | | | | | | | | | |
| **3RH2911-□DA11** | 1 | 1 | |  | **21** | -- | -- | 11 | 11 | -- | -- | -- | -- |
| **3RH2911-□DA11** + **3RH2911-□DA11** | 1 | 1 |  | | 32 | -- | -- | 22 | 22 | -- | -- | -- | -- |
| **3RH2911-□DA20** | 2 | -- | |  | 30 | -- | -- | 20 | 20 | -- | -- | -- | -- |
| **3RH2911-□DA20** + **3RH2911-□DA20** | 2 | -- |  | | 50 | -- | -- | 40 | 40 | -- | -- | -- | -- |
| **3RH2911-□DA20** + **3RH2911-□DA20** | 2 | -- | | | | | | | | | | | |
| **3RH2911-□DA20** + **3RH2911-□DA11** | 2 | -- |  | | **41** | -- | -- | 31 | 31 | -- | -- | -- | -- |
| | 1 | 1 | | | | | | | | | | | |
| **3RH2911-□DA20** + **3RH2911-□DA02** | 2 | -- |  | | **32** | -- | -- | 22 | 22 | -- | -- | -- | -- |
| | -- | 2 | | | | | | | | | | | |
| **3RH2911-□DA11** + **3RH2911-□DA02** | 1 | 1 |  | | **23** | -- | -- | 13 | -- | -- | -- | -- | -- |
| | -- | 2 | | | | | | | | | | | |
| ***For sizes S00 to S3*** | | | Left | Right | | | | | | | | | |
| **3RH2921-□DA02** | -- | 2 | |  | 12 | 03 | **13** | 02 | 02 | **13** | -- | -- | -- | -- |
| **3RH2921-□DA02** + **3RH2921-□DA02** | -- | 2 |  | | 14 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | -- | 2 | | | | | | | | | | | | |
| **3RH2921-□DA11** | 1 | 1 | |  | 21 | 12 | **22** | 11 | 11 | **22** | **22** | -- | -- | -- |
| **3RH2921-□DA11** + **3RH2921-□DA11** | 1 | 1 |  | | 32 | 23 | 33 | 22 | 22 | -- | -- | -- | -- | -- |
| **3RH2921-□DA20** | 2 | -- | |  | 30 | 21 | **31** | 20 | 20 | **31** | **31** | -- | -- | -- |
| **3RH2921-□DA20** + **3RH2921-□DA20** | 2 | -- |  | | 50 | 41 | 51 | 40 | 40 | -- | -- | -- | -- | -- |
| | 2 | -- | | | | | | | | | | | | |

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

3

| Additional auxiliary switches | | | 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 switches (continued)** | | | | | | | | | | | | |
| ***For sizes S00 to S3*** | | | Left Right | | | | | | | | | |
| **3RH2921-☐DA20** + **3RH2921-☐DA11** | 2<br>1 | --<br>1 |  | | | 41 | 32 | 42 | 31 | 31 | -- | -- | -- | -- | -- |
| **3RH2921-☐DA20** + **3RH2921-☐DA02** | 2<br>-- | --<br>2 |  | | | 32 | 23 | 33 | 22 | 22 | -- | -- | -- | -- | -- |
| **3RH2921-☐DA11** + **3RH2921-☐DA02** | 1<br>-- | 1<br>2 |  | | | 23 | 14 | 24 | 13 | -- | -- | -- | -- | -- | -- |
| **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** + **3RH2911-2DE11** | 1<br>1 | 1<br>1 |  | | | 32 | -- | -- | 22 | 22 | -- | -- | -- | -- | -- |
| **For sizes S00 to S3** | | | Left Right | | | | | | | | | | | | |
| **3RH2921-☐DE11** | 1 | 1 |  | | | 21 | 12 | 22 | 11 | 11 | 22 | 22 | -- | -- | -- |
| **3RH2921-☐DE11** + **3RH2921-☐DE11** | 1<br>1 | 1<br>1 |  | | | 32 | 23 | 33 | 22 | 22 | -- | -- | -- | -- | -- |
| **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.

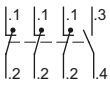
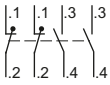
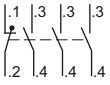
[2] Without positively driven operation.

## Selection and ordering data

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-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Article No. | Price per PU | | Article No. | Price per PU |
| Type | NO | NC | | d | | | d | | |
| **Auxiliary switches 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 |  | ▶ | **3RH2911-1HA03** | | 2 | **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 | -- |  | ▶ | **3RH2911-1HA30** | | ▶ | **3RH2911-2HA30** | |
| | 3 | 1 |  | ▶ | **3RH2911-1HA31** | | ▶ | **3RH2911-2HA31** | |

[1] For detailed information on use, see page 3/90.

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

3

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-loaded terminals Article No. | Price per PU |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Type | | | | | | d | | | d | | |
| **Auxiliary switches 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 switches, 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 3/90 and 3/91.



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

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


3RH2911-1GA22


3RH2911-2GA22

| For contactor relays[1] | Contactor relay with auxiliary switch Ident. No. | Auxiliary contacts Version NO | NC | SD | Screw terminals Article No. | Price per PU | SD | Spring-loaded terminals Article No. | Price per PU |
|---|---|---|---|---|---|---|---|---|---|
| Type | | | | d | | | d | | |
| **Auxiliary switches 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 3/92.

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-loaded terminals Article No. | Price per PU |
|---|---|---|---|---|---|---|---|---|
| Type | | | d | | | d | | |
| **Auxiliary switches 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** | | ► | **3RH2911-2XA04-0MA0** | |

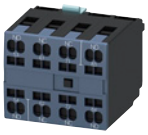
[1] For detailed information on use, see page 3/92.

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

3

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


3RH1921-1XA22-0MA0

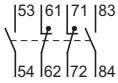

3RH1921-2XA22-0MA0


3RH1921-1CA10


3RH1921-1CD10


3RH1921-2CA10


3RH1921-2CA01

| For contactors | Auxiliary contacts | | | | | | SD | Screw terminals | | SD | Spring-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Ident. No. | Version | | | | | | Article No. | Price per PU | | Article No. | Price per PU |
| Type | | NO | NC | NO | NC | | d | | | d | | |
| **Auxiliary switches for snapping onto the front** | | | | | | | | | | | | |
| ***Sizes S6 to S12*** | | | | | | | | | | | | |
| | **4-pole auxiliary switches** | | | | | | | | | | | |
| | **• According to EN 50012** | | | | | | | | | | | |
| 3RT1.5 ... 3RT1.7 | **22** | 2 | 2 | -- | -- |  | ▶ | **3RH1921-1XA22-0MA0** | | 2 | **3RH1921-2XA22-0MA0** | |
| | **1-pole auxiliary switches** | | | | | | | | | | | |
| | **• 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 (leading) | -- |  | ▶ | **3RH1921-1CD10** | | | **--** | |
| | **01** | -- | -- | -- | 1 (lagging) |  | ▶ | **3RH1921-1CD01** | | | **--** | |



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

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-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Article No. | Price per PU | | Article No. | Price per PU |
| Type | NO | NC | | d | | | d | | |
| **Laterally mountable auxiliary switches, mounting onto the right and/or the left, 2-pole** | | | | | | | | | |
| ***Size S00*** | | | Left Right | | | | | | |
| 3RT2.1 | -- | 2 | 41 51 / 42 52 — 21 31 / 22 32 | ▶ | **3RH2911-1DA02** | | 2 | **3RH2911-2DA02** | |
| | 1 | 1 | 41 53 / 42 54 — 21 33 / 22 34 | ▶ | **3RH2911-1DA11** | | ▶ | **3RH2911-2DA11** | |
| | 2 | -- | 43 53 / 44 54 — 23 33 / 24 34 | ▶ | **3RH2911-1DA20** | | ▶ | **3RH2911-2DA20** | |
| ***Sizes S0 to S3*** | | | Left Right | | | | | | |
| 3RT2.1, 3RT2.2[2], 3RT2.3[3], 3RT2.4[3] | -- | 2 | 51 61 / 52 62 — 31 41 / 32 42 | ▶ | **3RH2921-1DA02** | | ▶ | **3RH2921-2DA02** | |
| | 1 | 1 | 51 63 / 52 64 — 31 43 / 32 44 | ▶ | **3RH2921-1DA11** | | ▶ | **3RH2921-2DA11** | |
| | 2 | -- | 53 63 / 54 64 — 33 43 / 34 44 | ▶ | **3RH2921-1DA20** | | ▶ | **3RH2921-2DA20** | |

[1] For detailed information on use, see pages 3/93 and 3/94.

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

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

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

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

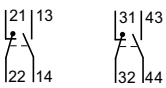
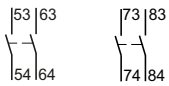
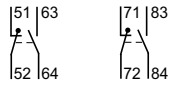
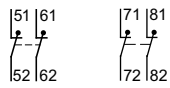
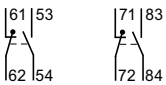
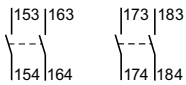
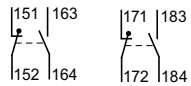
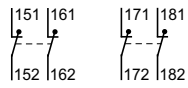

3RH1921-1DA11


3RH1921-1JA11


3RH1921-1EA02


3RH1921-1KA02


3RH1921-2DA11

| For contactors | Auxiliary contacts Version | | | SD | Screw terminals | | SD | Spring-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Article No. | Price per PU | | Article No. | Price per PU |
| Type | NO | NC | | d | | | d | | |
| **Lateral auxiliary switches, mounting onto the right or the left, 2-pole** | | | | | | | | | |
| ***Sizes S6 to S12*** | | | Left / Right | | | | | | |
| | **First auxiliary switch** | | | | | | | | |
| | **• 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** | |
| | **Second auxiliary switch** | | | | | | | | |
| | **• 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

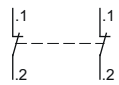
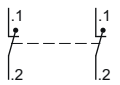
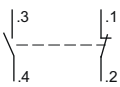
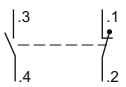
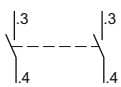
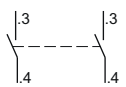
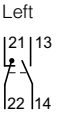
PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B


3RH2911-1NF..


3RH2911-2NF..


3RH2911-2DE11


3RH1921-2JE11

| For contactors/ contactor relays[1] | Size | Contacts Version | | SD | Screw terminals | | SD | Spring-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | | Article No. | Price per PU | | Article No. | Price per PU |
| Type | | NO | NC | d | | | d | | |
| **Solid-state compatible auxiliary switches, 2-pole** | | | | | | | | | |
| • For operation in dusty atmospheres<br>• For solid-state circuits with rated operational currents $I_e$/AC-14 and DC-13 from 1 to 300 mA at 3 to 60 V<br>• Hard gold-plated contacts<br>• 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 switches for snapping onto the front*** | | | | | | | | | |
| | | | | S00 | S0 ... S3 | | | | |
| 3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4 | **S00 ... S3** | -- | 2 |  |  | 2 | **3RH2911-1NF02** | 2 | **3RH2911-2NF02** |
| 3RH21, 3RH24 | | 1 | 1 |  |  | ▶ | **3RH2911-1NF11** | ▶ | **3RH2911-2NF11** |
| | | 2 | -- |  |  | ▶ | **3RH2911-1NF20** | ▶ | **3RH2911-2NF20** |
| ***Lateral auxiliary switches, mounting onto the right and/or the left, acc. to EN 50012*** | | | | | | | | | |
| | | **Auxiliary switches** | | | | | | | |
| | | | | Left | Right | | | | |
| 3RT2.1 | **S00** | 1 | 1 |  |  | | -- | 2 | **3RH2911-2DE11** |
| 3RT2.2, 3RT2.3, 3RT2.4 | **S0 ... S3** | 1 | 1 |  |  | | -- | ▶ | **3RH2921-2DE11** |
| | | **First auxiliary switch** | | | | | | | |
| | | | | Left | Right | | | | |
| 3RT1.5 ... 3RT1.7 | **S6 ... S12** | 1 | 1 |  |  | | -- | ▶ | **3RH1921-2DE11** |
| | | **Second auxiliary switch** | | | | | | | |
| | | | | Left | Right | | | | |
| 3RT1.5 ... 3RT1.7 | **S6 ... S12** | 1 | 1 |  |  | | -- | ▶ | **3RH1921-2JE11** |

[1] For detailed information on use, see pages 3/92 and 3/94.

3

## 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 switches for mounting onto 3RT2 contactors** | | | | | | | | |
| | ***Size S0*** | | | | | | | |
|  | **Auxiliary contacts 1 NO and 1 NC**[1] | | | | | | | |
| | **ON-delay** | | | | | | | |
| | 3RT202[2] | 0.1 ... 30 | 10 | **3RT2926-2PA01** | | 1 | 1 unit | 41B |
| | | 1 ... 60 | 10 | **3RT2926-2PA11** | | 1 | 1 unit | 41B |
| | **OFF-delay** | | | | | | | |
| | 3RT202[2] | 0.1 ... 30 | 10 | **3RT2926-2PR01** | | 1 | 1 unit | 41B |
| 3RT2926-2P..1 | | 1 ... 60 | 10 | **3RT2926-2PR11** | | 1 | 1 unit | 41B |

1) In addition to these, no other auxiliary contacts are permitted.
2) Cannot be fitted onto coupling contactors and coupling contactor relays.

Technical specifications, see Equipment Manual.

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-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Type | V | s | | d | Article No. | Price per PU | d | Article No. | Price per PU |
| **Solid-state time-delay auxiliary switches[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 switches are also available as 3RA28 function modules for mounting onto 3RT2 contactors and 3RH2 contactor relays, see page 3/107.
3) Cannot be fitted onto coupling contactors and coupling contactor relays.
4) From product version E04 onwards, 3RA281. solid-state time-delay auxiliary switches 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 changeover to the correct setting.

Technical specifications, see page 3/84.



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

| 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 switches for mounting onto 3RT1 contactors** | | | | | | | | |
| ***Sizes S6 to S12*** | | | | | | | | |
| | **ON-delay**[2] | | | | | | | |
| 3RT10, 3RT14 | 1 NO + 1 NC | 24 AC/DC | 0.05 ... 1 | 2 | **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 | 2 | **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 | 5 | **3RT1926-2FJ21** | 1 | 1 unit | 41H |
| | | | 5 ... 100 | 5 | **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 |

3RT1926-2E..1, 3RT1926-2F..1

3RT1926-2G.51

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 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.

3

## Selection and ordering data

| For contactors | Version | Rated control supply voltage $U_s$ [1] AC operation | DC operation | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| Type | | V AC | V DC | d | | | | | |
| **Surge suppressors without LED (also for spring-loaded terminals)** | | | | | | | | | |
| ***Size S00*** | | | | | | | | | |
| | **For plugging onto the front of the contactors (with or without auxiliary switches)** | | | | | | | | |
| 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 | -- | ▶ | **3RT2916-1CE00** | | 1 | 1 unit | 41B |
| | | 400 ... 600 | -- | 2 | **3RT2916-1CF00** | | 1 | 1 unit | 41B |
| 3RT2.1, 3RH2 | **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 into the front of the contactors (before mounting the auxiliary switch)** | | | | | | | | |
| 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 | -- | ▶ | **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 into the front of the contactors (before mounting the auxiliary switch)** | | | | | | | | |
| 3RT2.3, 3RT2.4 | **Varistors** [2] | 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 | -- | 2 | **3RT2936-1BE00** | | 1 | 1 unit | 41B |
| | | 400 ... 600 | -- | 2 | **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 | -- | 2 | **3RT2936-1CE00** | | 1 | 1 unit | 41B |
| | | 400 ... 600 | -- | 5 | **3RT2936-1CF00** | | 1 | 1 unit | 41B |
| 3RT2.3, 3RT2.4 | **Diode assemblies** for DC operation | -- | 24 | ▶ | **3RT2936-1ER00** | | 1 | 1 unit | 41B |
| | | -- | 30 ... 250 | 5 | **3RT2936-1ES00** | | 1 | 1 unit | 41B |
| ***Size S3*** | | | | | | | | | |
| | **For plugging into the two recesses on the left next to the connection block for auxiliary switches and coils A1 and A2. The connecting cables are wired to A1 and A2,** **see also page 3/11****.** | | | | | | | | |
| 3RT2.4 | **RC elements** | 24 ... 48 | 24 ... 70 | 2 | **3RT2946-1CB00** | | 1 | 1 unit | 41B |
| | | 48 ... 127 | 70 ... 150 | 2 | **3RT2946-1CC00** | | 1 | 1 unit | 41B |
| | | 127 ... 240 | 150 ... 250 | ▶ | **3RT2946-1CD00** | | 1 | 1 unit | 41B |
| | | 240 ... 400 | -- | 5 | **3RT2946-1CE00** | | 1 | 1 unit | 41B |
| | | 400 ... 600 | -- | 5 | **3RT2946-1CF00** | | 1 | 1 unit | 41B |


3RT2916-1B.00


3RT2926-1E.00

3RT2936-1BF00

3RT2946-1C.00

[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.



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

| For contactors | Version | Rated control supply voltage $U_s$ [1] AC operation | Rated control supply voltage $U_s$ [1] DC operation | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| Type | | V AC | V DC | d | | | | | |
| **Surge suppressors without LED** | | | | | | | | | |
| ***Sizes S6 to S12*** | | | | | | | | | |
| | **For connecting to withdrawable coil for contactors with • Standard operating mechanisms 3RT1...-.A... • Solid-state operating mechanisms 3RT1...-.N...** | | | | **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 | -- | 20 | **3RT1956-1CF00** | | 1 | 1 unit | 41B |
| | | | | | **Spring-loaded terminals** | | | | |
| 3RT1.5 ... 3RT1.7 | **RC elements** | 24 ... 48 | 24 ... 70 | 2 | **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 | -- | 20 | **3RT1956-1CF02** | | 1 | 1 unit | 41B |


3RT1956-1C.00


3RT1956-1C.02

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

| For contactors | Version | Rated control supply voltage $U_s$ [1] AC operation | Rated control supply voltage $U_s$ [1] DC operation | Power consumption $P$ 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 with LED (also for spring-loaded terminals)** | | | | | | | | | | |
| ***Size S00*** | | | | | | | | | | |
| | **For plugging onto the front of the contactors (with or without auxiliary switches)** | | | | | | | | | |
| 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 | **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*** | | | | | | | | | | |
| | **For plugging into the front of the contactors (before mounting the auxiliary switch)** | | | | | | | | | |
| 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*** | | | | | | | | | | |
| | **For plugging into the front of the contactors (before mounting the auxiliary switch)** | | | | | | | | | |
| 3RT2.3, 3RT2.4 | **Varistors** | 24 ... 48 | 12 ... 24 | 10 ... 120 | ▶ | **3RT2936-1JJ00** | | 1 | 1 unit | 41B |
| | | 48 ... 127 | 24 ... 70 | 20 ... 470 | 2 | **3RT2936-1JK00** | | 1 | 1 unit | 41B |
| | | 127 ... 240 | 70 ... 150 | 50 ... 700 | ▶ | **3RT2936-1JL00** | | 1 | 1 unit | 41B |


3RT2916-1J.00


3RT2926-1MR00


3RT2936-1JJ00

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

3

## Selection and ordering data

| For contactors Type | Version | SD d | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|
| **Coupling links for control by PLC** | | | | | | | |
| | | | **Screw terminals** | | | | |
| ***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 onto the front 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 | ▶ | **3RH2914-1GP11** | | 1 | 1 unit | 41B |
| | | | **Spring-loaded terminals** | | | | |
| 3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4 3RH2 | • 24 V DC control, 17 ... 30 V DC operating range | 2 | **3RH2914-2GP11** | | 1 | 1 unit | 41B |


3RH2924-1GP11


3RH2914-1GP11


3RH2914-2GP11

Technical specifications, see page 3/86.



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

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

**More information**

Equipment Manual for 3RA28 function modules, see https://support.industry.siemens.com/cs/ww/en/view/60279150

3RA2811-2CW10

3RA2812-1DW10

3RA2816-0EW20

| For contactors | Size | Version | Rated control supply voltage $U_s$ [1] | Time setting range $t$ | SD | Screw terminals | SD | Spring-loaded terminals |
|---|---|---|---|---|---|---|---|---|
| Type | | | V AC/DC | s | d | Article No. / Price per PU | d | Article No. / Price per PU |
| **3RA28 function modules for mounting onto 3RT2 contactors and 3RH2 contactor relays** | | | | | | | | |
| ***For direct-on-line starting*** | | | | | | | | |
| 3RT2.1[2], 3RT2.2[2], 3RH21[2], 3RH24 | S00, S0 | **ON-delay 2-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 contactors 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 3/87.

***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 3/153.

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

3

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

**More information**

Equipment Manual for 3RA2711 function modules for IO-Link, see https://support.industry.siemens.com/cs/ww/en/view/39319600

Equipment Manual for 3RA2712 function modules for AS-Interface, see https://support.industry.siemens.com/cs/ww/en/view/39318922

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

| For contactors Type | Size | Version | SD d | Screw terminals Article No. | Price per PU | SD d | Spring-loaded terminals Article No. | Price per PU |
|---|---|---|---|---|---|---|---|---|
| **SIRIUS 3RA27 function modules for direct-on-line starting** | | | | | | | | |
| 3RT201 ... 3RT204[1] | S00 ... S3 | **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] | S00 ... S3 | **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** | | 5 | **3RA2712-2BA00** | |
| | | **Assembly kits for making 3-pole contactor assemblies** See page 3/111 | | | | | | |
| **SIRIUS 3RA27 function modules for star-delta (wye-delta) starting[4]** | | | | | | | | |
| 3RT201 ... 3RT204[1] | S00 ... S3 | **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 3/112 | | | | | | |

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 3/154 to 3/157. 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 3/109.

4) For complete contactor assemblies for star-delta (wye-delta) starting including function modules, see pages 3/171 to 3/174.

Technical specifications for 3RA27 function modules, see page 3/88.

For contactors with voltage tap-off, see pages 3/61, 3/65, 3/69 and 3/71.

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



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


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**<br>Comprising:<br>• Two module connectors (14-pole, short)<br>• Two interface covers | 5 | **3RA2711-0EE10** | | 1 | 1 unit | 41B |
| 3RA271.-..A00 | **Module connectors** | | | | | | |
| | • 14-pole | | | | | | |
| | - 6 cm | 5 | **3RA2711-0EE17** | | 1 | 1 unit | 41B |
| | - 9 cm | 5 | **3RA2711-0EE06** | | 1 | 1 unit | 41B |
| | - 13 cm | 5 | **3RA2711-0EE18** | | 1 | 1 unit | 41B |
| | - 26 cm | 5 | **3RA2711-0EE07** | | 1 | 1 unit | 41B |
| | - 33.5 cm | 5 | **3RA2711-0EE08** | | 1 | 1 unit | 41B |
| | • 10-pole, 9 cm<br>for the additional auxiliary voltage infeed | 5 | **3RA2711-0EE16** | | 1 | 1 unit | 41B |
| | Note:<br>Selection of module connectors, see Equipment Manual for 3RA2711 function modules for IO-Link. | | | | | | |
| 3RA271.-..A00 | **Interface covers**<br>(Set of 5) | 5 | **3RA2711-0EE15** | | 1 | 1 unit | 41B |
| 3RA271.-..A00 | **Cover, sealable** | 2 | **3RA2910-0** | | 1 | 5 units | 41B |
| **Operator panel for communication via IO-Link** | | | | | | | |
| 3RA2711-..A00 | **Operator panel (set)**<br>Comprising:<br>• 1 x operator panel<br>• 1 x enabling module<br>• 1 x interface cover<br>• 1 x fixing terminal | 10 | **3RA6935-0A** | | 1 | 1 unit | 42F |
| 3RA2711-..A00 | **Connecting cable**<br>For connecting the operator panel to the coupling module<br>Length 2 m, 10- to 14-pole | 5 | **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 |

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

3

| For contactors | Rated control supply voltage $U_S$ | Time setting range $t$ | SD | Screw terminals | | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|
| Type | V | s | d | Article No. | Price per PU | | | |
| **Mechanical latching blocks (no switching state change in the event of voltage drop)** | | | | | | | | |
| ***Size S0*** | | | | | | | | |
| **For snapping onto the front of contactors** | | | | | | | | |
| The contactor remains in the energized state after a power failure. | | | | | | | | |
| 3RT202, 3RT232, 3RT252 | 24 AC/DC | -- | ▶ | **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 |


3RT2926-3A.31

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **OFF-delay devices for contactors with AC/DC and DC operation** | | | | | | | | |
| ***Sizes S00 to S3*** | | | | | | | | |
| **Non-adjustable delay time** | | | | | | | | |
| 3RT201.-1BF4., 3RT202.-1BF4., 3RT203.-1NF3., 3RH2...-1BF40 | 110 AC/DC | S00: > 0.1<br>S0: > 0.08<br>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<br>S0: > 0.3<br>S2: > 0.8 | 2 | **3RT2916-2BL01** | | 1 | 1 unit | 41B |
| 3RT201.-1BB4., 3RT202.-1BB4., 3RT203.-1NB3., 3RT204.-1NB3., 3RT244.-1NB3., 3RH2...-1BB40 | 24 DC | S00: > 0.2<br>S0: > 0.1<br>S2: > 0.1<br>S3: > 0.05 | 2 | **3RT2916-2BE01** | | 1 | 1 unit | 41B |


3RT2916-2B.01



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

## 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** | | | | | | | | |
| 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** | | ▶ | **3RA2936-1A** | | 1 | 1 unit | 41B |


3RA2926-1A

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

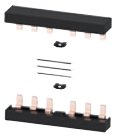
| For contactors Type | Size | Version | SD d | Article No. Screw terminals | Price per PU | SD d | Article No. Spring-loaded terminals | Price per PU |
|---|---|---|---|---|---|---|---|---|
| **Assembly kits for reversing contactor assemblies for making 3-pole contactor assemblies** | | | | | | | | |
| 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** | |
| 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** | |
| 3RT203 | **S2-S2** | The assembly kit contains: Two connectors for two contactors, wiring modules on the top and bottom (3RA2934-2B mechanical interlock must be ordered separately, see page 3/115) | | | | | | |
| | | • For main and auxiliary circuits | ▶ | **3RA2933-2AA1** | | | -- | |
| | | • Only for main circuit[3] | | -- | | 5 | **3RA2933-2AA2** | |
| 3RT204 | **S3-S3** | The assembly kit contains: Two connectors for two contactors, wiring modules on the top and bottom (3RA2934-2B mechanical interlock must be ordered separately, see page 3/115) | | | | | | |
| | | • For main and auxiliary circuits | 2 | **3RA2943-2AA1** | | | -- | |
| | | • Only for main circuit[3] | | -- | | 2 | **3RA2943-2AA2** | |
| 3RT1.5 | **S6-S6** | The assembly kit contains: Wiring modules on the top and bottom | 5 | **3RA1953-2A** | | 5 | **3RA1953-2A** | |
| 3RT1.6 | **S10-S10** | | 15 | **3RA1963-2A** | | 15 | **3RA1963-2A** | |
| 3RT1.7 | **S12-S12** | | 15 | **3RA1973-2A** | | 15 | **3RA1973-2A** | |


3RA2923-2AA1


3RA2923-2AA2


3RA2933-2AA1


3RA2943-2AA1


3RA2943-2AA2


3RA1953-2A


3RA1963-2A

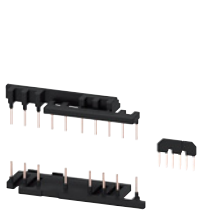
[1] Use of the 3RA2923-2AA1 assembly kit in conjunction with the 3RT202.-.....-3MA0 contactors is limited because the auxiliary switches in the basic unit are not allowed to be used on account of the permanently mounted auxiliary switch.

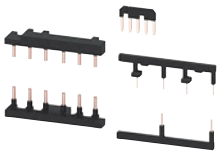
[2] Version in size S0 with spring-loaded terminals:
Only the wiring modules for the main circuit are included.
No connecting clips are included for the auxiliary and control circuit.

[3] Version in sizes S2 and S3 with spring-loaded 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.

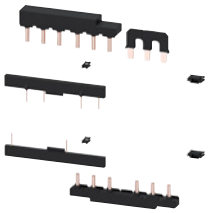
*** You can order this quantity or a multiple thereof.**
**Illustrations are approximate**

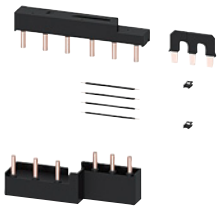
PU (UNIT, SET, M) = 1
PS* = 1 unit (unless otherwise specified)
PG = 41B

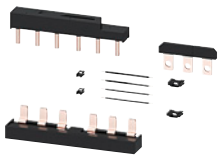

3RA2913-2BB1


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-loaded 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 assembly 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 of the line contactor to the A2 coil contact of the delta contactor | ▶ | **3RA2933-2C** | | ▶ | **3RA2933-2C** | |
| 3RT203 | **S2-S2-S2** | The assembly kit[2] contains: Four connectors for three contactors, an S2 star jumper, a cable for connecting the A2 coil contact of 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 | | **--** | | 2 | **3RA2933-2BB2** | |
| 3RT204 | **S3-S3-S2** | The assembly 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 of the line contactor to the A2 coil contact of the delta contactor | 2 | **3RA2943-2C** | | 2 | **3RA2943-2C** | |
| 3RT204 | **S3-S3-S3** | The assembly kit[2] contains: Four connectors for three contactors, an S3 star jumper, a cable for connecting the A2 coil contact of 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 | 2 | **3RA2943-2BB1** | | | **--** | |
| | | • Wiring modules on the top and bottom for the main circuit, a cable set for the auxiliary circuit | | **--** | | 2 | **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.

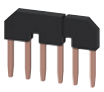
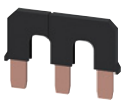
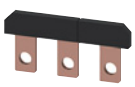
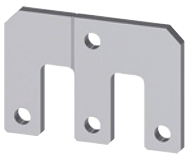
[2] The 3RA2934-2B mechanical interlock for sizes S2 and S3 must be ordered separately, see page 3/115.



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

| | 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 assembly 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 3/114. | 5 | **3RA1953-3G** | | 1 | 1 unit | 41B |
|   3RA1953-2B | 3RT1.5 | **S6-S6-S6** For connection with box terminal | -- | 5 | **3RA1953-2B** | | 1 | 1 unit | 41B |
|   3RA1953-2N | 3RT1.5 | **S6-S6-S6** For connection without box terminal | -- | 5 | **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 3/114. | 20 | **3RA1963-3E** | | 1 | 1 unit | 41B |
|   3RA1963-2B | 3RT1.6 | **S10-S10-S10** For connection without box terminal | -- | 15 | **3RA1963-2B** | | 1 | 1 unit | 41B |
|  3RA1973-3E | 3RT1.7, 3RT1.6 | **S12-S12-S10** For connection with box terminal | The S10 star jumper must be ordered separately, see page 3/114. | 20 | **3RA1973-3E** | | 1 | 1 unit | 41B |
|   3RA1973-2B | 3RT1.7 | **S12-S12-S12** For connection without box terminal | -- | 15 | **3RA1973-2B** | | 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. Screw terminals | Price per PU | SD d | Article No. Spring-loaded terminals | Price per PU |
|---|---|---|---|---|---|---|---|---|---|
| **Single wiring modules for making 3-pole contactor assemblies** | | | | | | | | | |
| | | | | | **Screw terminals** | | | **Spring-loaded terminals** | |
|  3RA2913-3DA1 | | | | | | | | | |
| 3RT201 | **S00-S00** | • Top (in-phase) | PS = 5 units | ▶ | **3RA2913-3DA1** | | 2 | **3RA2913-3DA2** | |
| | | • Bottom (with phase reversal) | PS = 5 units | 2 | **3RA2913-3EA1** | | 5 | **3RA2913-3EA2** | |
|  3RA2913-3DA2 | | | | | | | | | |
| 3RT202 | **S0-S0** | • Top (in-phase) | PS = 5 units | ▶ | **3RA2923-3DA1** | | 5 | **3RA2923-3DA2** | |
| | | • Bottom (with phase reversal) | PS = 5 units | 5 | **3RA2923-3EA1** | | 5 | **3RA2923-3EA2** | |
|  3RA1933-3D | | | | | | | | | |
| 3RT203 | **S2-S2** | • Top (in-phase), contactor clearance 10 mm | | ▶ | **3RA1933-3D** | | ▶ | **3RA1933-3D** | |
| | | • Bottom (with phase reversal), contactor clearance 10 mm | | 2 | **3RA1933-3E** | | 2 | **3RA1933-3E** | |
|  3RA1943-3E | | | | | | | | | |
| 3RT204 | **S3-S3** | • Top (in-phase), contactor clearance 10 mm | | ▶ | **3RA1943-3D** | | ▶ | **3RA1943-3D** | |
| | | • Bottom (with phase reversal), contactor clearance 10 mm | | 2 | **3RA1943-3E** | | 2 | **3RA1943-3E** | |
|  3RA1953-3D | | | | | | | | | |
| 3RT1.5 | **S6-S6** | • Top (in-phase, for connection with box terminal), contactor clearance 10 mm | | 5 | **3RA1953-3D** | | 5 | **3RA1953-3D** | |
| | | • Top (with phase reversal, for connection without box terminal), contactor clearance 10 mm | | 5 | **3RA1953-3P** | | 5 | **3RA1953-3P** | |
| **Star jumpers (links for paralleling), 3-pole** | | | | | | | | | |
| | | | | | **Screw terminals** | | | **Spring-loaded terminals** | |
|  3RT1916-4BA31 | | | | | | | | | |
| 3RT201 | **S00** | **With through-hole** The links for paralleling can be reduced by one pole. | | ▶ | **3RT1916-4BA31** | | 2 | **3RT2916-4BA32** | |
|  3RT2926-4BA32 | | | | | | | | | |
| 3RT202 | **S0** | Without connecting terminal | | ▶ | **3RT1926-4BA31** | | ▶ | **3RT2926-4BA32** | |
|  3RT1936-4BA31 | | | | | | | | | |
| 3RT203 | **S2** | | | ▶ | **3RT1936-4BA31** | | ▶ | **3RT1936-4BA31** | |
|  3RT1946-4BA31 | | | | | | | | | |
| 3RT204 | **S3** | | | 20 | **3RT1946-4BA31** | | 20 | **3RT1946-4BA31** | |
|  3RT1956-4BA31 | | | | | | | | | |
| 3RT1.5 | **S6** | | | 5 | **3RT1956-4BA31** | | 5 | **3RT1956-4BA31** | |
|  3RT1966-4BA31 | | | | | | | | | |
| 3RT1.6, 3RT1.7 | **S10, S12** | | | 5 | **3RT1966-4BA31** | | 5 | **3RT1966-4BA31** | |



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

| | 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. | ► | **3RA2912-2H** | | 1 | 10 units | 41B |
| | 3RT202, 3RT232 | **S0-S0** | | ► | **3RA2922-2H** | | 1 | 10 units | 41B |

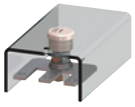
| | For contactors Type | Size | Version | SD d | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| **Mechanical interlocks for contactor assemblies** | | | | | | | | | |
| | | | A contactor clearance of 10 mm must be considered when using the following 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[1)] | **S6 (3RT1)-S6 (3RT1)-S3 (3RT2)[1)]** | **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. | 20 | **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 | 2 | **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) | 10 | **3RA1932-2D** | | 1 | 10 units | 41B |
| | | | **4-pole version** | | | | | | |
|  | 3RT233 | **S2-S2** | • With 20 mm contactor clearance | 2 | **3RA2932-2G** | | 1 | 10 units | 41B |
| | 3RT234. | **S3-S3** | • With 10 mm contactor clearance | 5 | **3RA2942-2G** | | 1 | 10 units | 41B |
|  3RA2942-2G | | | | | | | | | |

[1)] The 3RA1954-2G adapter cannot be used in conjunction with 3RT204..-.KB coupling contactors, size S3.

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

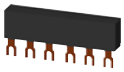
3

## Selection and ordering data

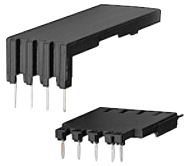
| | For contactors Type | Size | Version | SD d | Screw terminals Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| **Links for paralleling for main circuits** | | | | | | | | | |
| | | | The links for paralleling (insulated) can be reduced by one pole. With connecting terminal | | | | | | |
| | | | **3-pole** | | | | | | |
|  3RT1916-4BB31 | 3RT201 | **S00** | • Max. conductor cross-section: 25 mm$^2$, stranded | ▶ | **3RT1916-4BB31** | | 1 | 1 unit | 41B |
|  3RT2926-4BB31 | 3RT202 | **S0** | • Max. conductor cross-section: 50 mm$^2$, stranded | ▶ | **3RT2926-4BB31** | | 1 | 1 unit | 41B |
|  3RT1936-4BB31 | 3RT203 | **S2** | • Max. conductor cross-section: 120 mm$^2$, stranded | 2 | **3RT1936-4BB31** | | 1 | 1 unit | 41B |
|  3RT1946-4BB31 | 3RT204, 3RT244 | **S3** | • Max. conductor cross-section: 185 mm$^2$, stranded<br>A cover plate is included for touch protection (can only be used when box terminal is removed). | 20 | **3RT1946-4BB31** | | 1 | 1 unit | 41B |
| | | | **4-pole** | | | | | | |
|  3RT1916-4BB41 | 3RT231, 3RT251 | **S00** | • Max. conductor cross-section: 25 mm$^2$, stranded | 2 | **3RT1916-4BB41** | | 1 | 1 unit | 41B |



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

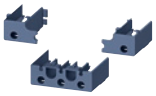
| | For contactors | Size | Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| | Type | | | d | | | | | |
| **1-phase infeed terminals** | | | | | | | | | |
|  3RA2943-3L | 3RT204, 3RT244, 3RT264 | **S3** | Conductor cross-section: 95 mm² | 2 | **3RA2943-3L** | | 1 | 1 unit | 41B |
| **3-phase infeed terminals** | | | | | | | | | |
|  3RA2913-3K | 3RT201 | **S00** | Max. conductor cross-section: up to 10 mm², AWG 12 ... 8 | 2 | **3RA2913-3K** | | 1 | 10 units | 41B |
|  3RV2925-5AB | 3RT202, 3RT262 | **S0** | Max. conductor cross-section: up to 25 mm², AWG 10 ... 2/0 | ► | **3RV2925-5AB** | | 1 | 1 unit | 41E |
|  3RV2935-5A | 3RT203, 3RT263 | **S2** | Max. conductor cross-section: up to 70 mm², AWG 10 ... 2/0 | ► | **3RV2935-5A** | | 1 | 1 unit | 41E |
| **3-phase infeed terminals with increased clearances and creepage distances** | | | | | | | | | |
|  3RV2935-5E | 3RT203 | **S2** | Max. conductor cross-section: up to 70 mm², AWG 10 ... 2/0 | ► | **3RV2935-5E** | | 1 | 1 unit | 41E |
| **3-phase busbars** | | | | | | | | | |
|  3RV1915-1AB | 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 |
| **Terminal blocks for connecting auxiliary conductors to main terminals** | | | | | | | | | |
| | | | **Box terminal blocks**<br>For round and ribbon cables<br>Connectable cross-sections of the contactors, see "Technical specifications", page 3/52. | | | | | | |
| | 3RT204 | **S3** | • 3-pole, for connection of main contacts, 2.5 to 70 mm² | X | **3RT2946-4G** | | 1 | 1 unit | 41B |
|  3RT1956-4G | 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 |
|  3RT1966-4G | 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 |
|  3TX7500-0A | 3RT1.5 | **S6** | **Box terminal for auxiliary conductor connection, 1-pole**<br>For connection of auxiliary and control cables (0.5 ... 2.5 mm²) to the main conductor terminals | 5 | **3TX7500-0A** | | 1 | 1 unit | 41B |
|  3RT2946-4F | 3RT204 | **S3** | **Auxiliary terminals, 3-pole**<br>For connection of auxiliary and control cables (0.5 ... 2.5 mm²) to the main conductor terminals | 2 | **3RT2946-4F** | | 1 | 1 unit | 41B |

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

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

| | For contactors | Size | Version | SD | **Screw terminals** | | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| | Type | | | d | Article No. | Price per PU | | | |
| **Connection module (adapter and plug) for contactors with screw terminals** | | | | | | | | | |
|  | | | The connection module comprises an adapter and a motor feeder connector. | | | | | | |
| 3RT1926-4RD01 | | | **Adapters** | | | | | | |
| | | | Ambient temperature $t_{u\ max.}$ = 60 °C | | | | | | |
| | 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 |
|  | 3RT201, 3RT202, 3RH2 | **S00, S0** | **Motor feeder connector** | 5 | **3RT1900-4RE01** | | 1 | 1 unit | 41B |
| 3RT1900-4RE01 | | | | | | | | | |

## Selection and ordering data

| | For contactors | Size | Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| | Type | | | d | | | | | |
| **Terminal covers** | | | | | | | | | |
| | | | **Covers for contactors with screw terminals (box terminals)** (2 units required per contactor) | | | | | | |
|  3RT2936-4EA2  3RT2946-4EA2 | 3RT203 | **S2** | • For 3-pole contactors | ▶ | **3RT2936-4EA2** | | 1 | 1 unit | 41B |
| | 3RT204, 3RT244 | **S3** | | ▶ | **3RT2946-4EA2** | | 1 | 1 unit | 41B |
|  3RT1956-4EA2  3RT1966-4EA2 | 3RT1.5 | **S6**[1] | | ▶ | **3RT1956-4EA2** | | 1 | 1 unit | 41B |
| | 3RT1.6, 3RT1.7 | **S10**[1], **S12**[1] | | 5 | **3RT1966-4EA2** | | 1 | 1 unit | 41B |
|  3RT2936-4EA4  3RT2946-4EA4 | 3RT233, 3RT253 | **S2** | • For 4-pole contactors (Scope of supply: one 3-pole and two 1-pole terminal covers are supplied) | ▶ | **3RT2936-4EA4** | | 1 | 1 unit | 41B |
| | 3RT234, 3RT254 | **S3** | | 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) | | | | | | |
|  3RT1946-4EA1 | | | | | | | | | |
|  3RT1956-4EA1  3RT1966-4EA1 | 3RT2.4 | **S3** | • Length: 100 mm | 20 | **3RT1946-4EA1** | | 1 | 1 unit | 41B |
| | 3RT1.5 | **S6**[1] | • Length: 100 mm | ▶ | **3RT1956-4EA1** | | 1 | 1 unit | 41B |
| | 3RT1.6, 3RT1.7 | **S10**[1], **S12**[1] | • Length: 120 mm | 5 | **3RT1966-4EA1** | | 1 | 1 unit | 41B |
|  3RT1956-4EA4 | | | • For the assembly kits for 3RA1953-.. contactor assemblies for star-delta (wye-delta) starting (page 3/113) or for the 3RA1953-3 single wiring modules. (page 3/114) | | | | | | |
| | 3RT1.5 | **S6** | - Length: 38 mm | 5 | **3RT1956-4EA4** | | 1 | 1 unit | 41B |
| | | | **Terminal covers for busbar connections** | | | | | | |
|  3RT1956-4EA3  3RT1966-4EA3 | | | • 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 | 5 | **3RT1966-4EA3** | | 1 | 1 unit | 41B |
|  3TX6526-3B  3TX6546-3B | | | • Can be screwed on free screw end; cover one busbar connection (1 set = 6 units) | | | | | | |
| | 3RT1.5 | **S6** | - M8 | 2 | **3TX6526-3B** | | 1 | 1 unit | 41B |
| | 3RT1.6, 3RT1.7 | **S10, S12** | - M10 | 2 | **3TX6546-3B** | | 1 | 1 unit | 41B |
| **Sealable covers** | | | | | | | | | |
|  3RT2916-4MA10  3RT1926-4MA10 | 3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4, 3RH2[3] | **S00 ... S3** | For preventing manual operation (Not suitable for coupling contactors) | 2 | **3RT2916-4MA10** | | 1 | 5 units | 41B |
| | 3RT1.5 ... 3RT1.7[3] | **S6 ... S12** | | 20 | **3RT1926-4MA10** | | 1 | 5 units | 41B |

[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 mounted onto the front.

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

3

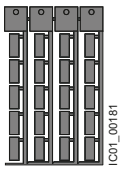
## Selection and ordering data

| | 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** | | 15 | **3RA1962-2A** | | 1 | 1 unit | 41B |
| | 3RT1.7 | **S12** | | 15 | **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<br>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** | | 15 | **3RA1962-2E** | | 1 | 1 unit | 41B |
| | | **S10-S10-S10** | | 15 | **3RA1962-2F** | | 1 | 1 unit | 41B |
| | | **S12-S12-S10** | | 15 | **3RA1972-2E** | | 1 | 1 unit | 41B |
| | | **S12-S12-S12** | | 15 | **3RA1972-2F** | | 1 | 1 unit | 41B |
|  3RA1952-2F | | | | | | | | | |
| **Adapters for screw fixing** | | | | | | | | | |
|  3RT1926-4P | 3RT2.2 | **S0** | Screw adapters for securing the contactors, two units required per contactor<br>(1 pack = 10 sets for 10 contactors) | 15 | **3RT1926-4P** | | 1 | 10 units | 41B |
| **Connection kit for one complete contactor** | | | | | | | | | |
|  | | | Each set includes 6 screws, spring washers and nuts. | | | | | | |
| | 3RT105 | **S6** | M 8 x 25 | 5 | **3RT1955-4PA00** | | 1 | 1 unit | 41B |
| | 3RT106, 3RT107 | **S10, S12** | M 10 x 30 | 5 | **3RT1966-4PA00** | | 1 | 1 unit | 41B |
|  3RT1955-4PA00 | | | | | | | | | |
| **EMC suppression modules; 3-phase, up to 7.5 kW** | | | | | | | | | |
| | ***For contactors with AC or DC operation*** | | | | | | | | |
|  3RT2916-1PA. | | | | | **Screw terminals** | | | | |
| | 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 | ▶ | **3RT2916-1PA2** | | 1 | 1 unit | 41B |
| | | | • Up to 690 V | 2 | **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

| | 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 of the contactors with or without auxiliary switches<br>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<br>Rated voltage:<br>50/60 Hz AC, 180 ... 255 V<br>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.<br>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.<br>Rated voltage:<br>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 startup 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 |

| | For contactors Type | Size | Version | SD d | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|
| **Insulation stop for securely holding back the conductor insulation for conductors up to 1 mm²** | | | | | | | | | |
| | | | | | **Spring-loaded terminals** | | | | |
|  3RT2916-4JA02 | | | **Insulation stop strip** Can be inserted in cable entry of the spring-loaded terminal (two strips per contactor required) | | | | | | |
| | 3RT2.1, 3RH2 | **S00** | • For basic units, removable individually | 2 | **3RT2916-4JA02** | | 1 | 20 units | 41B |
|  3RT1916-4JA02 | 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-loaded terminals** | | | | | | | | | |
|  3RA2908-1A | 3RT, 3RH | **S00 ... S12** | **Screwdrivers** For all SIRIUS devices with spring-loaded 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] | | | | | | |
| | 3RT | **S00 ... S12** | • 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 |
| | | | **Adhesive labels** For SIRIUS devices | | | | | | |
| | 3RT | **S00 ... S12** | • 19 mm × 6 mm, titanium gray | 5 | **3RT2900-1SB60** | | 100 | 3060 units | 41B |

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



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

## Selection and ordering data

### *Screw terminals and spring-loaded 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 | X | **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 | -- | X | **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 | X | **3RT2926-5AG61** | | 1 | 1 unit | 41B |
| | -- | 200 | 220 | 5 | **3RT2926-5AN61** | | 1 | 1 unit | 41B |
| | -- | 400 | 440 | 5 | **3RT2926-5AR61** | | 1 | 1 unit | 41B |

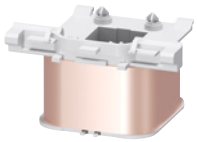
Note:

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.

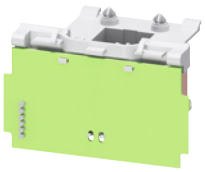
*** You can order this quantity or a multiple thereof.**
**Illustrations are approximate**

## Spare parts for SIRIUS 3RT contactors and SIRIUS 3RH2 contactor relays > Solenoid coils

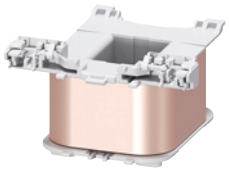
***Screw terminals and spring-loaded terminals***



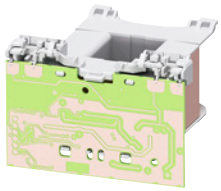
3RT2934-5A.01



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 | -- | -- | 2 | **3RT2934-5AC21** | | 1 | 1 unit | 41B |
| | -- | 42 | -- | -- | X | **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 | -- | -- | 2 | **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 | -- | X | **3RT2934-5AG61** | | 1 | 1 unit | 41B |
| | -- | 200 | 220 | -- | 5 | **3RT2934-5AN61** | | 1 | 1 unit | 41B |
| | -- | -- | 277 | -- | X | **3RT2934-5AU61** | | 1 | 1 unit | 41B |
| | -- | 400 | 440 | -- | 2 | **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 | -- | -- | -- | 10 | **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 | -- | -- | 10 | **3RT2944-5AD21** | | 1 | 1 unit | 41B |
| | -- | 48 | -- | -- | 5 | **3RT2944-5AH21** | | 1 | 1 unit | 41B |
| | -- | 110 | -- | -- | 2 | **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 | -- | 10 | **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 | X | **3RT2934-5ND31** | | 1 | 1 unit | 41B |
| | -- | 48 ... 80 | -- | 48 ... 80 | 10 | **3RT2934-5NE31** | | 1 | 1 unit | 41B |
| | -- | 83 ... 155 | -- | 83 ... 155 | X | **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 | 10 | **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 |

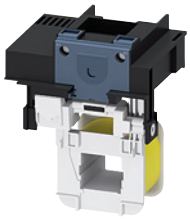
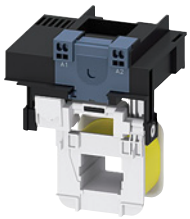
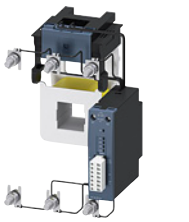
Note:

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



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

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

| For contactors | | Rated control supply voltage $U_s$ | SD | Screw terminals | SD | Spring-loaded terminals |
|---|---|---|---|---|---|---|
| | | | | Article No. Price per PU | | Article No. Price per PU |
| Size | Type | V | d | | d | |
| **Withdrawable coils** | | | | | | |
| ***Standard operating mechanism for AC/DC*** | | | | | | |
|  3RT1955-5A.31 | | | | | | |
| **S6** | 3RT105, 3RT145 | 23 ... 26 AC/DC | 5 | **3RT1955-5AB31** | 5 | **3RT1955-5AB32** |
| | | 42 ... 48 AC/DC | 5 | **3RT1955-5AD31** | X | **3RT1955-5AD32** |
| | | 110 ... 127 AC/DC ▶ | | **3RT1955-5AF31** | 5 | **3RT1955-5AF32** |
| | | 200 ... 220 AC/DC | 5 | **3RT1955-5AM31** | 5 | **3RT1955-5AM32** |
| | | 220 ... 240 AC/DC ▶ | | **3RT1955-5AP31** | 5 | **3RT1955-5AP32** |
| | | 240 ... 277 AC/DC | 5 | **3RT1955-5AU31** | X | **3RT1955-5AU32** |
| | | 380 ... 420 AC/DC | 5 | **3RT1955-5AV31** | 5 | **3RT1955-5AV32** |
| | | 440 ... 480 AC/DC | 5 | **3RT1955-5AR31** | X | **3RT1955-5AR32** |
| | | 500 ... 550 AC/DC | 5 | **3RT1955-5AS31** | X | **3RT1955-5AS32** |
| | | 575 ... 600 AC/DC | 5 | **3RT1955-5AT31** | X | **3RT1955-5AT32** |
|  3RT1955-5A.32 | | | | | | |
| **S10** | 3RT106, 3RT146 | 23 ... 26 AC/DC | 5 | **3RT1965-5AB31** | 5 | **3RT1965-5AB32** |
| | | 42 ... 48 AC/DC | 5 | **3RT1965-5AD31** | X | **3RT1965-5AD32** |
| | | 110 ... 127 AC/DC ▶ | | **3RT1965-5AF31** | 5 | **3RT1965-5AF32** |
| | | 200 ... 220 AC/DC | 5 | **3RT1965-5AM31** | X | **3RT1965-5AM32** |
| | | 220 ... 240 AC/DC ▶ | | **3RT1965-5AP31** | 5 | **3RT1965-5AP32** |
| | | 240 ... 277 AC/DC | 5 | **3RT1965-5AU31** | X | **3RT1965-5AU32** |
| | | 380 ... 420 AC/DC | 5 | **3RT1965-5AV31** | 5 | **3RT1965-5AV32** |
| | | 440 ... 480 AC/DC | 5 | **3RT1965-5AR31** | X | **3RT1965-5AR32** |
| | | 500 ... 550 AC/DC | 5 | **3RT1965-5AS31** | X | **3RT1965-5AS32** |
| | | 575 ... 600 AC/DC | 5 | **3RT1965-5AT31** | X | **3RT1965-5AT32** |
| **S12** | 3RT107, 3RT147 | 23 ... 26 AC/DC | 5 | **3RT1975-5AB31** | 5 | **3RT1975-5AB32** |
| | | 42 ... 48 AC/DC | 5 | **3RT1975-5AD31** | X | **3RT1975-5AD32** |
| | | 110 ... 127 AC/DC | 5 | **3RT1975-5AF31** | X | **3RT1975-5AF32** |
| | | 200 ... 220 AC/DC | 5 | **3RT1975-5AM31** | X | **3RT1975-5AM32** |
| | | 220 ... 240 AC/DC ▶ | | **3RT1975-5AP31** | 5 | **3RT1975-5AP32** |
| | | 240 ... 277 AC/DC | 5 | **3RT1975-5AU31** | X | **3RT1975-5AU32** |
| | | 380 ... 420 AC/DC | 5 | **3RT1975-5AV31** | X | **3RT1975-5AV32** |
| | | 440 ... 480 AC/DC | 5 | **3RT1975-5AR31** | 5 | **3RT1975-5AR32** |
| | | 500 ... 550 AC/DC | 5 | **3RT1975-5AS31** | X | **3RT1975-5AS32** |
| | | 575 ... 600 AC/DC | 5 | **3RT1975-5AT31** | X | **3RT1975-5AT32** |
| ***Solid-state operating mechanism for AC/DC with 24 V DC control signal input e.g. for control by PLC*** | | | | | | |
|  3RT1955-5N.31 | | | | | | |
| **S6** | 3RT105, 3RT145 | 21 ... 27.3 AC/DC | 5 | **3RT1955-5NB31** | X | **3RT1955-5NB32** |
| | | 96 ... 127 AC/DC | 5 | **3RT1955-5NF31** | X | **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** | X | **3RT1975-5NB32** |
| | | 96 ... 127 AC/DC | 5 | **3RT1975-5NF31** | 5 | **3RT1975-5NF32** |
| | | 200 ... 277 AC/DC | 5 | **3RT1975-5NP31** | 5 | **3RT1975-5NP32** |
|  3RT1955-5P.31 | | | | | | |
| • **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 | X | **3RT1975-5PF31** | | **--** |
| | | 200 ... 277 AC/DC | X | **3RT1975-5PP31** | | **--** |
| ***Solid-state operating mechanism for DC with 24 ... 110 V DC control signal input e.g. for control by PLC with extended application range*** | | | | | | |
|  3RT1955-5X.42 | | | | | | |
| (see also contactors for railway applications on page 4/61) | | | | | | |
| **S6** | 3RT105..-X...- 0LA2 | 24 DC | | -- | 5 | **3RT1955-5XB42** |
| | | 72 DC | | -- | X | **3RT1955-5XJ42** |
| | | 110 DC | | -- | 5 | **3RT1955-5XF42** |
| **S10** | 3RT106..-X...- 0LA2 | 24 DC | | -- | 5 | **3RT1965-5XB42** |
| | | 72 DC | | -- | X | **3RT1965-5XJ42** |
| | | 110 DC | | -- | 5 | **3RT1965-5XF42** |
| **S12** | 3RT107..-X...- 0LA2 | 24 DC | | -- | 5 | **3RT1975-5XB42** |
| | | 72 DC | | -- | X | **3RT1975-5XJ42** |
| | | 110 DC | | -- | 5 | **3RT1975-5XF42** |

Note:

In the case of 3RT10..-.S contactors with fail-safe control inputs, removing and replacing the operating mechanism are not permitted.

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

3

## 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*** | | | | | | | | |
|  3RT294.-6A | | | | | | | | |
| **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 | | 2 | **3RT2945-6A** | | 1 | 1 unit | 41B |
| | 3RT2046 | | 2 | **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 | | ▶ | **3RT1976-6A** | | 1 | 1 unit | 41B |
|  3RT1954-6A | | | | | | | | |
| **S3** | 3RT2446 | Main contacts (3 NO contacts) for utilization category AC-1 (1 set = 3 movable and 6 fixed switching elements with fixing parts) | 10 | **3RT2946-6D** | | 1 | 1 unit | 41B |
| | 3RT2448 | | 10 | **3RT2948-6D** | | 1 | 1 unit | 41B |
| **S6** | 3RT1456 | | 5 | **3RT1956-6D** | | 1 | 1 unit | 41B |
| **S10** | 3RT1466 | | 5 | **3RT1966-6D** | | 1 | 1 unit | 41B |
| | 3RT1467 | | 10 | **3RT1967-6D** | | 1 | 1 unit | 41B |
| **S12** | 3RT1476 | | 5 | **3RT1976-6D** | | 1 | 1 unit | 41B |
|  3RT197.-6A, 3RT1976-6D | | | | | | | | |
| ***For contactors with 4 main contacts*** | | | | | | | | |
|  3RT2936-6E | | | | | | | | |
| **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) | 10 | **3RT2936-6E** | | 1 | 1 unit | 41B |
| | 3RT2337 | | 10 | **3RT2937-6E** | | 1 | 1 unit | 41B |
| **Arc chutes** | | | | | | | | |
| ***For contactors with 3 main contacts*** | | | | | | | | |
|  3RT195.-7. | | | | | | | | |
| **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 |
|  3RT196.-7. | | | | | | | | |
| **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 |
|  3RT197.-7. | | | | | | | | |
| **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 |



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

## 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 3/119 and 3/140).

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 the vacuum contactors with or without overload relays, refer to the Manuals and Configuration Manuals, see "More information" on page 3/128.

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 7/123 onwards) can be mounted onto 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 according 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:
- Standard operating mechanism with economy circuit for AC and DC operation (switchover from closing coil to holding coil), 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 switches. These can be fitted with up to eight lateral auxiliary contacts (identical auxiliary switches 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.

## SIRIUS 3RT12 and 3TF6 vacuum contactors



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 3/23, and 3/48 to 3/54.

**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

System Manual for modular system, see https://support.industry.siemens.com/cs/ww/en/view/60311318

Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/60306557

Application Manual for controls with IE3/IE4 motors, see https://support.industry.siemens.com/cs/ww/en/view/94770820

Configuration Manual for load feeders, see https://support.industry.siemens.com/cs/ww/en/view/39714188

Configuration Manual for UL, see https://support.industry.siemens.com/cs/ww/en/view/53433538

| Type | **SIRIUS vacuum contactors** |
|---|---|
| | **3RT12** |
| Size | **S10 and S12** |

### Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching low inductive or non-inductive AC loads (AC-1) and motor-driven 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.

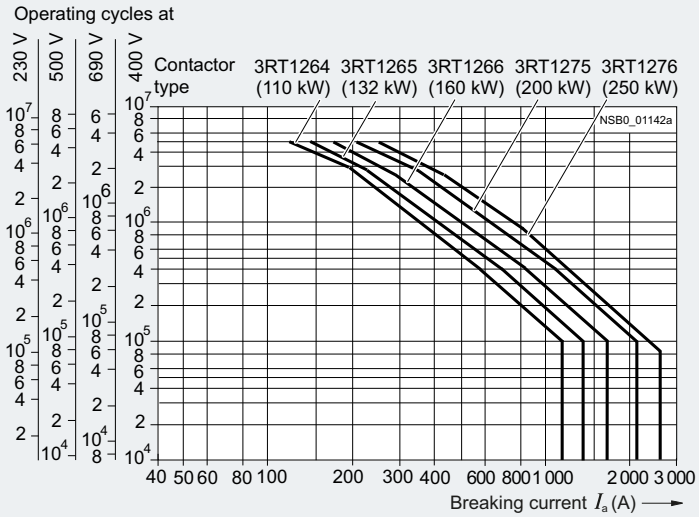
The rated operational current $I_e$ complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

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

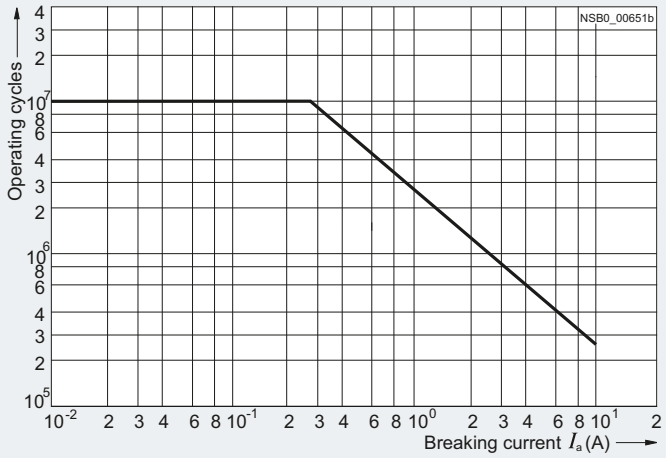


| | | | |
|---|---|---|---|
| | | **Vacuum contactors** | |
| Type | | **3TF6** | |
| Size | | **14** | |
| **Rated data of the auxiliary contacts** | | According to IEC 60947-5-1 | |
| **Rated insulation voltage $U_i$** (pollution degree 3) | V | 690 | |
| **Conventional thermal current $I_{th}$ = rated operational current $I_e$/AC-12** | A | 10 | |
| **AC load** | | | |
| **Rated operational current $I_e$/AC-15/AC-14** | | | |
| • At 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** | | | |
| • At 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 |
| • At 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 |
| **cULus and cULus 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.

## SIRIUS 3RT12 and 3TF6 vacuum contactors

| | Vacuum contactors |
|---|---|
| Type | 3TF6 |
| Size | 14 |

### Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching low inductive or non-inductive AC loads (AC-1) and motor-driven 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.

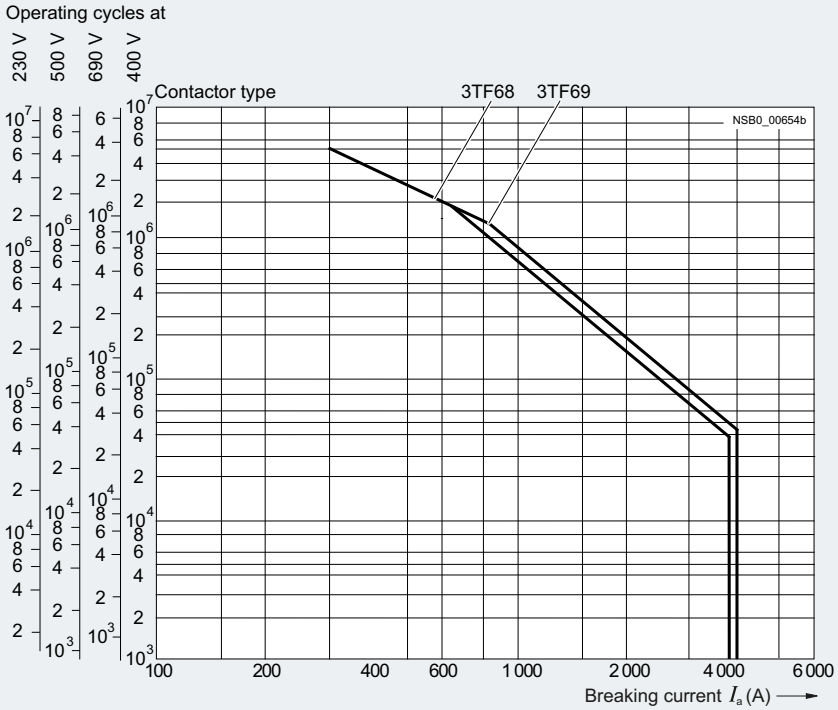
The rated operational current $I_e$ complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

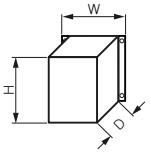
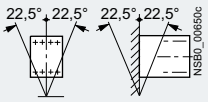
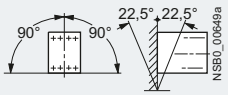
If a shorter contact endurance is sufficient, the rated operational current $I_e$/AC-4 can be increased.

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**<br>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 to 80% of the normal values. | | No | | Yes | |
| **Mechanical endurance** | Operating cycles | 10 million | | 5 million | |
| **Electrical endurance**<br>Contact endurance of the main contacts | | See page 3/128 | | See above | |
| **Rated insulation voltage $U_i$**<br>(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**<br>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<br>One NC contact each must be connected in series for the left and right auxiliary switch respectively. | |

| | | 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 IP on the front** acc. to IEC 60529 | | IP00<br>(IP20 with box terminal/cover) | | 3TF6...-.C..: IP00 (IP20 with cover);<br>3TF6...-.D../-.Q..: IP00 | |
| **Touch protection on the front** acc. to IEC 60529 | | Finger-safe for vertical touching from the front with box terminal/cover | | 3TF6...-.C..: Finger-safe for vertical touching from the front with cover;<br>3TF6...-.D../-.Q..: -- | |
| **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 3/127 | | | |
| **Short-circuit protection** | | | | | |
| **Main circuit** | | | | | |
| Fuse links, operational class gG:<br>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 acc. to IEC 60947-4-1) | A | 400 | 500 | 400 | 500 |
| **Auxiliary circuit** | | | | | |
| Short-circuit test | | | | | |
| • Fuse links, operational class gG:<br>DIAZED, type 5SB; NEOZED, type 5SE<br>(weld-free protection at $I_k \leq 1$ kA) | A | 10 | | | |
| • Miniature circuit breaker with C characteristic<br>(short-circuit current $I_k \leq 400$ A) | A | 10 | | | |
| Short-circuit protection for contactors with overload relays | | See Configuration Manual for load feeders | | | |

[1] For ambient temperatures > 55 °C, only 3TF6.33-.Q..-Z A02 contactors (= without connection of the main current path circuits) can be used. However, derating must be taken into account for these contactors too:
- 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.

## SIRIUS 3RT12 and 3TF6 vacuum contactors



| | | | 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 $U_s$) | | | | | | |
| | | | Standard operating mechanism | | | |
| • 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 mechanism | | | |
| • 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) | |
| | | | Standard operating mechanism | | | |
| • 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 mechanism, 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 mechanism, 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.

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | **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** | | | | | | | | | |
| • 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 cross-section in the main circuit for max. AC-1 rated value | | $mm^2$ | 185 | | | 370 | | 480 | $I_e \geq 800$ A: 2 x 60 x 5 (copper busbars) |
| **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 | 1/h | Standard operating mechanism: 2 000, Solid-state operating mechanism: 1 000 | | | | | -- | |
| | - AC | 1/h | -- | | | | | 2 000 | 1 000 |
| | - DC | 1/h | -- | | | | | 1 000 | |
| • Switching frequency *z* during rated operation[3] | - $I_e$/AC-1 at 400 V | 1/h | 800 | 750 | | | | 700 | |
| | - $I_e$/AC-2 at 400 V | 1/h | 300 | 250 | | | | 200 | |
| | - $I_e$/AC-3 at 400 V | 1/h | 750 | | | | | 500 | |
| | - $I_e$/AC-4 at 400 V | 1/h | 250 | | | | | 150 | |
| Contactors with overload relays | | | | | | | | | |
| • Mean value | | 1/h | 60 | | | | | 15 | |

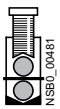
1) Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

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 $U'$: $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

## SIRIUS 3RT12 and 3TF6 vacuum contactors



| | | 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) | $mm^2$ | 70 ... 240 | | -- | |
| • Finely stranded without end sleeve | $mm^2$ | 70 ... 240 | | -- | |
| • Stranded | $mm^2$ | 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) | $mm^2$ | 120 ... 185 | | -- | |
| • Finely stranded without end sleeve | $mm^2$ | 120 ... 185 | | -- | |
| • Stranded | $mm^2$ | 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) | $mm^2$ | Min. 2 x 50, max. 2 x 185 | | -- | |
| • Finely stranded without end sleeve | $mm^2$ | Min. 2 x 50, max. 2 x 185 | | -- | |
| • Stranded | $mm^2$ | 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] | $mm^2$ | 50 ... 240 | | -- | |
| • Stranded with cable lug[1] | $mm^2$ | 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 | $mm^2$ | -- | | 50 ... 240 | |
| • Stranded with cable lug | $mm^2$ | -- | | 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 3/140) | | | | | |
| • 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 | $mm^2$ | 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) | $mm^2$ | 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 | $mm^2$ | -- | | 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 for conductor cross-sections larger than 240 $mm^2$ and according to DIN 46235 for conductor cross-sections larger than 185 $mm^2$, the 3RT1966-4EA1 terminal cover is required to maintain the phase clearance, see page 3/119.

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

| | | SIRIUS vacuum contactors | | | | | Vacuum contactors | |
|---|---|---|---|---|---|---|---|---|
| Type | | 3RT1264 | 3RT1265 | 3RT1266 | 3RT1275 | 3RT1276 | 3TF68 | 3TF69 |
| Size | | S10 | | | S12 | | 14 | |
| **cULus and cULus 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 cULus and cULus 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.

For the selection and dimensioning of load feeders, see UL Configuration Manual and the UL guide "Competitive control panels for the North American market".

3

## Selection and ordering data

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

AC/DC operation

- Standard operating mechanism 3RT12..-.A
- 3RT12..-.N solid-state operating mechanism with 24 V DC control signal input
- For screw fixing
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections; a connection kit with screws, spring washers and nuts is enclosed.

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 $U_s$ 50/60 Hz AC or DC | 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 | | | |
| | 1 000 V | 230 V | **400 V** | 500 V | 690 V | 1 000 V | | | | | | | | | |
| | A | kW | **kW** | kW | kW | A | NO | NC | V | d | | | | | |
| **Standard operating mechanism with economy circuit for AC and DC operation (switchover from closing coil to holding coil)** | | | | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated at the factory)** | | | | | | | | | | | | | | | |
| **S10** | 225 | 55 | **110** | 160 | 200 | 330 | 2 | 2 | 110 ... 127 | 2 | **3RT1264-6AF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 220 ... 240 | ▶ | **3RT1264-6AP36** | | 1 | 1 unit | 41B |
| | 265 | 75 | **132** | 160 | 250 | 330 | 2 | 2 | 110 ... 127 | 10 | **3RT1265-6AF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 220 ... 240 | 5 | **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 | 5 | **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 | 5 | **3RT1276-6AF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 220 ... 240 | ▶ | **3RT1276-6AP36** | | 1 | 1 unit | 41B |
| **Solid-state operating mechanism** | | | | | | | | | | | | | | | |
| ***With 24 V DC control signal input e.g. for control by PLC*** | | | | | | | | | | | | | | | |
| **With integrated coil circuit (varistor integrated in electronics at the factory)** | | | | | | | | | | | | | | | |
| **S10** | 225 | 55 | **110** | 160 | 200 | 330 | 2 | 2 | 96 ... 127 | 20 | **3RT1264-6NF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 200 ... 277 | 10 | **3RT1264-6NP36** | | 1 | 1 unit | 41B |
| | 265 | 75 | **132** | 160 | 250 | 330 | 2 | 2 | 96 ... 127 | 20 | **3RT1265-6NF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 200 ... 277 | 10 | **3RT1265-6NP36** | | 1 | 1 unit | 41B |
| | 300 | 90 | **160** | 200 | 250 | 330 | 2 | 2 | 96 ... 127 | 10 | **3RT1266-6NF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 200 ... 277 | 10 | **3RT1266-6NP36** | | 1 | 1 unit | 41B |
| **S12** | 400 | 132 | **200** | 250 | 400 | 610 | 2 | 2 | 96 ... 127 | 10 | **3RT1275-6NF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 200 ... 277 | 10 | **3RT1275-6NP36** | | 1 | 1 unit | 41B |
| | 500 | 160 | **250** | 355 | 500 | 610 | 2 | 2 | 96 ... 127 | 10 | **3RT1276-6NF36** | | 1 | 1 unit | 41B |
| | | | | | | | | | 200 ... 277 | 10 | **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 versions with solid-state operating mechanism 3RT12.6-6**N**....
For more information about dimensioning and configuring, see page 3/7.

Other voltages according to page 3/76 on request.

For an overview of the 3RT12 vacuum contactors with mountable accessories, see pages 3/14 and 3/16.

The accessories for the 3RT1 vacuum contactors correspond to those for the basic units of the 3RT1 contactors, see page 3/77 onwards.

For spare parts, see page 3/141.



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

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

AC operation

- 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 $U_s$ 50/60 Hz AC | 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 | d | | | | | |
| **AC operation, 50/60 Hz**[1] | | | | | | | | | | | | | | | | |
| **14** | 630 | 200 | **335**[2] | 434 | 600 | -- | 700 | 4 | 4 | 110 ... 132 | X | **3TF6844-0CF7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 200 ... 240 | ▶ | **3TF6844-0CM7** | | 1 | 1 unit | 41B |
| | | | | | | 600 | 700 | 4 | 4 | 110 ... 132 | 20 | **3TF6844-8CF7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 200 ... 240 | X | **3TF6844-8CM7** | | 1 | 1 unit | 41B |
| **14** | 820 | 260 | **450**[3] | 600 | 800 | -- | 910 | 4 | 4 | 110 ... 132 | X | **3TF6944-0CF7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 200 ... 240 | ▶ | **3TF6944-0CM7** | | 1 | 1 unit | 41B |
| | | | | | | 800 | 910 | 4 | 4 | 110 ... 132 | 20 | **3TF6944-8CF7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 200 ... 240 | X | **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 3/7.

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

Accessories and spare parts, see pages 3/139 to 3/142.

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

Delivery time on request

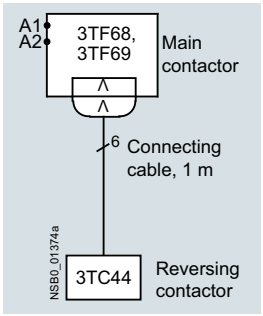
| Rated control supply voltage $U_s$ | **Contactor type** | **3TF6844-.C.., 3TF6944-.C..** |
|---|---|---|
| | **Size** | **14** |
| ***AC operation*** | | |
| **Solenoid coils for 50/60 Hz** | | |
| 110 ... 132 V AC | | F7 |
| 200 ... 240 V AC | | M7 |
| 230 ... 277 V AC | | P7 |
| 380 ... 460 V AC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

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

## SIRIUS 3RT12 and 3TF6 vacuum contactors *IE3/IE4* ready

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 – Operational current $I_e$ up to 690 V | Rating of three-phase motors at 50 Hz and 230 V | **400 V** | 500 V | 690 V | 1 000 V | AC-1, $t_u$: 40 °C – Operational current $I_e$ up to 690 V | Auxiliary contacts, lateral NO | NC | Rated control supply voltage $U_s$ 50/60 Hz AC or DC | SD | **Screw terminals** Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | A | kW | **kW** | kW | kW | kW | A | | | V | d | | | | | |
| **DC operation · DC economy circuit[1)2)]** | | | | | | | | | | | | | | | | |
| **14** | 630 | 200 | **335[3)]** | 434 | 600 | -- | 700 | 3 | 3 | 24 DC | 20 | **3TF6833-1DB4** | | 1 | 1 unit | 41B |
| | | | | | | 600 | 700 | 3 | 3 | 24 DC | 20 | **3TF6833-8DB4** | | 1 | 1 unit | 41B |
| **14** | 820 | 260 | **450[4)]** | 600 | 800 | -- | 910 | 3 | 3 | 24 DC | 20 | **3TF6933-1DB4** | | 1 | 1 unit | 41B |
| | | | | | | 800 | 910 | 3 | 3 | 24 DC | X | **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 | 20 | **3TF6833-1QG7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 220 ... 240 AC | 20 | **3TF6833-1QL7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 380 ... 420 AC | 20 | **3TF6833-1QV7** | | 1 | 1 unit | 41B |
| | | | | | | 600 | 700 | 3 | 3 | 220 ... 240 AC | 20 | **3TF6833-8QL7** | | 1 | 1 unit | 41B |
| **14** | 820 | 260 | **450[4)]** | 600 | 800 | -- | 910 | 3 | 3 | 110 ... 120 AC | 20 | **3TF6933-1QG7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 220 ... 240 AC | 20 | **3TF6933-1QL7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 380 ... 420 AC | 20 | **3TF6933-1QV7** | | 1 | 1 unit | 41B |
| | | | | | | 800 | 910 | 3 | 3 | 110 ... 120 AC | X | **3TF6933-8QG7** | | 1 | 1 unit | 41B |
| | | | | | | | | | | 220 ... 240 AC | 20 | **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 supply 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 3/7.

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 connection cable (approx. 1 m) and plug is included in the scope of supply of the vacuum contactor.

Accessories and spare parts, see pages 3/139 to 3/142.

### *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

## Selection and ordering data

### *Accessories*

For further accessories for the SIRIUS 3RT12 vacuum contactors, see 3RT1 basic units, page 3/77 onwards.

| For contactors | | Version | Auxiliary contacts | | | Connections | | SD | Screw terminals | | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Version | | | | | | Article No. | Price per PU | | | |
| Size | Type | | NO | NC | NC | Left | Right | d | | | | | |
| **Auxiliary switches, instantaneous** | | | | | | | | | | | | | |
| **For lateral mounting** | | | | | | | | | | | | | |
| 14 | 3TF68, 3TF69 | First auxiliary switch (replacement for 3TY7561-1A/3TY7561-1B) | 1 | 1 | -- | | | ► | **3TY7561-1AA00** | | 1 | 1 unit | 41B |
| | 3TF68, 3TF69 | First auxiliary switch | 1 | -- | 1 | | | 20 | **3TY7561-1EA00** | | 1 | 1 unit | 41B |
| | 3TF68, 3TF69 | Second auxiliary switch (replacement for 3TY7561-1K/3TY7561-1L) | 1 | 1 | -- | | | 5 | **3TY7561-1KA00** | | 1 | 1 unit | 41B |
| **For switchover 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 switches*** | | | | | | | | | | | | | |
| **For lateral mounting** | | | | | | | | | | | | | |
| 14 | 3TF68, 3TF69 | Second auxiliary switch, left or right (replacement for 3TY6561-1U/3TY6561-1V) | 1 CO contact | | | | | 5 | **3TY7561-1UA00** | | 1 | 1 unit | 41B |


3TY7561-1.A00


5TY7561-1UA00

## Accessories and spare parts for SIRIUS 3RT12 and 3TF6 vacuum contactors



| For contactors Size | Type | Version | SD d | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|
| **Main current path surge suppression modules** | | | | | | | | |
|  3RT1966-1PV3  3RT1966-1PV4 | | | | | | | | |
| S10/ S12 | 3RT12 | For damping overvoltages and protecting motor windings against multiple re-ignition when switching off three-phase motors<br>For connection on the contactor feeder side (2-T1/4-T2/6-T3), for separate installation<br>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** | | | | | | | | |
|  3TX7572-3. | | | | | | | | |
| 14 | 3TF68, 3TF69 | **Varistors**<br>AC operation<br>The surge suppressor (varistor) is included in the scope of supply of the 3TF68 and 3TF69 contactors with AC operation.<br>DC operation · DC economy circuit<br>Varistor for snapping onto the side of the auxiliary switch (includes the peak value of the alternating voltage on the DC side)<br>Rated control supply voltage $U_s$ | | | | | | |
| | | • 24 ... 48 V DC | 20 | **3TX7572-3G** | | 1 | 1 unit | 41B |
| | | • 127 ... 240 V DC | 20 | **3TX7572-3J** | | 1 | 1 unit | 41B |
| **Terminal covers** | | | | | | | | |
|  3TX7686-0A | | | | | | | | |
| 14 | | Two units required per contactor (1 set = 2 units). | | | | | | |
| | 3TF68 | For protection against inadvertent contact with exposed busbar connections | 2 | **3TX7686-0A** | | 1 | 1 unit | 41B |
| | 3TF69 | Can be screwed onto free screw end on middle connecting bar | 2 | **3TX7696-0A** | | 1 | 1 unit | 41B |
| **Links for paralleling (star jumpers), 3-pole** | | | | | | | | |
| 14 | 3TF68, 3TF69 | **Links for paralleling**<br>without connecting 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**<br>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)<br>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)<br>Conductor cross-sections for auxiliary conductors:<br>• Solid 2 x (0.75 ... 2.5) $mm^2$<br>• Finely stranded with end sleeve 2 x (0.5 ... 2.5) $mm^2$<br>• AWG, solid or stranded 2 x (18 ... 12)<br>• 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 |



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

## *Spare parts*

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

### Withdrawable coils


3RT1975-5A.31


3RT1975-5A.32


3RT1975-5N.31

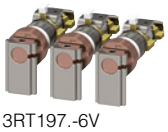
| For contactors | | Rated control supply voltage $U_{s\,min}$ … $U_{s\,max}$ | SD | Screw terminals | | SD | Spring-loaded terminals | |
|---|---|---|---|---|---|---|---|---|
| Size | Type | V AC/DC | d | Article No. | Price per PU | d | Article No. | Price per PU |
| ***Standard operating mechanism for AC/DC*** | | | | | | | | |
| S10 | 3RT126 | 23 … 26 | 5 | **3RT1966-5AB31** | | | **--** | |
| | | 42 … 48 | X | **3RT1966-5AD31** | | | **--** | |
| | | 110 … 127 | 2 | **3RT1966-5AF31** | | | **--** | |
| | | 200 … 220 | 5 | **3RT1966-5AM31** | | | **--** | |
| | | 220 … 240 | 5 | **3RT1966-5AP31** | | | **--** | |
| | | 240 … 277 | 5 | **3RT1966-5AU31** | | | **--** | |
| | | 380 … 420 | X | **3RT1966-5AV31** | | | **--** | |
| | | 440 … 480 | 5 | **3RT1966-5AR31** | | | **--** | |
| | | 500 … 550 | X | **3RT1966-5AS31** | | | **--** | |
| | | 575 … 600 | X | **3RT1966-5AT31** | | | **--** | |
| S12 | 3RT127 | 23 … 26 | 5 | **3RT1975-5AB31** | | 5 | **3RT1975-5AB32** | |
| | | 42 … 48 | 5 | **3RT1975-5AD31** | | X | **3RT1975-5AD32** | |
| | | 110 … 127 | 5 | **3RT1975-5AF31** | | X | **3RT1975-5AF32** | |
| | | 200 … 220 | 5 | **3RT1975-5AM31** | | X | **3RT1975-5AM32** | |
| | | 220 … 240 | ▶ | **3RT1975-5AP31** | | 5 | **3RT1975-5AP32** | |
| | | 240 … 277 | 5 | **3RT1975-5AU31** | | X | **3RT1975-5AU32** | |
| | | 380 … 420 | 5 | **3RT1975-5AV31** | | X | **3RT1975-5AV32** | |
| | | 440 … 480 | 5 | **3RT1975-5AR31** | | 5 | **3RT1975-5AR32** | |
| | | 500 … 550 | 5 | **3RT1975-5AS31** | | X | **3RT1975-5AS32** | |
| | | 575 … 600 | 5 | **3RT1975-5AT31** | | X | **3RT1975-5AT32** | |
| ***Solid-state operating mechanism 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** | | X | **3RT1975-5NB32** | |
| | | 96 … 127 | 5 | **3RT1975-5NF31** | | 5 | **3RT1975-5NF32** | |
| | | 200 … 277 | 5 | **3RT1975-5NP31** | | 5 | **3RT1975-5NP32** | |

### Solenoid coils


3TY76.3-0...

| For contactors | | Version | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|
| Size | Type | | d | | | | | |
| | | **AC operation**[1] | | | | | | |
| 14 | 3TF68<br>3TF69 | The solenoid coils are fitted as standard with varistors against overvoltage; the coil is supplied with switch-on electronics. | | **3TY7683-0C..**<br>**3TY7693-0C..** | | | | |
| | | **DC operation**[1] **· DC economy circuit** | | | | | | |
| 14 | 3TF68<br>3TF69 | The solenoid coils are supplied without reversing contactor. | | **3TY7683-0D..**<br>**3TY7693-0D..** | | | | |

### Vacuum interrupters


3RT197.-6V

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| S10 | 3RT1264 | Set with three 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<br>3TF69 | Set with three vacuum interrupters with components<br>Note:<br>In order to ensure reliable operation of the contactors, only **original replacement interrupters** should be used. | 5<br>15 | **3TY7680-0B**<br>**3TY7690-0B** | | 1<br>1 | 1 unit<br>1 unit | 41B<br>41B |

[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 3/137 and 3/138.

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

## Accessories and spare parts for SIRIUS 3RT12 and 3TF6 vacuum contactors



| 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 | X | **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 | X | **3TY7693-0QV7** | 1 | 1 unit | 41B |
| **3TC44 reversing contactors** | | | | | | | | |
| 14 | 3TF68..-.Q, 3TF69..-.Q | Complete with series resistor, 1 m connection 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 | X | **3TY7684-0QV7** | 1 | 1 unit | 41B |



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

## 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

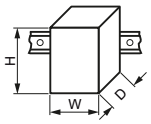
Because they are hum-free they are suitable for use in household appliances and distribution boards in office and residential areas.

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.

3

## Technical specifications

| More information | |
|---|---|
| Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16186/td | Reference Manual for switching devices, see https://support.industry.siemens.com/cs/ww/en/view/35554359<br>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 the coil and the 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 IP on the front** acc. to IEC 60529 | | | IP00 |
| **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** | | | |
| • 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.

## 3TG10 power relays/miniature contactors

| 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 of 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, (*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 |
| **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 |

| 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) | | | 1-phase/3-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 |

## 3TG10 power relays/miniature contactors

### 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 At 55 °C: Operational current $I_e$ up to 400 V | AC-1: Power of AC loads at 50 Hz and 400 V | AC-2 and AC-3: Operational current $I_e$ up to 400 V[1] | AC-2 and AC-3: Power of AC loads at 50 Hz and 400 V | Auxiliary contacts: Version NO | Auxiliary contacts: Version NC | Rated control supply voltage $U_s$ | SD | Article No. | Price per PU | PU (UNIT, SET, M) | PS* | PG |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| A | kW | A | kW | NO | NC | V | d | | | | | |
| **Hum-free · with screw terminals** | | | | | | | | **Screw terminals** | | | | |
|  3TG10..-0... | | | | | | | | | | | | |
| ***AC operation, 45 ... 450 Hz*** | | | | | | | | | | | | |
| 20 | 13 | 8.4 | 4 | 1 | -- | 24 AC | ▶ | **3TG1010-0AC2** | | 1 | 1 unit | 41H |
| | | | | | | 110 AC | 5 | **3TG1010-0AG2** | | 1 | 1 unit | 41H |
| | | | | | | 230 AC | ▶ | **3TG1010-0AL2** | | 1 | 1 unit | 41H |
| | | | | -- | 1 | 24 AC | ▶ | **3TG1001-0AC2** | | 1 | 1 unit | 41H |
| | | | | | | 110 AC | 5 | **3TG1001-0AG2** | | 1 | 1 unit | 41H |
| | | | | | | 230 AC | ▶ | **3TG1001-0AL2** | | 1 | 1 unit | 41H |
| ***DC operation*** | | | | | | | | | | | | |
| 20 | 13 | 8.4 | 4 | 1 | -- | 24 DC | ▶ | **3TG1010-0BB4** | | 1 | 1 unit | 41H |
| | | | | -- | 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 | 1 | -- | 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 |
| | | | | -- | 1 | 24 AC | 30 | **3TG1001-1AC2** | | 1 | 1 unit | 41H |
| | | | | | | 110 AC | 30 | **3TG1001-1AG2** | | 1 | 1 unit | 41H |
| | | | | | | 230 AC | ▶ | **3TG1001-1AL2** | | 1 | 1 unit | 41H |
| ***DC operation*** | | | | | | | | | | | | |
| 16 | 10 | 8.4 | 4 | 1 | -- | 24 DC | 5 | **3TG1010-1BB4** | | 1 | 1 unit | 41H |
| | | 8.4 | 4 | -- | 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 connecting terminal | 16 | -- | ▶ | **3RT1916-4BA31** | | 1 | 1 unit | 41B |
| • With connecting terminal | 40 | 25 | ▶ | **3RT1916-4BB31** | | 1 | 1 unit | 41B |
| **4-pole** | | | | | | | | |
| • With connecting terminal | 40 | 25 | 2 | **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.



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

## Overview

| More information | |
|---|---|
| Homepage, see www.siemens.com/sirius<br>Industry Mall, see www.siemens.com/product?3RA23_3RT1 | Conversion tool for article numbers, see www.siemens.com/sirius/conversion-tool<br>TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=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 page 3/154 onwards.
- For all individual parts for customer assembly, see from page 3/77 onwards.

The 3RA23 reversing contactor assemblies have screw or spring-loaded 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 page 7/98 onwards) or 3RB3 overload relays (see page 7/111 onwards) for contactor mounting or stand-alone installation, SIMOCODE pro 3UF7 motor management and control devices (page 10/16 onwards) or 3RN2 thermistor motor protection relays (page 10/143 onwards) can be used for motor protection.

***3RA23 reversing contactor assemblies with voltage tap-off***

The reversing contactor assemblies with voltage tap-off (see pages 3/154 to 3/157) 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 3/108.

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

## SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Sizes S00 to S3

| Rated data AC-2 and AC-3 at 50 Hz 400 V AC | | Size | Type | | |
|---|---|---|---|---|---|
| **Rating** kW | Operational current $I_e$ A | | Contactor (See page 3/55 onwards) | Assembly kit (See page 3/111) | **Fully wired and tested reversing contactor assemblies** |
| | | | **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-loaded 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 3/115.

### *Article No. scheme*

| **Product versions** | | **Article number** |
|---|---|---|
| **SIRIUS reversing contactor assembly** | | **3RA23** □ □ – □ □ □ □ □ – □ □ □ □ |
| Size of the contactor | e.g. 4 = S3 | □ |
| Rating 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 | □ |
| Interlock | 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:

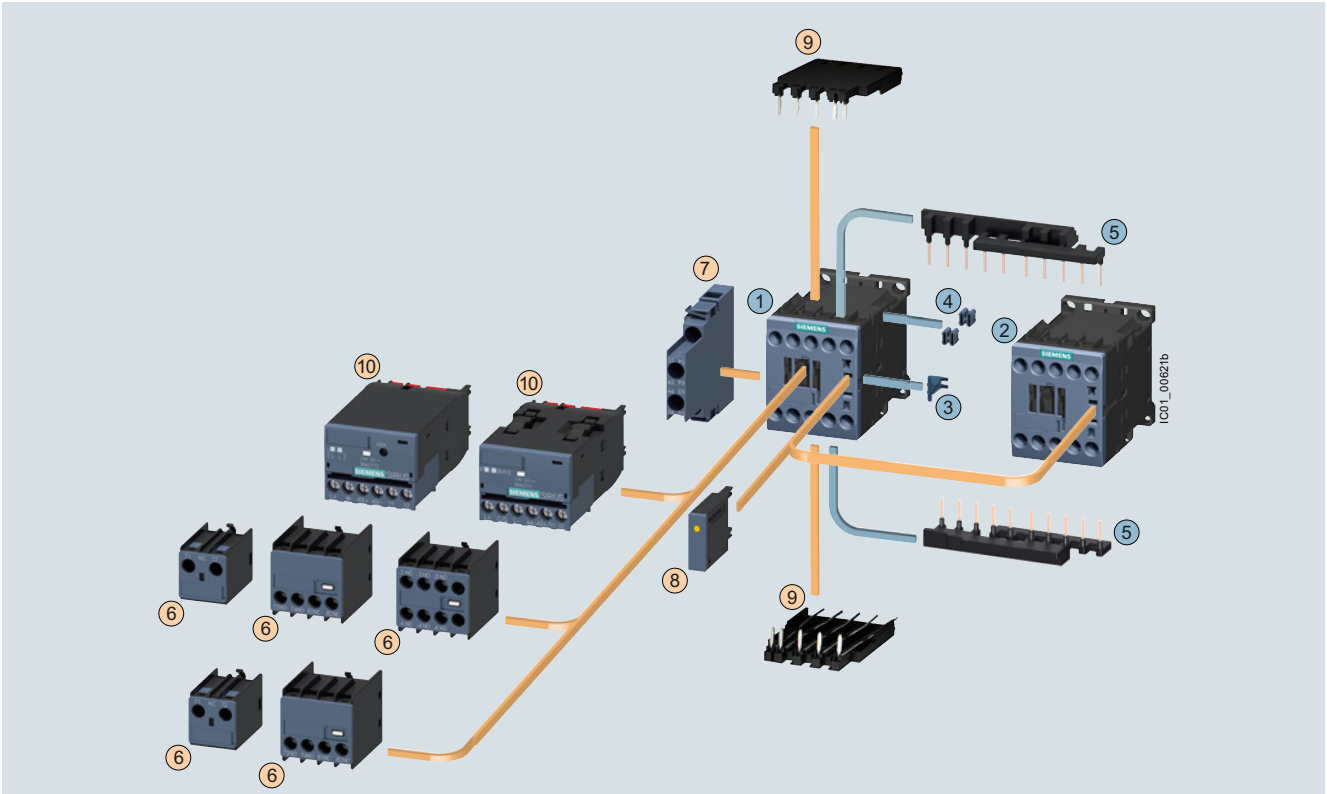
The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

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

## 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, front[1] | 3RH2911 | 3/95 ... 3/97 |
| 7 | Auxiliary switch, lateral | 3RH2921 | 3/99 |
| 8 | Surge suppressors | 3RT2916 | 3/104, 3/105 |
| 9 | Solder pin adapters | 3RT1916-4KA1 | 3/118 |
| 10 | Function module for connection to the control system | 3RA271.-1BA00 | 3/108 |

### Complete reversing contactor assembly

| Individual parts | | Type Q11 | Type Q12 | Page |
|---|---|---|---|---|
| 1 2 | Contactors, 3 kW | 3RT2015 | 3RT2015 | 3/55, 3/60, 3/61 |
| 1 2 | Contactors, 4 kW | 3RT2016 | 3RT2016 | 3/55, 3/60, 3/61 |
| 1 2 | Contactors, 5.5 kW | 3RT2017 | 3RT2017 | 3/55, 3/60, 3/61 |
| 1 2 | Contactors, 7.5 kW | 3RT2018 | 3RT2018 | 3/55, 3/60, 3/61 |
| 3 ... 5 | Assembly kit comprising: | 3RA2913-2AA1 | | 3/111 |
| | 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 according to EN 50005 must be used.

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

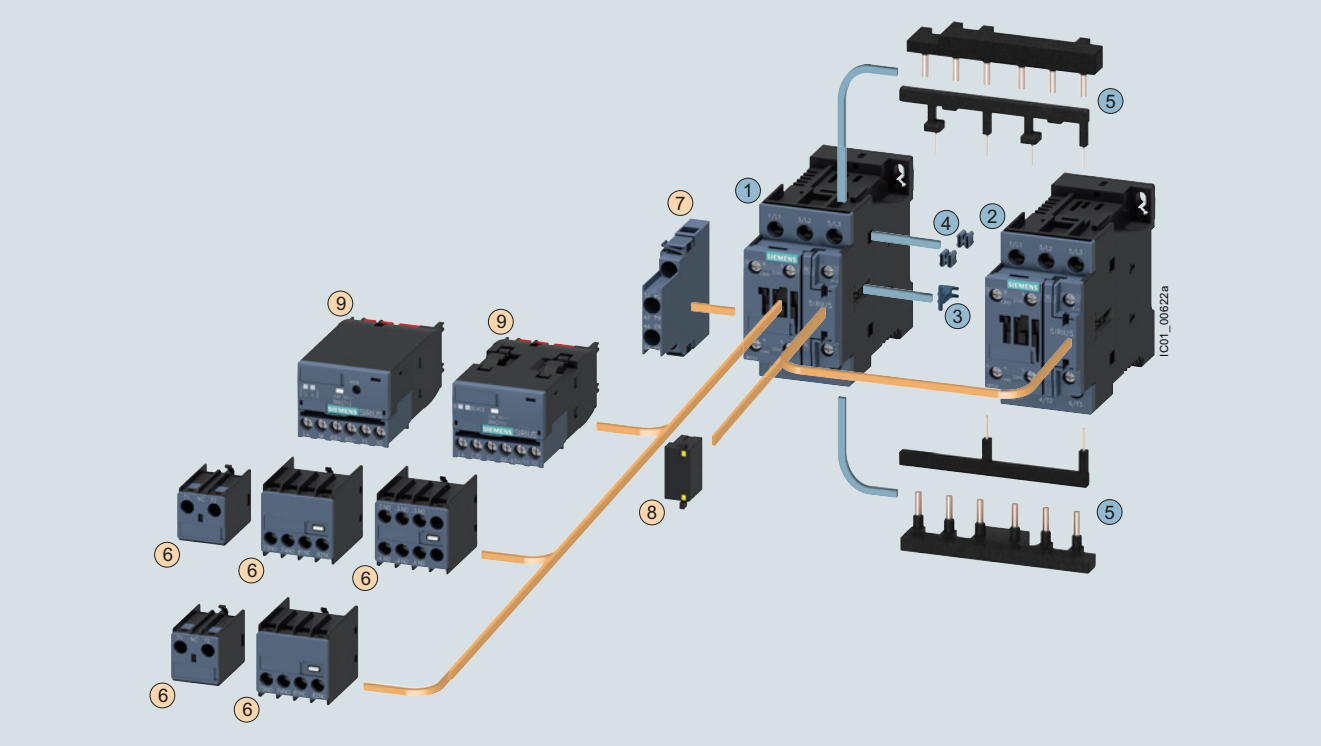
[3] 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

For complete reversing contactor assemblies, see page 3/154.

## 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, front | 3RH2911 | 3/95 ... 3/97 |
| 7 | Auxiliary switch, lateral | 3RH2921 | 3/99 |
| 8 | Surge suppressors | 3RT2926 | 3/104, 3/105 |
| 9 | Function module for connection to the control system | 3RA271.-1BA00 | 3/108 |

### Complete reversing contactor assembly

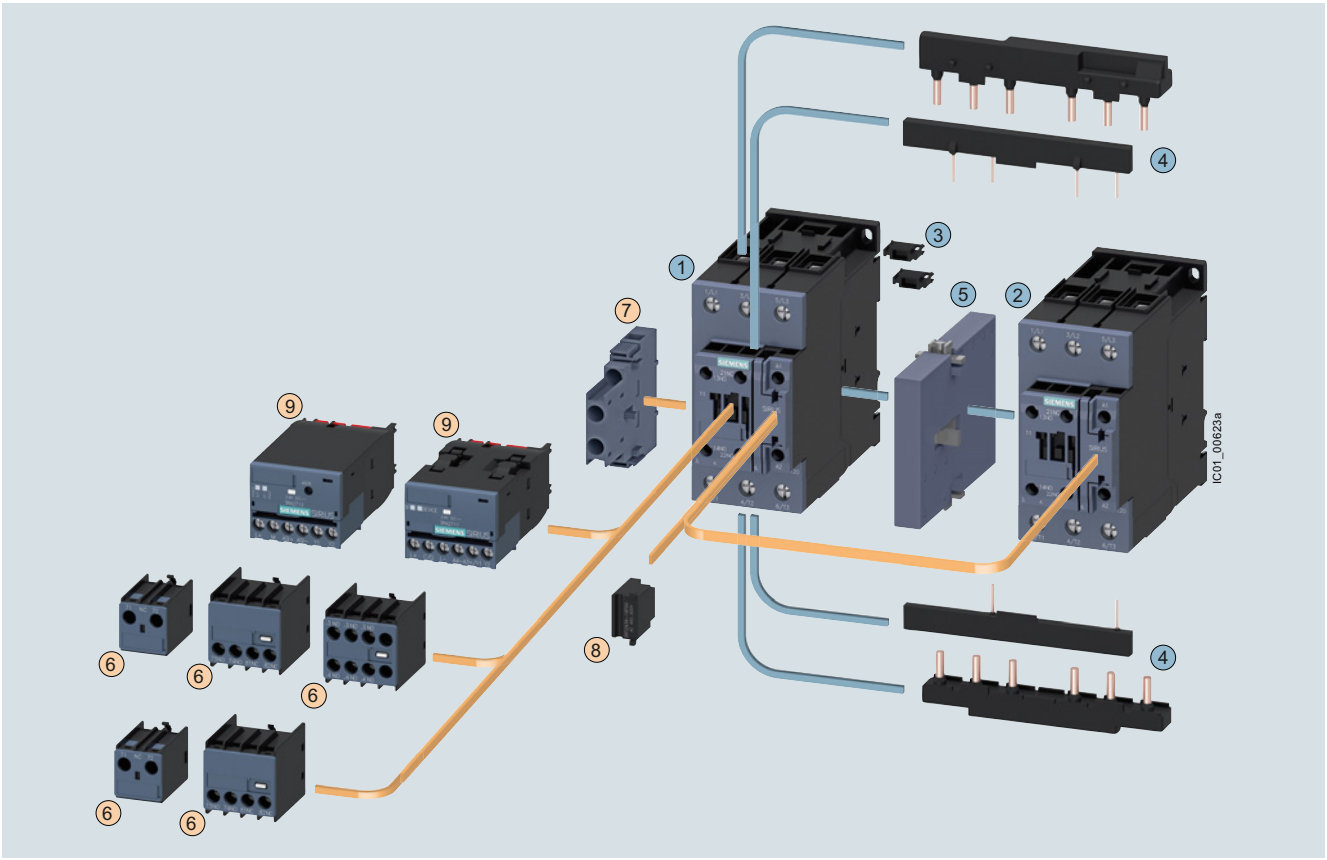
| Individual parts | | Type Q11 | Type Q12 | Page |
|---|---|---|---|---|
| 1 2 | Contactors, 5.5 kW | 3RT2024 | 3RT2024 | 3/56, 3/64, 3/65 |
| 1 2 | Contactors, 7.5 kW | 3RT2025 | 3RT2025 | 3/56, 3/64, 3/65 |
| 1 2 | Contactors, 11 kW | 3RT2026 | 3RT2026 | 3/56, 3/64, 3/65 |
| 1 2 | Contactors, 15 kW | 3RT2027 | 3RT2027 | 3/56, 3/64, 3/65 |
| 1 2 | Contactors, 18.5 kW | 3RT2028 | 3RT2028 | 3/56, 3/64, 3/65 |
| 3 ... 5 | Assembly kit comprising: | 3RA2923-2AA1 | | 3/111 |
| | 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 3/155.

***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, front | 3RH2911 | 3/95 ... 3/97 |
| 7 | Auxiliary switch, lateral | 3RH2921 | 3/99 |
| 8 | Surge suppressors | 3RT2936 | 3/104, 3/105 |
| 9 | Function module for connection to the control system | 3RA271.-1BA00 | 3/108 |

## Complete reversing contactor assembly

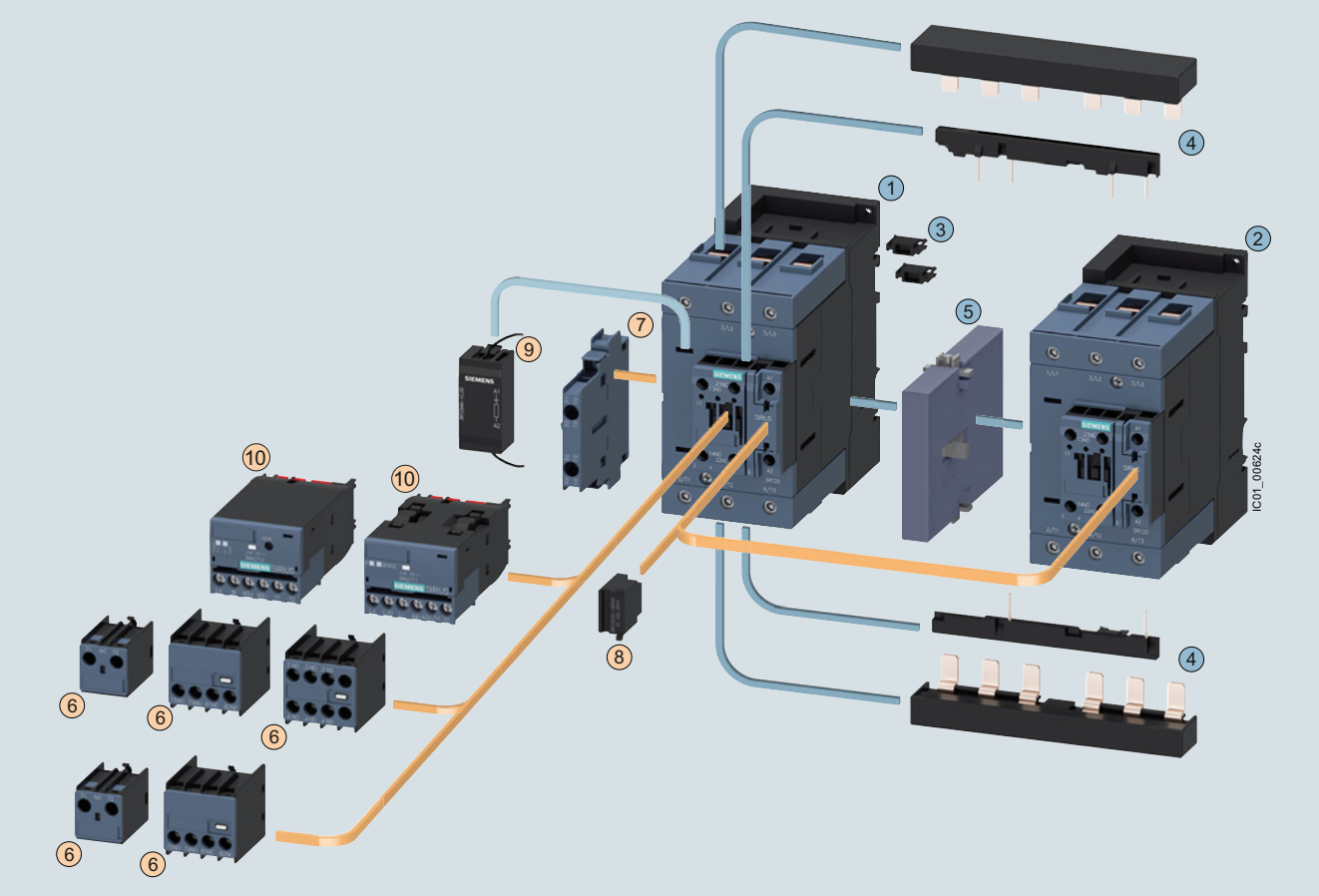
| Individual parts | | Type | | Page |
|---|---|---|---|---|
| | | Q11 | Q12 | |
| 1 2 | Contactors, 18.5 kW | 3RT2035 | 3RT2035 | 3/58, 3/69 |
| 1 2 | Contactors, 22 kW | 3RT2036 | 3RT2036 | 3/58, 3/69 |
| 1 2 | Contactors, 30 kW | 3RT2037 | 3RT2037 | 3/58, 3/69 |
| 1 2 | Contactors, 37 kW | 3RT2038 | 3RT2038 | 3/58, 3/69 |
| 3 4 | Assembly kit comprising: | 3RA2933-2AA1 | | 3/111 |
| | 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 | | 3/115 |

For complete reversing contactor assemblies, see page 3/156.

## SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

***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, front | 3RH2911 | 3/95 ... 3/97 |
| 7 Auxiliary switch, lateral | 3RH2921 | 3/99 |
| 8 Surge suppressor (varistor, diode assembly) | 3RT2936 | 3/104, 3/105 |
| 9 Surge suppressor (RC element) | 3RT2946 | 3/104 |
| 10 Function module for connection to the control system (the associated module connectors 3RA2711-0EE17 must be ordered separately, see page 3/109) | 3RA271.-1BA00 | 3/108 |

### Complete reversing contactor assembly

| Individual parts | Type Q11 | Type Q12 | Page |
|---|---|---|---|
| 1 2 Contactors, 37 kW | 3RT2045 | 3RT2045 | 3/59, 3/71 |
| 1 2 Contactors, 45 kW | 3RT2046 | 3RT2046 | 3/59, 3/71 |
| 1 2 Contactors, 55 kW | 3RT2047 | 3RT2047 | 3/59, 3/71 |
| 3 4 Assembly kit comprising: | 3RA2943-2AA1 | | 3/111 |
| 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 | | 3/115 |

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

## 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 with at least one NO contact for self-locking 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 self-locking.

### *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 | System Manual for modular system, see https://support.industry.siemens.com/cs/ww/en/view/60311318 |
| FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16146/faq | Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/60306557 |
| | Application Manual for controls with IE3/IE4 motors, see https://support.industry.siemens.com/cs/ww/en/view/94770820 |

The technical specifications are the same as for the individual contactors (see page 3/23 onwards).

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

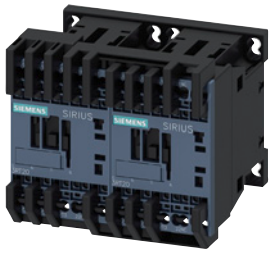
### Selection and ordering data

***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-loaded 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 3/149.



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

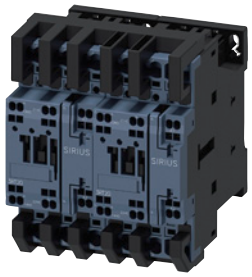
**IE3/IE4 ready** **SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW**

***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-loaded terminals** |
|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz | | | | | 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 3/150.

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

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

***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-loaded terminals** | |
|---|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz | | | | | 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** | 37 | 110 AC | 5 | **3RA2337-8XB30-1AG2** | | **--** | |
| | | | | 230 AC | 2 | **3RA2337-8XB30-1AL2** | | **--** | |
| 80 | 22 | **37** | 45 | 110 AC | 5 | **3RA2338-8XB30-1AG2** | | **--** | |
| | | | | 230 AC | 2 | **3RA2338-8XB30-1AL2** | | **--** | |
| **AC/DC operation** | | | | | | | | | |
| ***With integrated coil circuit (varistor integrated in electronics at the factory)*** | | | | | | | | | |
| 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** | 37 | 20 ... 33 AC/DC | 2 | **3RA2337-8XB30-1NB3** | | **--** | |
| 80 | 22 | **37** | 45 | 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** | 37 | 20 ... 33 AC/DC | 5 | **3RA2337-8XE30-1NB3** | | **--** | |
| 80 | 22 | **37** | 45 | 20 ... 33 AC/DC | 5 | **3RA2338-8XE30-1NB3** | | **--** | |

Representation of the complete reversing contactor assemblies with optionally mountable accessories, see page 3/151.



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

***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-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz | | | | | 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** | | | | | | | | | | |
| ***With integrated coil circuit (varistor integrated in electronics at the factory)*** | | | | | | | | | | |
| 80 | 22 | **37** | 55 | 20 ... 33 AC/DC | 5 | **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*** [1] | | | | | | | | | | |
| 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) The associated module connectors 3RA2711-0EE17 for the 3RA271. function modules must be ordered separately, see page 3/109.

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**

## Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

### Overview

The individual parts for the reversing contactor assemblies for customer assembly must be ordered separately.

- 3RT contactors (see page 3/72 onwards): 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 (see page 3/115)
- Wiring kits consisting of link rails (see page 3/111)
- Base plate (see page 3/120)

Additional components

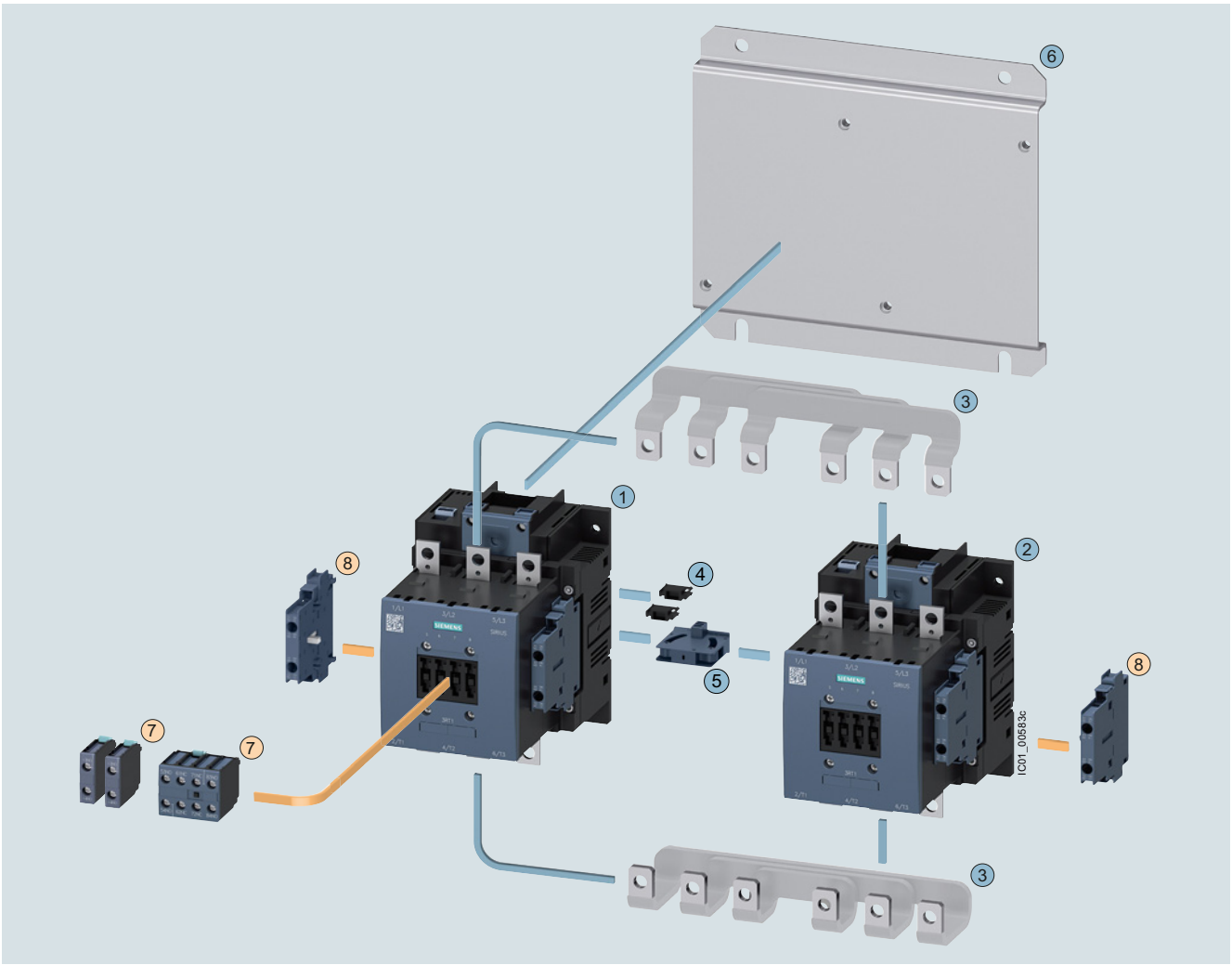
- For momentary-contact operation: auxiliary switch (NO contact) for self-locking
- 3RB2 overload relays (see page 7/123 onwards), SIMOCODE pro 3UF7 motor management and control devices (page 10/16 onwards) or 3RN2 thermistor motor protection relays (page 10/143 onwards) can be used for overload protection.

**More information**

Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RA23_3RT1

## 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)

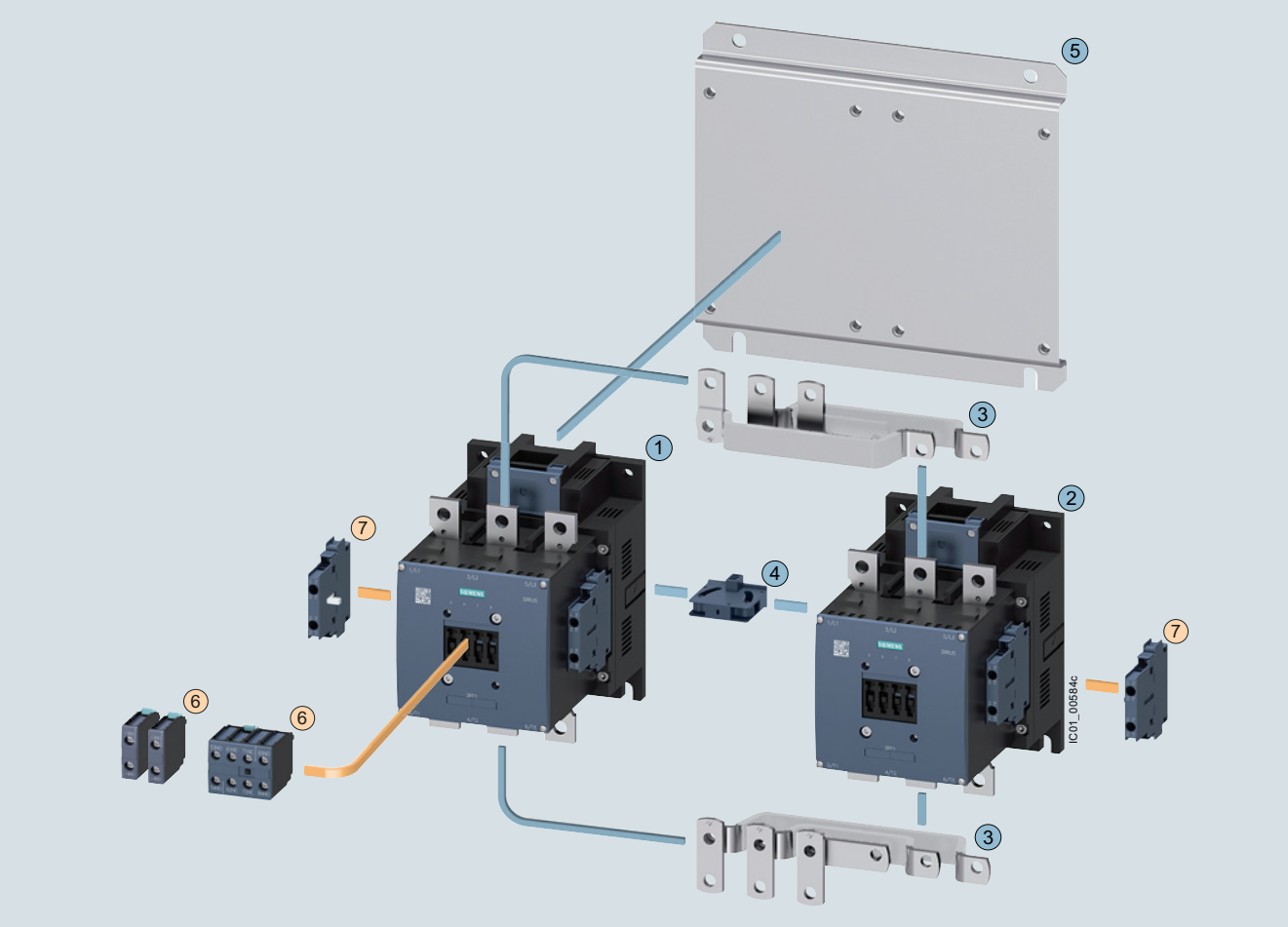
| To be ordered separately | Type | Page |
|---|---|---|
| ⑦ Auxiliary switch, front | 3RH1921 | 3/98 |
| ⑧ Auxiliary switch, lateral | 3RH1921 | 3/100 |

### Reversing contactor assembly for customer assembly

| Individual parts | Type Q11 | Type Q12 | Page |
|---|---|---|---|
| ①② Contactors, 55 kW | 3RT1054 | 3RT1054 | 3/72 ... 3/74 |
| ①② Contactors, 75 kW | 3RT1055 | 3RT1055 | 3/72 ... 3/74 |
| ①② Contactors, 90 kW | 3RT1056 | 3RT1056 | 3/72 ... 3/74 |
| 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 | | 3/111 |
| ④ Two connectors for two contactors | 3RA1932-2D | | 3/115 |
| ⑤ Mechanical interlock (must be ordered separately) | 3RA1954-2A | | 3/115 |
| ⑥ Base plate for reversing contactor assemblies | 3RA1952-2A | | 3/120 |

## 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)

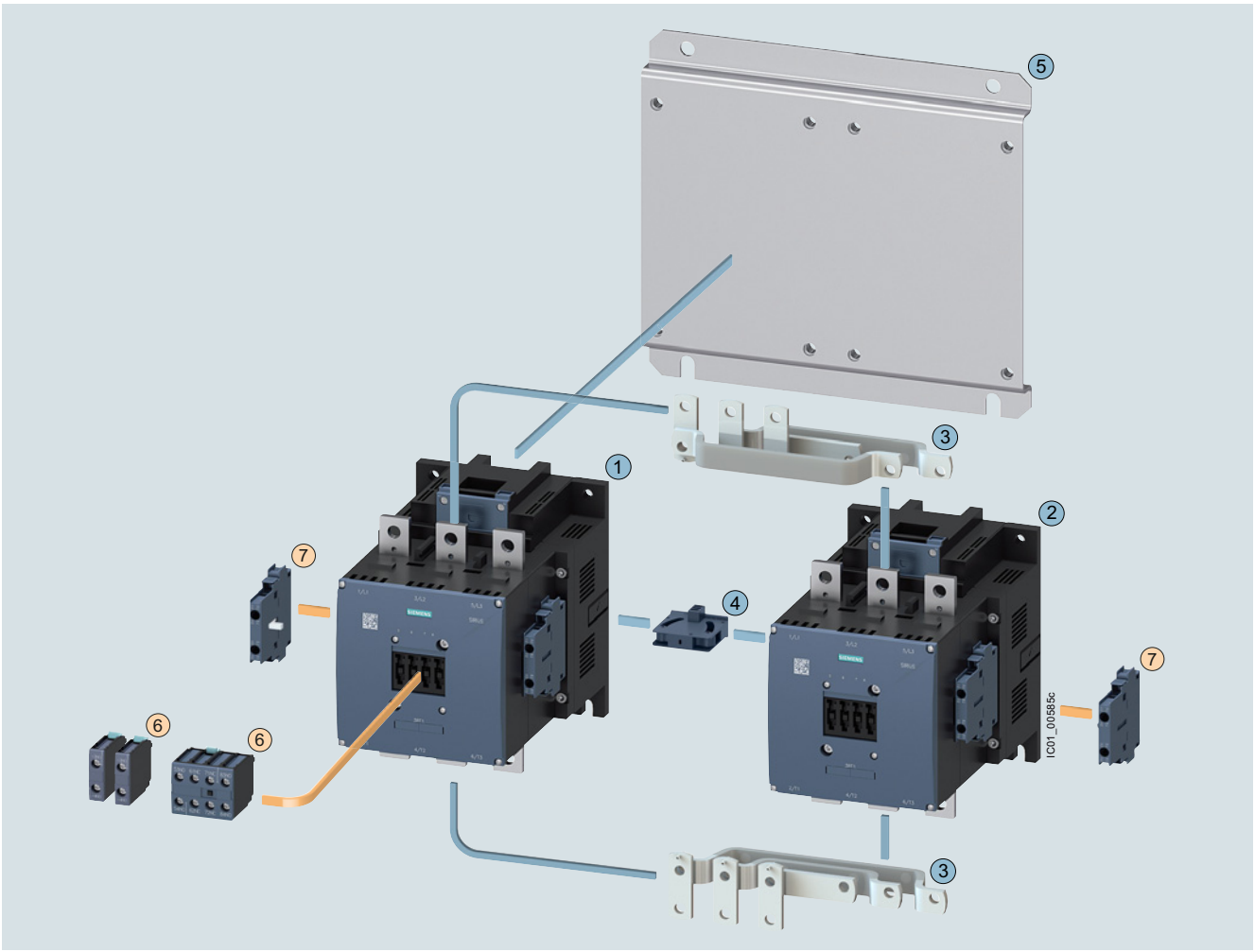
| To be ordered separately | Type | Page |
|---|---|---|
| ⑥ Auxiliary switch, front | 3RH1921 | 3/98 |
| ⑦ Auxiliary switch, lateral | 3RH1921 | 3/100 |

### Reversing contactor assembly for customer assembly

| Individual parts | | Type Q11 | Type Q12 | Page |
|---|---|---|---|---|
| ①② | Contactors, 110 kW | 3RT1.64 | 3RT1.64 | 3/72 ... 3/74, 3/136 |
| ①② | Contactors, 132 kW | 3RT1.65 | 3RT1.65 | 3/72 ... 3/74, 3/136 |
| ①② | Contactors, 160 kW | 3RT1.66 | 3RT1.66 | 3/72 ... 3/74, 3/136 |
| 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 | | 3/111 |
| ④ | Mechanical interlock (must be ordered separately) | 3RA1954-2A | | 3/115 |
| ⑤ | Base plate for reversing contactor assemblies | 3RA1962-2A | | 3/120 |

## 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, front | 3RH1921 | 3/98 |
| ⑦ Auxiliary switch, lateral | 3RH1921 | 3/100 |

### Reversing contactor assembly for customer assembly

| Individual parts | | Type Q11 | Type Q12 | Page |
|---|---|---|---|---|
| ①② | Contactors, 200 kW | 3RT1.75 | 3RT1.75 | 3/72 ... 3/74, 3/136 |
| ①② | Contactors, 250 kW | 3RT1.76 | 3RT1.76 | 3/72 ... 3/74, 3/136 |
| 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 | | 3/111 |
| ④ | Mechanical interlock (must be ordered separately) | 3RA1954-2A | | 3/115 |
| ⑤ | Base plate for reversing contactor assemblies | 3RA1972-2A | | 3/120 |

## SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW



### Overview

| More information | |
|---|---|
| Homepage, see www.siemens.com/sirius<br>Industry Mall, see www.siemens.com/product?3RA24_3RT | Conversion tool for article numbers, see www.siemens.com/sirius/conversion-tool<br>TIA Selection Tool Cloud (TST Cloud), see https://www.siemens.com/tstcloud/?node=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 3/171 onwards.
- For all individual parts for customer assembly, see from page 3/77 onwards.

The 3RA24 contactor assemblies for star-delta (wye-delta) starting have screw or spring-loaded terminals and are suitable for screw fixing and snap-on mounting 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 Support, www.siemens.com/support-request.

#### *Surge suppression*

Surge suppression (varistor) is included in the 3RA28 function modules for star-delta (wye-delta) starting.

#### *Motor protection*

3RU2 overload relays (see page 7/98 onwards) or 3RB3 overload relays (see page 7/111 onwards) for contactor mounting or stand-alone installation, SIMOCODE pro 3UF7 motor management and control devices (page 10/16 onwards) or 3RN2 thermistor motor protection relays (page 10/143 onwards) can be used for motor protection.

The overload relay can either be mounted onto the line contactor or fitted separately. 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 3/107) 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 the contactor assembly for star-delta (wye-delta) starting size 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 assistance from Technical Support, you must provide the following details:
- Rated motor voltage,
- Rated motor current,
- Service factor, operating values
- Motor starting current factor
- Starting time
- Ambient temperature

### *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-loaded 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** □ □ – □ □ □ □ □ – □ □ □ □ |
| Size of the contactor | e.g. 4 = S3 | □ |
| Rating 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:

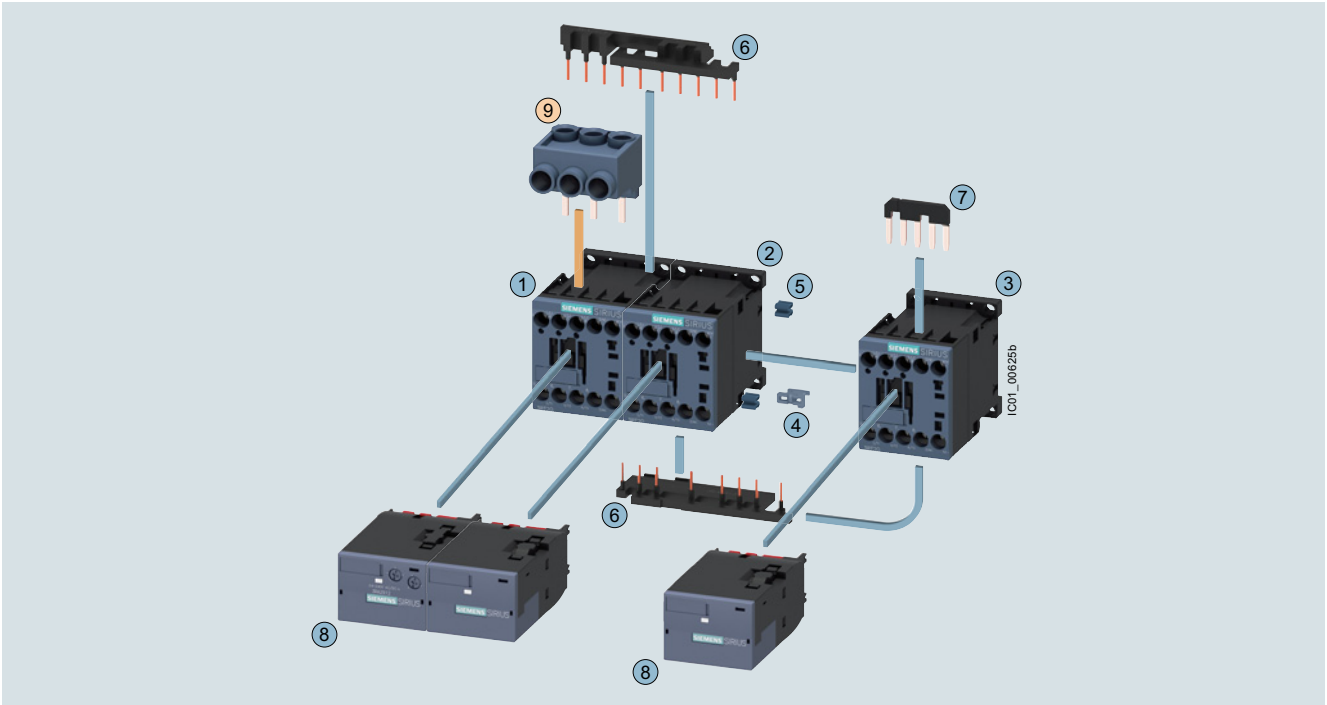
The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

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

## 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) 3-phase infeed terminal[1] | 3RA2913-3K | 3/117 |

### Complete contactor assembly for star-delta (wye-delta) starting

| Individual parts | | Type Q11[2] | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| (1)(2)(3) | Contactors, 5.5 kW | 3RT2015 | 3RT2015 | 3RT2015 | 3/55, 3/60 |
| (1)(2)(3) | Contactors, 7.5 kW | 3RT2017 | 3RT2017 | 3RT2015 | 3/55, 3/60 |
| (1)(2)(3) | Contactors, 11 kW | 3RT2018 | 3RT2018 | 3RT2016 | 3/55, 3/60 |
| (4) ... (7) | Assembly kit S00-S00-S00 comprising: | 3RA2913-2BB1 | | | 3/112 |
| | (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 | | | 3/107 |

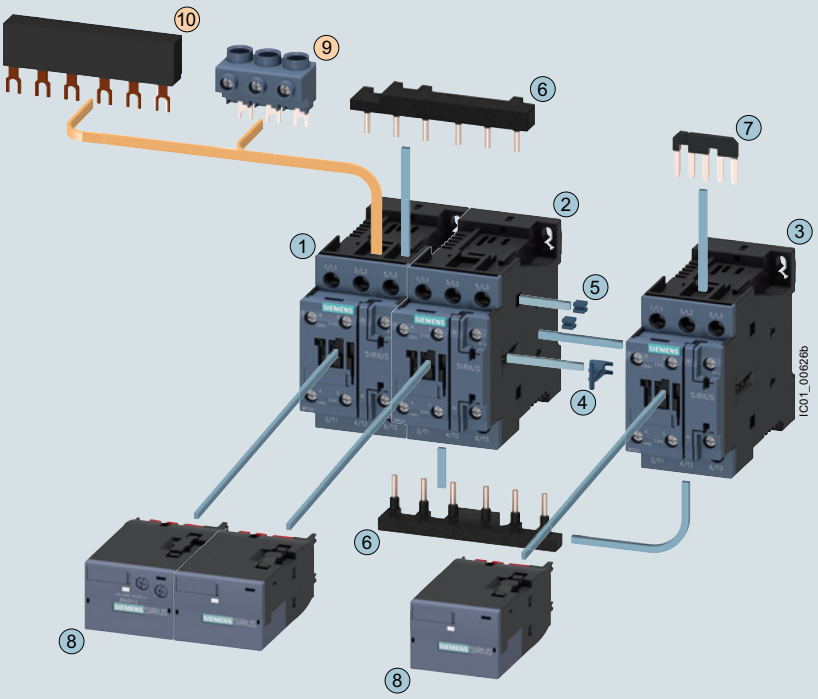
[1] Part (9) can only be mounted for contactors with screw terminals.
[2] The version with 1 NO is required for momentary-contact operation.

Complete contactor assemblies for star-delta (wye-delta) starting, see page 3/171.

## 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) 3-phase infeed terminal[1)] | 3RV2925-5AB | 3/117 |
| (10) 3-phase busbar[1)] | 3RV1915-1AB | 3/117 |

[1)] The parts (9) and (10) can only be mounted for contactors with screw terminals, the wiring modules (6) must be removed beforehand.

### Complete contactor assembly for star-delta (wye-delta) starting

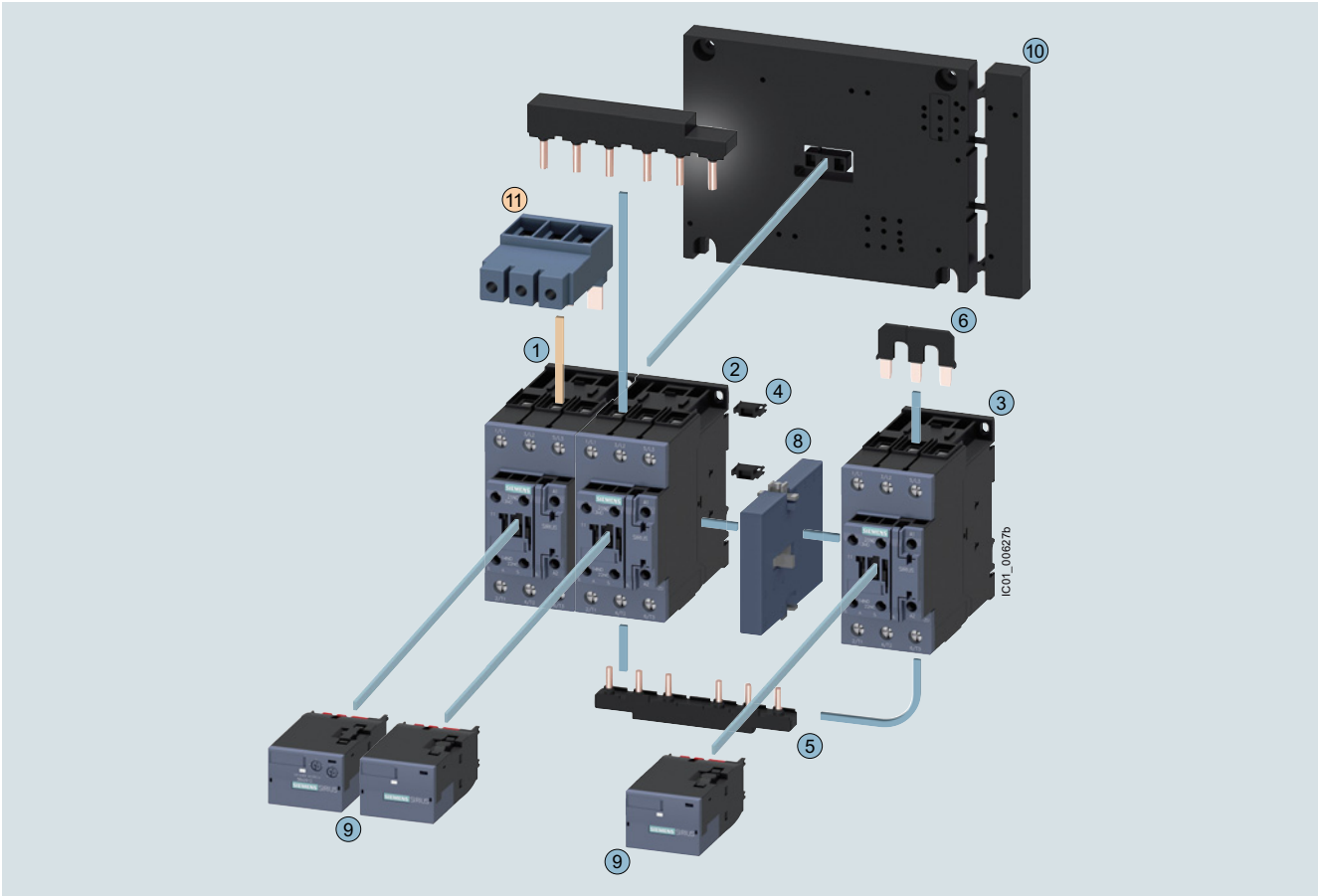
| Individual parts | | Type | | | Page |
|---|---|---|---|---|---|
| | | Q11 | Q13 | Q12 | |
| (1)(2)(3) | Contactors, 11 kW | 3RT2024 | 3RT2024 | 3RT2024 | 3/56, 3/64 |
| (1)(2)(3) | Contactors, 15/18.5 kW | 3RT2026 | 3RT2026 | 3RT2024 | 3/56, 3/64 |
| (1)(2)(3) | Contactors, 22 kW | 3RT2027 | 3RT2027 | 3RT2026 | 3/56, 3/64 |
| (4) ... (7) | Assembly kit S0-S0-S0 comprising: | 3RA2923-2BB1 | | | 3/112 |
| | (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 | | | 3/107 |

Complete contactor assemblies for star-delta (wye-delta) starting, see page 3/172.

## 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 3-phase infeed terminal | 3RV2935-5A | 3/117 |

### Complete contactor assembly for star-delta (wye-delta) starting

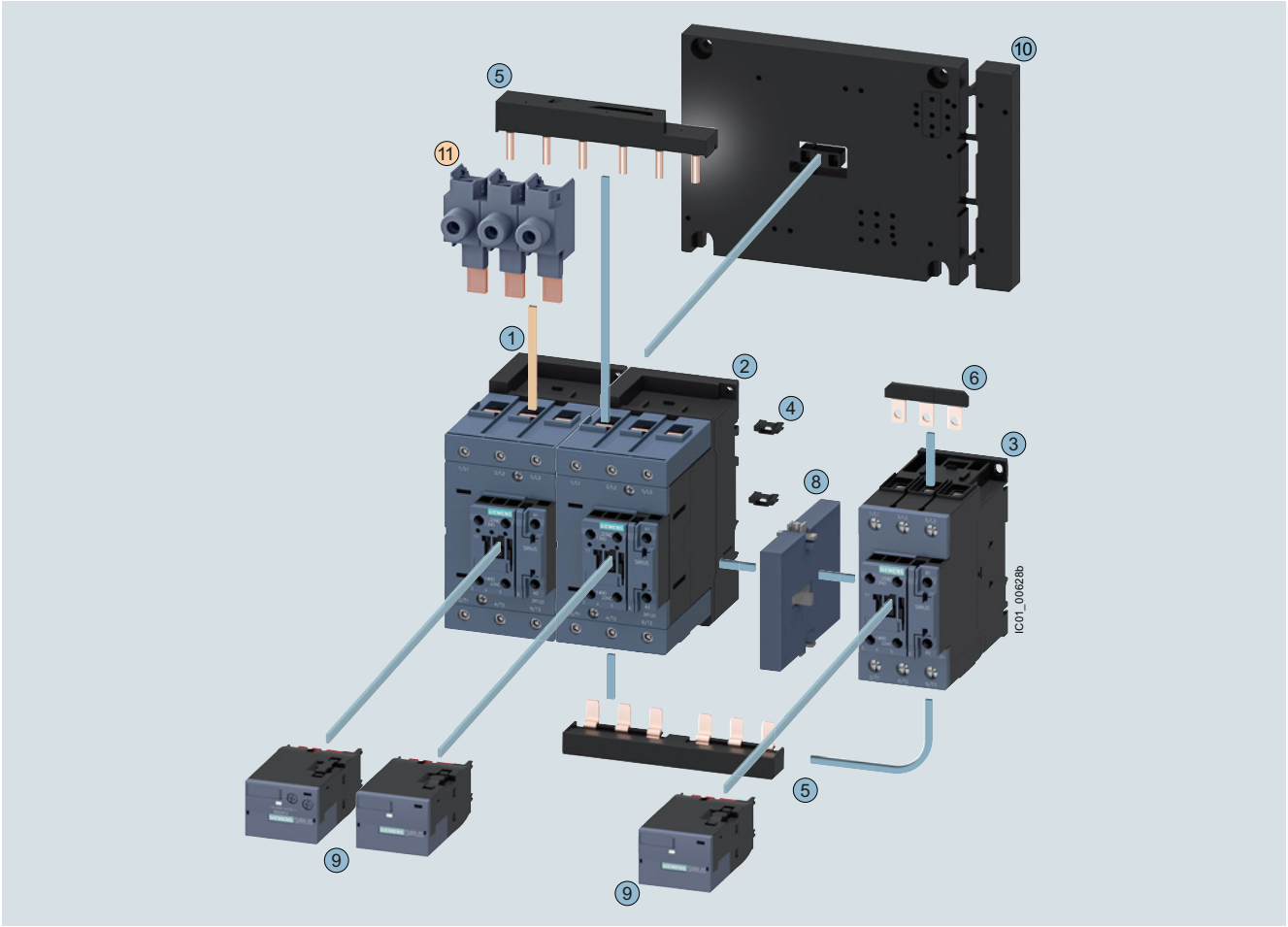
| Individual parts | | Type Q11 | Type Q13 | Type Q12 | Page |
|---|---|---|---|---|---|
| 1 2 3 | Contactors, 22/30 kW | 3RT2035 | 3RT2035 | 3RT2026 | 3/58, 3/69 |
| 1 2 3 | Contactors, 37 kW | 3RT2035 | 3RT2035 | 3RT2027 | 3/58, 3/69 |
| 1 2 3 | Contactors, 45 kW | 3RT2036 | 3RT2036 | 3RT2028 | 3/58, 3/69 |
| 1 2 3 | Contactors, 55 kW | 3RT2037 | 3RT2037 | 3RT2035 | 3/58, 3/69 |
| 4 ... 7 | Assembly kit S2-S2-S2 comprising: | 3RA2933-2BB1 | | | 3/112 |
| | 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 of the line contactor with the A2 coil contact of the delta contactor (not shown in the drawing) | | | | |
| 8 | Mechanical interlock | 3RA2934-2B | | | 3/115 |
| 9 | Function modules for star-delta (wye-delta) starting | 3RA2816-0EW20 | | | 3/107 |
| 10 | Base plate star-delta (wye-delta) | 3RA2932-2F | | | 3/120 |

[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 3/112.

Complete contactor assemblies for star-delta (wye-delta) starting, see page 3/173.

## 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 1-phase infeed terminal (3 units are required) | 3RA2943-3L | 3/117 |

### Complete contactor assembly for star-delta (wye-delta) starting

| Individual parts | | Type Q11 | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| 1 2 3 | Contactors, 55 kW | 3RT2045 | 3RT2045 | 3RT2035 | 3/59, 3/71 |
| 1 2 3 | Contactors, 75 kW | 3RT2045 | 3RT2045 | 3RT2036 | 3/59, 3/71 |
| 1 2 3 | Contactors, 90 kW | 3RT2046 | 3RT2046 | 3RT2037 | 3/59, 3/71 |
| 4 ... 7 | Assembly kit S3-S3-S2 comprising: | 3RA2943-2C | | | 3/112 |
| | 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 of the line contactor with the A2 coil contact of the delta contactor (not shown in the drawing) | | | | |
| 8 | Mechanical interlock | 3RA2934-2B | | | 3/115 |
| 9 | Function modules for star-delta (wye-delta) starting | 3RA2816-0EW20 | | | 3/107 |
| 10 | Base plate star-delta (wye-delta) | 3RA2942-2F | | | 3/120 |

[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 3/112.

Complete contactor assemblies for star-delta (wye-delta) starting, see page 3/174.

## SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

### 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

System Manual for modular system, see https://support.industry.siemens.com/cs/ww/en/view/60311318
Equipment Manual, see https://support.industry.siemens.com/cs/ww/en/view/60306557
Application Manual for controls with IE3/IE4 motors, see https://support.industry.siemens.com/cs/ww/en/view/94770820

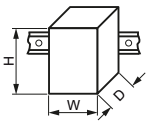
Unless otherwise indicated below, the technical specifications correspond to those of the 3RT individual contactors (see page 3/23 onwards) and 3RU2 overload relays (see page 7/94 onwards).

| 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 x 101 x 171 | | |
| - Spring-loaded terminals | mm | 135 x 84 x 145 | | | 135 x 114 x 171 | | |
| • DC operation | | | | | | | |
| - Screw terminals | mm | 135 x 68 x 145 | | | 135 x 101 x 181 | | |
| - Spring-loaded terminals | mm | 135 x 84 x 145 | | | 135 x 114 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** | | For circuit diagrams of the control circuit, see Equipment Manual for contactors/contactor assemblies. | | | | | |
| **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<br>A | 10<br>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<br>A | 10<br>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 for load feeders | | | | | |

## 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 | | 1/h | 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 | | 1/h | 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 | | 1/h | 15 | | | | | |

## 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** | | | For circuit diagrams of the control circuit, see Equipment Manual. | | | | | | |
| **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<br>A | 10<br>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<br>A | 10<br>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 for load feeders | | | | 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 | | 1/h | 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 | | 1/h | 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 | | 1/h | 15 | | | | | | |

## 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-loaded terminals |
|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz at | | | | | 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 3/164.

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

## 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 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.-8XE32-1BB4

3RA242.-8XF32-2A.2

| Rated data AC-3 | | | | Rated control supply voltage $U_s$ | SD | Screw terminals | SD | Spring-loaded terminals |
|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz at | | | | | 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 | 2 | **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 | ▶ | **3RA2425-8XF32-1AL2** | 2 | **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 | ▶ | **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 3/165.



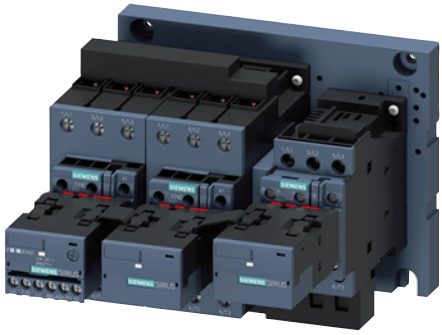
* You can order this quantity or a multiple thereof.
Illustrations are approximate

## 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 S2-S2-S0 · Up to 45 kW and S2-S2-S2 · 55 kW AC operation or AC/DC operation***

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

3RA2437-8XF32-1A.2



3RA2434-8XE32-1NB3

| Rated data AC-3 | | | | Rated control supply voltage $U_s$ | SD | **Screw terminals** | SD | **Spring-loaded terminals** |
|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz at | | | | | 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 | 2 | **3RA2434-8XF32-1AL2** | | -- |
| 80 | 25 | **37** | 63 | 24 AC | 2 | **3RA2435-8XF32-1AC2** | | -- |
| | | | | 110 AC | 2 | **3RA2435-8XF32-1AG2** | | -- |
| | | | | 230 AC | 2 | **3RA2435-8XF32-1AL2** | | -- |
| 86 | 27 | **45** | 63 | 24 AC | 2 | **3RA2436-8XF32-1AC2** | | -- |
| | | | | 110 AC | 2 | **3RA2436-8XF32-1AG2** | | -- |
| | | | | 230 AC | 2 | **3RA2436-8XF32-1AL2** | | -- |
| 115 | 37 | **55** | 93 | 24 AC | 5 | **3RA2437-8XF32-1AC2** | | -- |
| | | | | 110 AC | 5 | **3RA2437-8XF32-1AG2** | | -- |
| | | | | 230 AC | 2 | **3RA2437-8XF32-1AL2** | | -- |
| **AC/DC operation, 50/60 Hz AC or DC** | | | | | | | | |
| ***With integrated coil circuit (varistor integrated in electronics at the factory)*** | | | | | | | | |
| 50/65 | 19.6 | **22/30** | 34 | 20 ... 33 AC/DC | 2 | **3RA2434-8XF32-1NB3** | | -- |
| 80 | 25 | **37** | 63 | 20 ... 33 AC/DC | 2 | **3RA2435-8XF32-1NB3** | | -- |
| 86 | 27 | **45** | 63 | 20 ... 33 AC/DC | 2 | **3RA2436-8XF32-1NB3** | | -- |
| 115 | 37 | **55** | 93 | 20 ... 33 AC/DC | 5 | **3RA2437-8XF32-1NB3** | | -- |
| **For IO-Link connection** | | | | | | | | |
| 50/65 | 19.6 | **22/30** | 34 | 20 ... 33 AC/DC | 5 | **3RA2434-8XE32-1NB3** | | -- |
| 80 | 25 | **37** | 63 | 20 ... 33 AC/DC | 5 | **3RA2435-8XE32-1NB3** | | -- |
| 86 | 27 | **45** | 63 | 20 ... 33 AC/DC | 5 | **3RA2436-8XE32-1NB3** | | -- |
| 115 | 37 | **55** | 93 | 20 ... 33 AC/DC | 5 | **3RA2437-8XE32-1NB3** | | -- |
| **For AS-Interface connection** | | | | | | | | |
| 50/65 | 19.6 | **22/30** | 34 | 20 ... 33 AC/DC | 5 | **3RA2434-8XH32-1NB3** | | -- |
| 80 | 25 | **37** | 63 | 20 ... 33 AC/DC | X | **3RA2435-8XH32-1NB3** | | -- |
| 86 | 27 | **45** | 63 | 20 ... 33 AC/DC | X | **3RA2436-8XH32-1NB3** | | -- |
| 115 | 37 | **55** | 93 | 20 ... 33 AC/DC | X | **3RA2437-8XH32-1NB3** | | -- |

Representation of the complete contactor assemblies for star-delta (wye-delta) starting in size S2-S2-S2 with optionally mountable accessories, see page 3/166.

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

### 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 S3-S3-S2 · Up to 90 kW***
***AC operation ~ or AC/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-loaded terminals | |
|---|---|---|---|---|---|---|---|---|---|---|
| Operational current $I_e$ up to | Ratings of three-phase motors at 50 Hz and 60 Hz at | | | | | 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 | 5 | **3RA2445-8XF32-1AL2** | | | **--** | |
| 160 | 45 | **90** | 132 | 24 AC | X | **3RA2446-8XF32-1AC2** | | | **--** | |
| | | | | 110 AC | X | **3RA2446-8XF32-1AG2** | | | **--** | |
| | | | | 230 AC | 5 | **3RA2446-8XF32-1AL2** | | | **--** | |
| **AC/DC operation, 50/60 Hz AC or DC** | | | | | | | | | | |
| ***With integrated coil circuit (varistor integrated in electronics at the factory)*** | | | | | | | | | | |
| 115 | 30 | **55** | 90 | 20 ... 33 AC/DC | X | **3RA2444-8XF32-1NB3** | | | **--** | |
| 150 | 37 | **75** | 110 | 20 ... 33 AC/DC | 5 | **3RA2445-8XF32-1NB3** | | | **--** | |
| 160 | 45 | **90** | 132 | 20 ... 33 AC/DC | X | **3RA2446-8XF32-1NB3** | | | **--** | |
| **For IO-Link connection** | | | | | | | | | | |
| 115 | 30 | **55** | 90 | 20 ... 33 AC/DC | X | **3RA2444-8XE32-1NB3** | | | **--** | |
| 150 | 37 | **75** | 110 | 20 ... 33 AC/DC | X | **3RA2445-8XE32-1NB3** | | | **--** | |
| 160 | 45 | **90** | 132 | 20 ... 33 AC/DC | X | **3RA2446-8XE32-1NB3** | | | **--** | |
| **For AS-Interface connection** | | | | | | | | | | |
| 115 | 30 | **55** | 90 | 20 ... 33 AC/DC | X | **3RA2444-8XH32-1NB3** | | | **--** | |
| 150 | 37 | **75** | 110 | 20 ... 33 AC/DC | X | **3RA2445-8XH32-1NB3** | | | **--** | |
| 160 | 45 | **90** | 132 | 20 ... 33 AC/DC | X | **3RA2446-8XH32-1NB3** | | | **--** | |

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

**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 (page 7/123 onwards), SIMOCODE pro 3UF7 motor management and control devices (page 10/16 onwards) or 3RN2 thermistor motor protection relays (page 10/143 onwards) 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 Support, www.siemens.com/support-request.

**More information**

Homepage, see www.siemens.com/sirius
Industry Mall, see www.siemens.com/product?3RA24_3RT

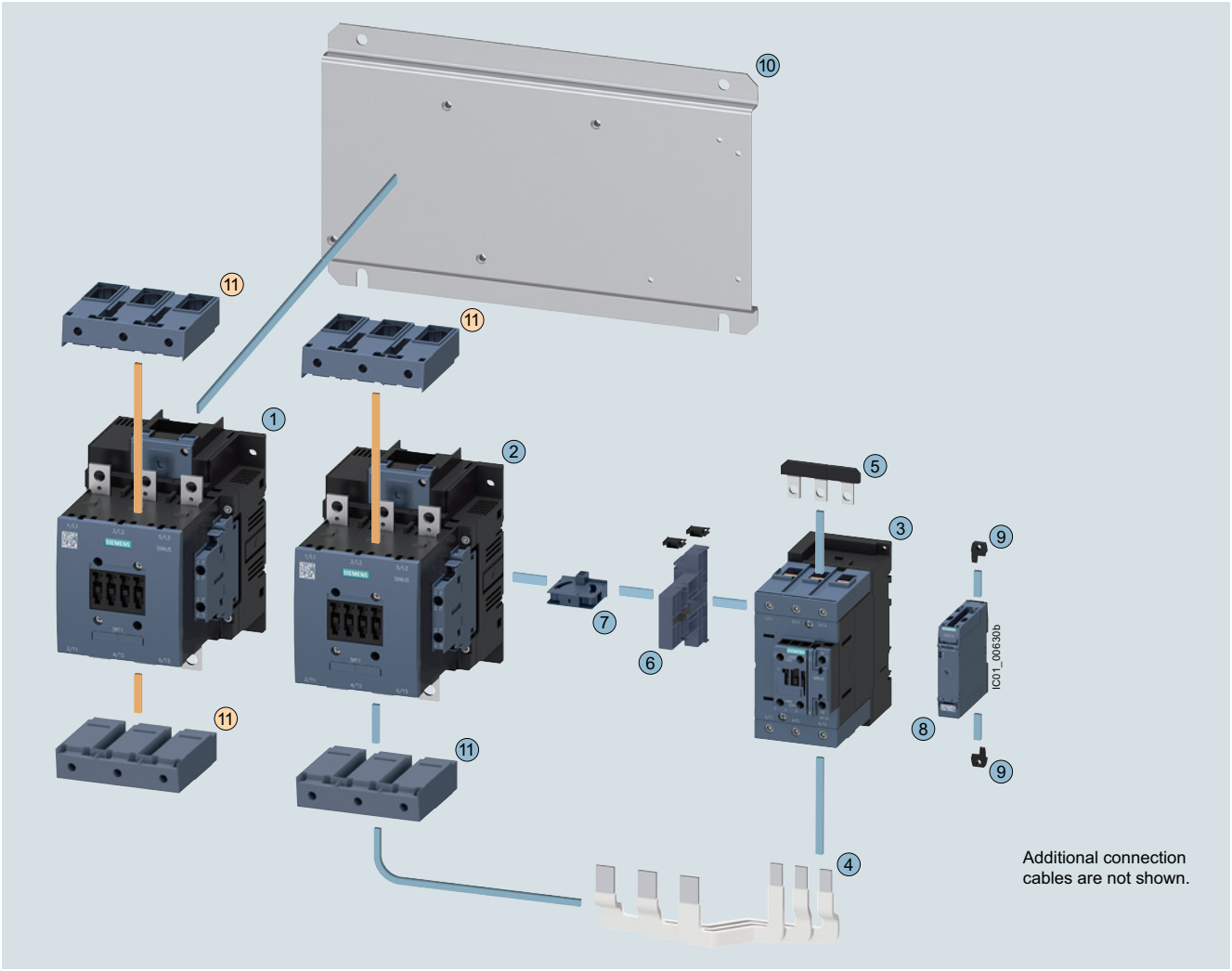
1) For effective assistance from Technical Support, you must provide the following details:
- Rated motor voltage,
- Rated motor current,
- Service factor, operating values
- Motor starting current factor
- Starting time
- Ambient temperature

# Switching devices – Contactors and contactor assemblies – for switching motors

## 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-S3 · Up to 160 kW***




**Mountable accessories (optional)**

| To be ordered separately | Type | Page |
|---|---|---|
| (11) Box terminal blocks | 3RT1955-4G | 3/117 |

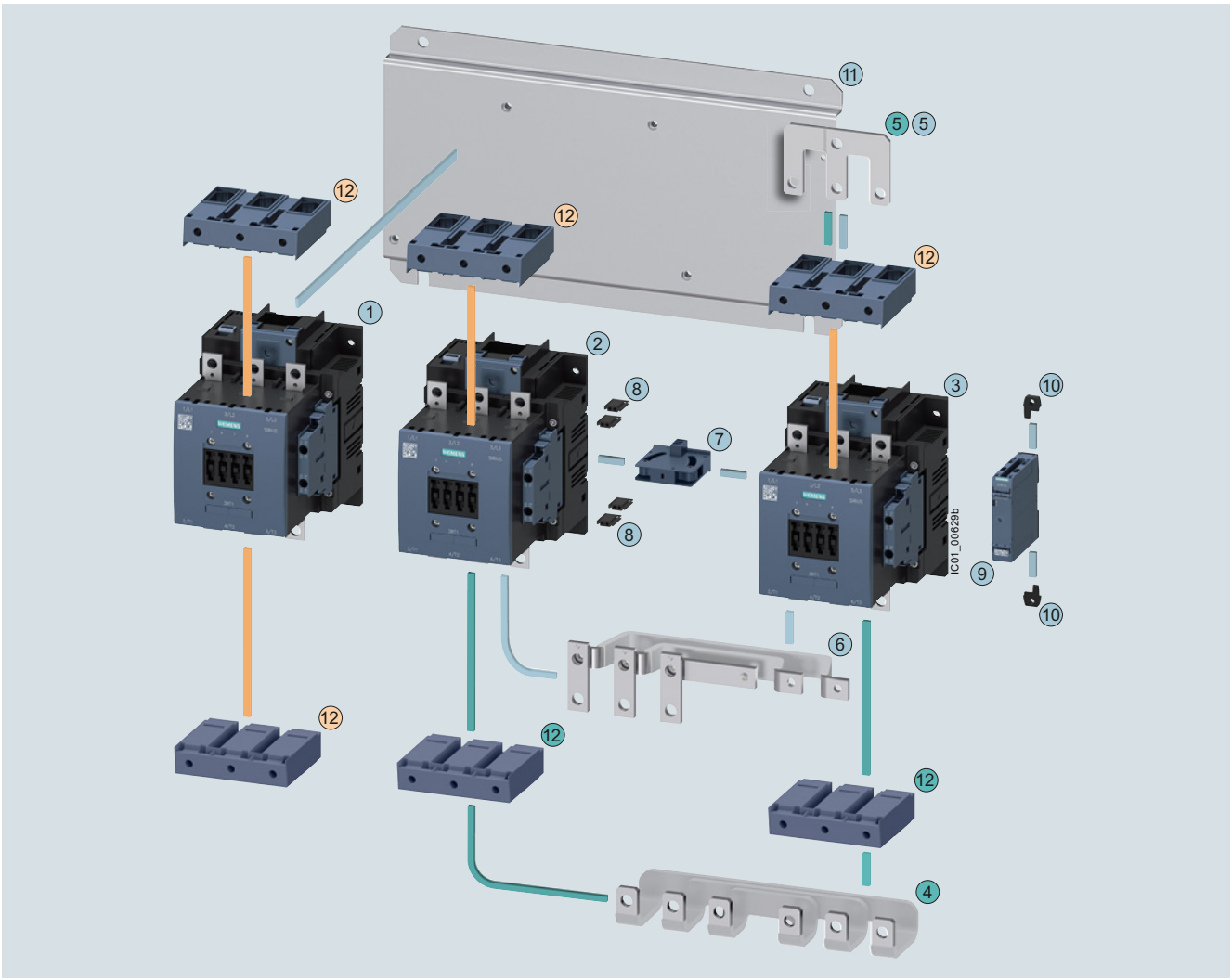
**Contactor assemblies for star-delta (wye-delta) starting for customer assembly**

| Individual parts | | Type Q11 | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| (1)(2)(3) | Contactors, 110 kW | 3RT1054 | 3RT1054 | 3RT2045 | 3/59, 3/67, 3/71 ... 3/74 |
| (1)(2)(3) | Contactors, 132 kW | 3RT1055 | 3RT1055 | 3RT2046 | 3/59, 3/67, 3/71 ... 3/74 |
| (1)(2)(3) | Contactors, 160 kW | 3RT1056 | 3RT1056 | 3RT2047 | 3/59, 3/67, 3/71 ... 3/74 |
| (4) | Assembly kit S6-S6-S3 for contactors with box terminals consisting of: Wiring modules, bottom | 3RA1953-3G | | | 3/113 |
| (5) | Star jumper S3 | 3RT1946-4BA31 | | | 3/114 |
| (6) | Adapter for the mechanical interlock between S6 and S3 (including two connectors) | 3RA1954-2G[1)] | | | 3/115 |
| (7) | Mechanical interlock between S6 and S3 | 3RA1954-2A | | | 3/115 |
| (8) | Timing relay with star-delta (wye-delta) function | 3RP257. | | | 10/38 |
| (9) | Push-in lugs for star-delta (wye-delta) timing relays | 3ZY1311-0AA00 | | | 10/39 |
| (10) | Base plate star-delta (wye-delta) | 3RA1952-2E | | | 3/120 |
| (11) | Box terminal block | 3RT1955-4G | | | 3/117 |

[1)] The 3RA1954-2G adapter cannot be used in conjunction with 3RT204..-.KB coupling contactors, size S3.

## 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)

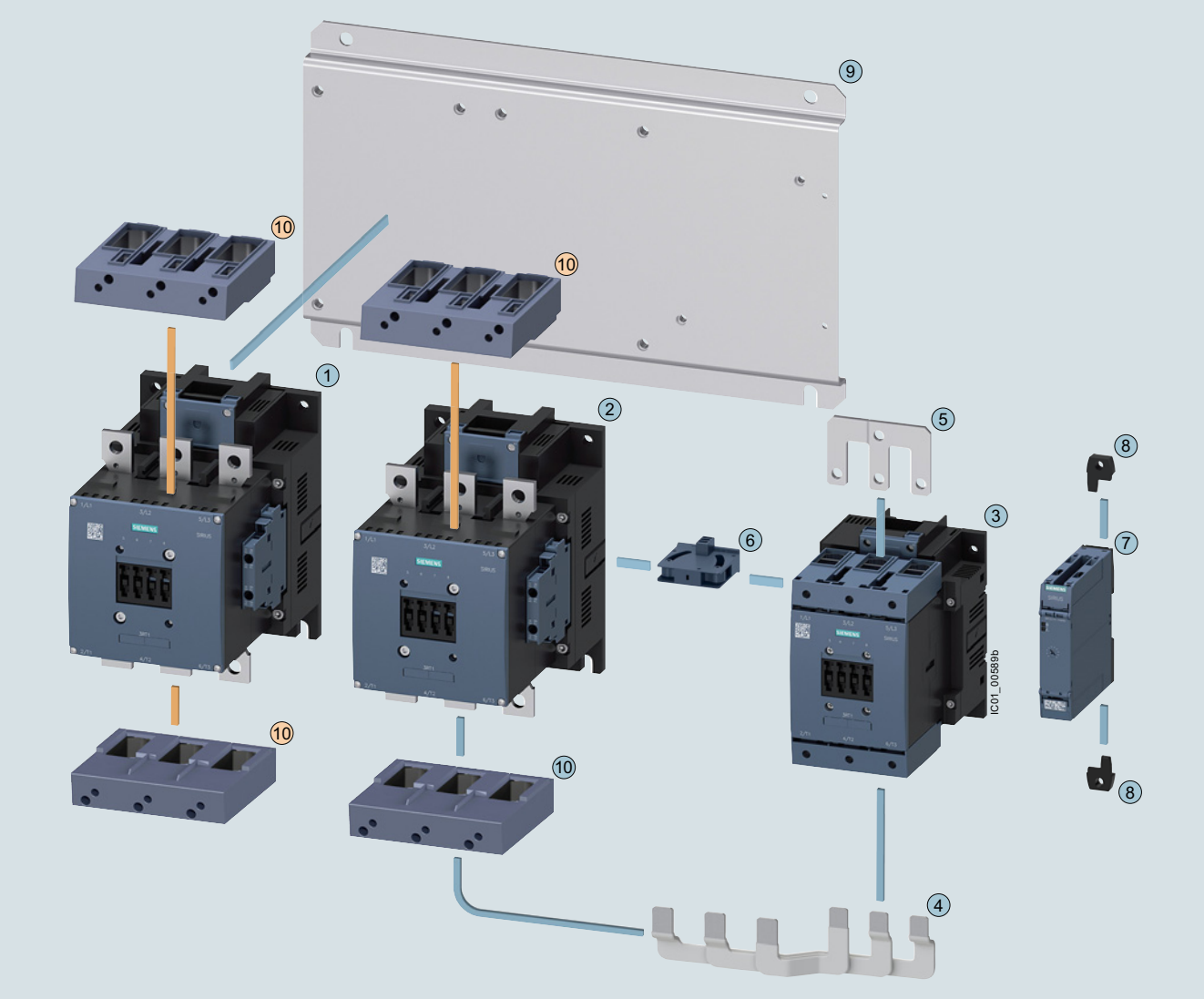
| To be ordered separately | Type | Page |
|---|---|---|
| 12 Box terminal blocks | 3RT1955-4G | 3/117 |

### Contactor assemblies for star-delta (wye-delta) starting for customer assembly

| Individual parts | | Type Q11 | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| 1 2 3 | Contactors, 110 kW | 3RT1054 | 3RT1054 | 3RT1054 | 3/72 ... 3/74 |
| 1 2 3 | Contactors, 132 kW | 3RT1055 | 3RT1055 | 3RT1055 | 3/72 ... 3/74 |
| 1 2 3 | Contactors, 160 kW | 3RT1056 | 3RT1056 | 3RT1056 | 3/72 ... 3/74 |
| 4 5 | Assembly kit S6-S6-S6 for contactors with box terminals consisting of: | 3RA1953-2B | | | 3/113 |
| | 4 Link rails, bottom | | | | |
| | 5 Star jumper S6 | | | | |
| 5 6 | Assembly kit S6-S6-S6 for contactors without box terminals consisting of: | 3RA1953-2N | | | 3/113 |
| | 6 Link rails, bottom | | | | |
| | 5 Star jumper S6 | | | | |
| 7 | Mechanical interlock | 3RA1954-2A | | | 3/115 |
| 8 | Four connectors | 3RA1932-2D | | | 3/115 |
| 9 | Timing relay with star-delta (wye-delta) function | 3RP257. | | | 10/38 |
| 10 | Push-in lugs for star-delta (wye-delta) timing relays | 3ZY1311-0AA00 | | | 10/39 |
| 11 | Base plate star-delta (wye-delta) | 3RA1952-2F | | | 3/120 |
| 12 | Box terminal block | 3RT1955-4G | | | 3/117 |

## 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)

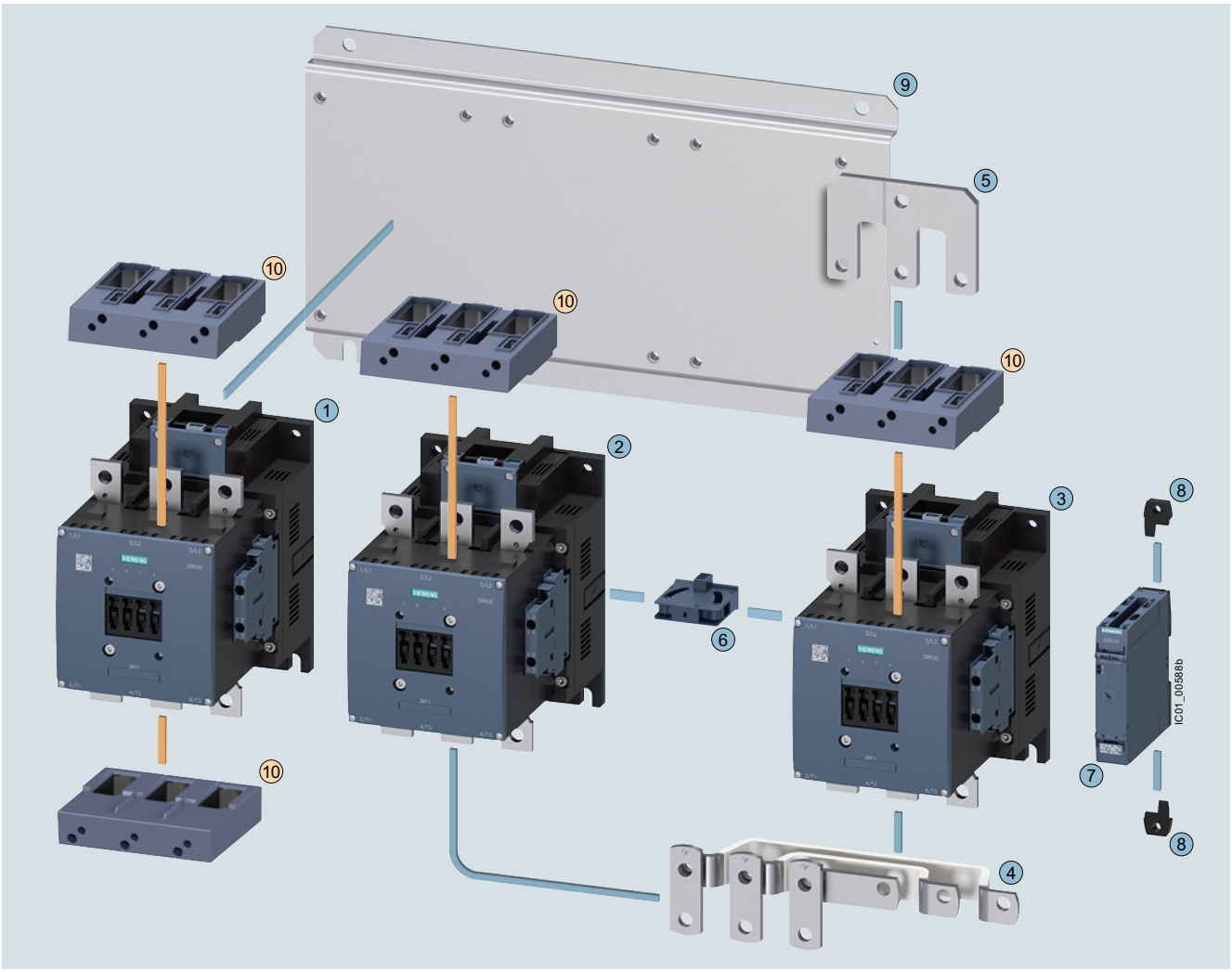
| To be ordered separately | Type | Page |
|---|---|---|
| 10 Box terminal blocks | 3RT1966-4G | 3/117 |

### Contactor assemblies for star-delta (wye-delta) starting for customer assembly

| Individual parts | | Type Q11 | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| 1 2 3 | Contactors, 200 kW | 3RT1.64 | 3RT1.64 | 3RT1054 | 3/72 ... 3/74, 3/136 |
| 1 2 3 | Contactors, 250 kW | 3RT1.65 | 3RT1.65 | 3RT1055 | 3/72 ... 3/74, 3/136 |
| 4 | Assembly kit S10-S10-S6 for contactors with box terminals consisting of: Wiring modules, bottom | 3RA1963-3E | | | 3/113 |
| 5 | Star jumper S6 | 3RT1956-4BA31 | | | 3/114 |
| 6 | Mechanical interlock between S10 and S6 | 3RA1954-2A | | | 3/115 |
| 7 | Timing relay with star-delta (wye-delta) function | 3RP257. | | | 10/38 |
| 8 | Push-in lugs for star-delta (wye-delta) timing relays | 3ZY1311-0AA00 | | | 10/39 |
| 9 | Base plate star-delta (wye-delta) | 3RA1962-2E | | | 3/120 |
| 10 | Box terminal block | 3RT1966-4G | | | 3/117 |

## 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)

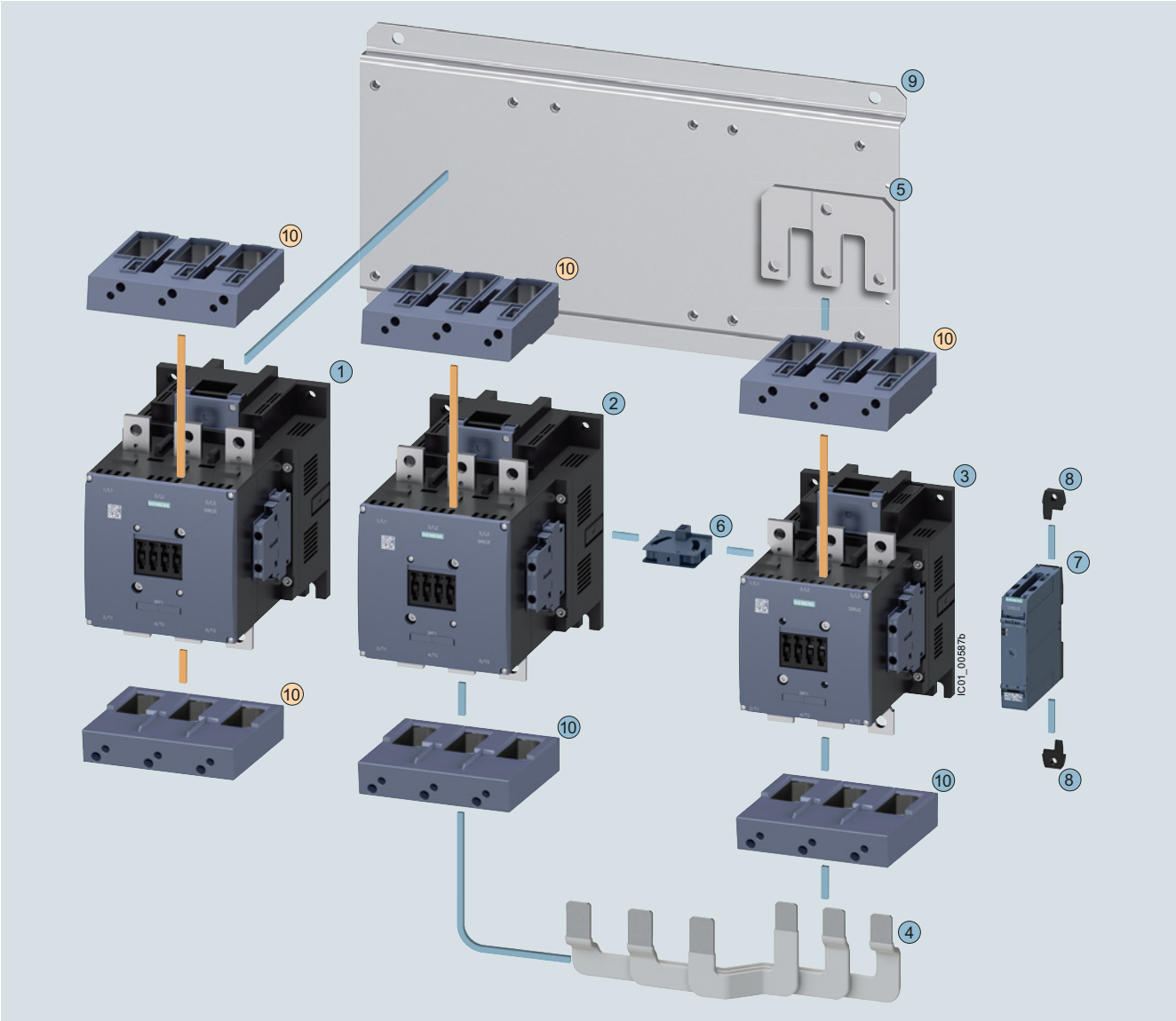
| To be ordered separately | Type | Page |
|---|---|---|
| ⑩ Box terminal blocks | 3RT1966-4G | 3/117 |

### Contactor assemblies for star-delta (wye-delta) starting for customer assembly

| Individual parts | | Type Q11 | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| ①②③ | Contactors, 200 kW | 3RT1.64 | 3RT1.64 | 3RT1.64 | 3/72 ... 3/74, 3/136 |
| ①②③ | Contactors, 250 kW | 3RT1.65 | 3RT1.65 | 3RT1.65 | 3/72 ... 3/74, 3/136 |
| ④⑤ | Assembly kit S10-S10-S10 for contactors without box terminals consisting of: | 3RA1963-2B | | | 3/113 |
| | ④ Link rails, bottom | | | | |
| | ⑤ Star jumper S10 | | | | |
| ⑥ | Mechanical interlock | 3RA1954-2A | | | 3/115 |
| ⑦ | Timing relay with star-delta (wye-delta) function | 3RP257. | | | 10/38 |
| ⑧ | Push-in lugs for star-delta (wye-delta) timing relays | 3ZY1311-0AA00 | | | 10/39 |
| ⑨ | Base plate star-delta (wye-delta) | 3RA1962-2F | | | 3/120 |

## 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)

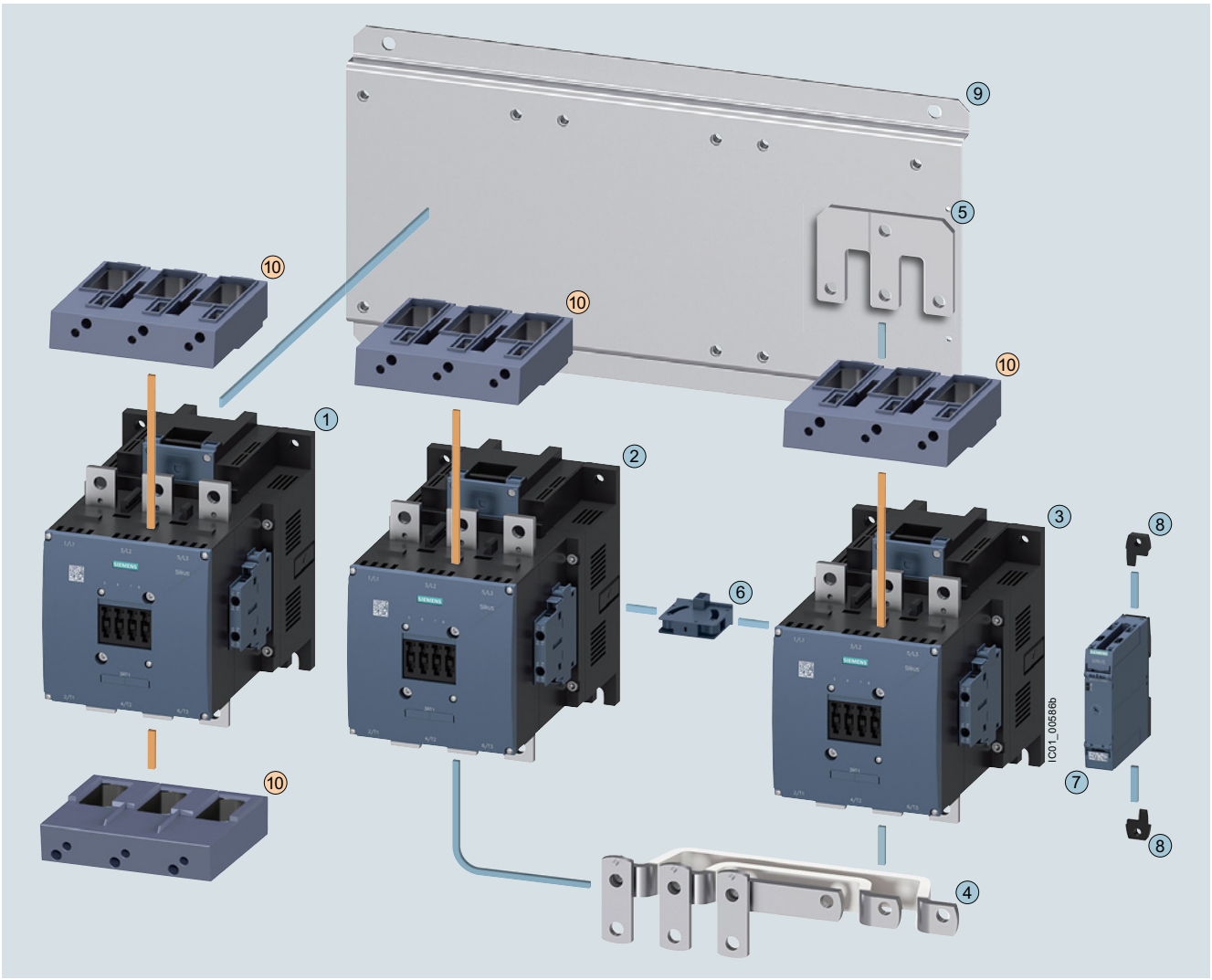
| To be ordered separately | Type | Page |
|---|---|---|
| ⑩ Box terminal blocks | 3RT1966-4G | 3/117 |

### Contactor assemblies for star-delta (wye-delta) starting for customer assembly

| Individual parts | | Type Q11 | Q13 | Q12 | Page |
|---|---|---|---|---|---|
| ①②③ | Contactors, 355 kW | 3RT1.75 | 3RT1.75 | 3RT1.64 | 3/72 ... 3/74, 3/136 |
| ①②③ | Contactors, 400 kW | 3RT1.75 | 3RT1.75 | 3RT1.65 | 3/72 ... 3/74, 3/136 |
| ①②③ | Contactors, 500 kW | 3RT1.76 | 3RT1.76 | 3RT1.66 | 3/72 ... 3/74, 3/136 |
| ④ | Assembly kit S12-S12-S10 for contactors with box terminals consisting of: Wiring modules, bottom | 3RA1973-3E | | | 3/113 |
| ⑤ | Star jumper S10 | 3RT1966-4BA31 | | | 3/114 |
| ⑥ | Mechanical interlock between S12 and S10 | 3RA1954-2A | | | 3/115 |
| ⑦ | Timing relay with star-delta (wye-delta) function | 3RP257. | | | 10/38 |
| ⑧ | Push-in lugs for star-delta (wye-delta) timing relays | 3ZY1311-0AA00 | | | 10/39 |
| ⑨ | Base plate star-delta (wye-delta) | 3RA1972-2E | | | 3/120 |
| ⑩ | Box terminal blocks | 3RT1966-4G | | | 3/117 |

## 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 | 3/117 |

### 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 | 3/72 ... 3/74, 3/136 |
| 1 2 3 | Contactors, 500 kW | 3RT1.76 | 3RT1.76 | 3RT1.76 | 3/72 ... 3/74, 3/136 |
| 4 5 | Assembly kit S12-S12-S12 for contactors without box terminals consisting of: | 3RA1973-2B | | | 3/113 |
| | 4 Link rails, bottom | | | | |
| | 5 Star jumper S12 | | | | |
| 6 | Mechanical interlock | 3RA1954-2A | | | 3/115 |
| 7 | Timing relay with star-delta (wye-delta) function | 3RP257. | | | 10/38 |
| 8 | Push-in lugs for star-delta (wye-delta) timing relays | 3ZY1311-0AA00 | | | 10/39 |
| 9 | Base plate star-delta (wye-delta) | 3RA1972-2F | | | 3/120 |

## Notes