



Power contactor, AC-3 32 A, 15 kW / 400 V 1 NO + 1 NC, 230 V AC, 50 Hz  
3-pole, size S0 Spring-type terminals

|   |                            |
|---|----------------------------|
| <b>product brand name</b>   | SIRIUS                     |
| <b>product designation</b>  | Power contactor            |
| <b>product type designation</b>   | 3RT2                       |
| <b>General technical data</b>   |                            |
| <b>size of contactor</b>  | S0                         |
| <b>product extension</b>  |                            |
| • function module for communication   | No                         |
| • auxiliary switch  | Yes                        |
| <b>power loss [W] for rated value of the current at AC in hot operating state</b>                       | 8.1 W                      |
| • per pole  | 2.7 W                      |
| <b>power loss [W] for rated value of the current without load current share typical</b>                 | 9.8 W                      |
| <b>surge voltage resistance</b>   |                            |
| • of main circuit rated value   | 6 kV                       |
| • of auxiliary circuit rated value  | 6 kV                       |
| <b>maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1</b> | 400 V                      |
| <b>shock resistance at rectangular impulse</b>  |                            |
| • at AC   | 8,3g / 5 ms, 5,3g / 10 ms  |
| <b>shock resistance with sine pulse</b>   |                            |
| • at AC   | 13,5g / 5 ms, 8,3g / 10 ms |
| <b>mechanical service life (switching cycles)</b>   |                            |
| • of contactor typical  | 10 000 000                 |
| • of the contactor with added electronically optimized auxiliary switch block typical                   | 5 000 000                  |
| • of the contactor with added auxiliary switch block typical  | 10 000 000                 |
| <b>reference code acc. to IEC 81346-2</b>   | Q                          |
| <b>Ambient conditions</b>   |                            |
| <b>installation altitude at height above sea level maximum</b>  | 2 000 m                    |
| • ambient temperature during operation  | -25 ... +60 °C             |
| • ambient temperature during storage  | -55 ... +80 °C             |
| <b>Main circuit</b>   |                            |
| <b>number of poles for main current circuit</b>   | 3                          |
| <b>number of NO contacts for main contacts</b>  | 3                          |
| • operating voltage at AC-3 rated value maximum   | 690 V                      |
| <b>operational current</b>  |                            |

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|--|---|
| <ul style="list-style-type: none"> <li>• at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>  | 50 A                                    |
| <ul style="list-style-type: none"> <li>• at AC-1 <ul style="list-style-type: none"> <li>— up to 690 V at ambient temperature 40 °C rated value</li> <li>— up to 690 V at ambient temperature 60 °C rated value</li> </ul> </li> </ul>  | 50 A<br>42 A                            |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>  | 32 A<br>32 A<br>21 A                    |
| <ul style="list-style-type: none"> <li>• at AC-4 at 400 V rated value</li> </ul>   | 22 A                                    |
| <ul style="list-style-type: none"> <li>• at AC-5a up to 690 V rated value</li> </ul>   | 44 A                                    |
| <ul style="list-style-type: none"> <li>• at AC-5b up to 400 V rated value</li> </ul>   | 26.5 A                                  |
| <ul style="list-style-type: none"> <li>• at AC-6a <ul style="list-style-type: none"> <li>— up to 230 V for current peak value n=20 rated value</li> <li>— up to 400 V for current peak value n=20 rated value</li> <li>— up to 500 V for current peak value n=20 rated value</li> <li>— up to 690 V for current peak value n=20 rated value</li> </ul> </li> </ul> | 30.8 A<br>30.8 A<br>27 A<br>21 A        |
| <ul style="list-style-type: none"> <li>• at AC-6a <ul style="list-style-type: none"> <li>— up to 230 V for current peak value n=30 rated value</li> <li>— up to 400 V for current peak value n=30 rated value</li> <li>— up to 500 V for current peak value n=30 rated value</li> <li>— up to 690 V for current peak value n=30 rated value</li> </ul> </li> </ul> | 20.5 A<br>20.5 A<br>18 A<br>18 A        |
| minimum cross-section in main circuit at maximum AC-1 rated value  | 10 mm <sup>2</sup>                      |
| <b>operational current for approx. 200000 operating cycles at AC-4</b>   |   |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>   | 12 A                                    |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>   | 12 A                                    |
| <b>operational current</b>   |   |
| <ul style="list-style-type: none"> <li>• at 1 current path at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>   | 35 A<br>4.5 A<br>1 A<br>0.4 A<br>0.25 A |
| <ul style="list-style-type: none"> <li>• with 2 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>  | 35 A<br>35 A<br>5 A<br>1 A<br>0.8 A     |
| <ul style="list-style-type: none"> <li>• with 3 current paths in series at DC-1 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul>  | 35 A<br>35 A<br>35 A<br>2.9 A<br>1.4 A  |
| <b>operational current</b>   |   |
| <ul style="list-style-type: none"> <li>• at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> </ul>   | 20 A<br>2.5 A                           |

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| <ul style="list-style-type: none"> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> <li>• with 2 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> <li>• with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> <li>— at 220 V rated value</li> <li>— at 440 V rated value</li> <li>— at 600 V rated value</li> </ul> </li> </ul> | 1 A<br>0.09 A<br>0.06 A<br><br>35 A<br>15 A<br>3 A<br>0.27 A<br>0.16 A<br><br>35 A<br>35 A<br>10 A<br>0.6 A<br>0.6 A  |
| <b>operating power</b> <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>   | 7.5 kW<br>15 kW<br>15 kW<br>18.5 kW   |
| <b>operating power for approx. 200000 operating cycles at AC-4</b> <ul style="list-style-type: none"> <li>• at 400 V rated value</li> <li>• at 690 V rated value</li> </ul>  | 6 kW<br>10.3 kW   |
| <b>operating apparent power at AC-6a</b> <ul style="list-style-type: none"> <li>• up to 230 V for current peak value n=20 rated value</li> <li>• up to 400 V for current peak value n=20 rated value</li> <li>• up to 500 V for current peak value n=20 rated value</li> <li>• up to 690 V for current peak value n=20 rated value</li> </ul>  | 12.2 kV·A<br>21.3 kV·A<br>23.3 kV·A<br>25 kV·A  |
| <b>operating apparent power at AC-6a</b> <ul style="list-style-type: none"> <li>• up to 230 V for current peak value n=30 rated value</li> <li>• up to 400 V for current peak value n=30 rated value</li> <li>• up to 500 V for current peak value n=30 rated value</li> <li>• up to 690 V for current peak value n=30 rated value</li> </ul>  | 8.1 kV·A<br>14.2 kV·A<br>15.5 kV·A<br>21.5 kV·A   |
| <b>short-time withstand current in cold operating state up to 40 °C</b> <ul style="list-style-type: none"> <li>• limited to 1 s switching at zero current maximum</li> <li>• limited to 5 s switching at zero current maximum</li> <li>• limited to 10 s switching at zero current maximum</li> <li>• limited to 30 s switching at zero current maximum</li> <li>• limited to 60 s switching at zero current maximum</li> </ul>  | 499 A; Use minimum cross-section acc. to AC-1 rated value<br>395 A; Use minimum cross-section acc. to AC-1 rated value<br>260 A; Use minimum cross-section acc. to AC-1 rated value<br>186 A; Use minimum cross-section acc. to AC-1 rated value<br>152 A; Use minimum cross-section acc. to AC-1 rated value |
| <b>no-load switching frequency</b> <ul style="list-style-type: none"> <li>• at AC</li> </ul>   | 5 000 1/h   |
| <b>operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> <li>• at AC-2 maximum</li> <li>• at AC-3 maximum</li> <li>• at AC-4 maximum</li> </ul>  | 1 000 1/h<br>750 1/h<br>750 1/h<br>250 1/h  |
| <b>Control circuit/ Control</b>  |   |
| <b>type of voltage of the control supply voltage</b>   | AC  |
| <b>control supply voltage at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul>   | 230 V   |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>   | 0.8 ... 1.1   |
| <b>apparent pick-up power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>  | 77 V·A  |
| <b>inductive power factor with closing power of the coil</b>   |   |

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| • at 50 Hz   | 0.82  |
| <b>apparent holding power of magnet coil at AC</b>                 |   |
| • at 50 Hz   | 9.8 V·A   |
| <b>inductive power factor with the holding power of the coil</b>   |   |
| • at 50 Hz   | 0.25  |
| <b>closing delay</b>   |   |
| • at AC  | 8 ... 40 ms   |
| <b>opening delay</b>   |   |
| • at AC  | 4 ... 16 ms   |
| <b>arcing time</b>   | 10 ... 10 ms  |
| <b>control version of the switch operating mechanism</b>           | Standard A1 - A2  |
| <b>Auxiliary circuit</b>   |   |
| number of NC contacts for auxiliary contacts instantaneous contact | 1   |
| number of NO contacts for auxiliary contacts instantaneous contact | 1   |
| operational current at AC-12 maximum                               | 10 A  |
| <b>operational current at AC-15</b>                                |   |
| • at 230 V rated value   | 10 A  |
| • at 400 V rated value   | 3 A   |
| • at 500 V rated value   | 2 A   |
| • at 690 V rated value   | 1 A   |
| <b>operational current at DC-12</b>                                |   |
| • at 24 V rated value  | 10 A  |
| • at 48 V rated value  | 6 A   |
| • at 60 V rated value  | 6 A   |
| • at 110 V rated value   | 3 A   |
| • at 125 V rated value   | 2 A   |
| • at 220 V rated value   | 1 A   |
| • at 600 V rated value   | 0.15 A  |
| <b>operational current at DC-13</b>                                |   |
| • at 24 V rated value  | 10 A  |
| • at 48 V rated value  | 2 A   |
| • at 60 V rated value  | 2 A   |
| • at 110 V rated value   | 1 A   |
| • at 125 V rated value   | 0.9 A   |
| • at 220 V rated value   | 0.3 A   |
| • at 600 V rated value   | 0.1 A   |
| <b>contact reliability of auxiliary contacts</b>                   | 1 faulty switching per 100 million (17 V, 1 mA)                     |
| <b>UL/CSA ratings</b>  |   |
| <b>full-load current (FLA) for 3-phase AC motor</b>                |   |
| • at 480 V rated value   | 27 A  |
| • at 600 V rated value   | 27 A  |
| <b>yielded mechanical performance [hp]</b>                         |   |
| • for single-phase AC motor  |   |
| — at 110/120 V rated value   | 2 hp  |
| — at 230 V rated value   | 5 hp  |
| • for 3-phase AC motor   |   |
| — at 200/208 V rated value   | 10 hp   |
| — at 220/230 V rated value   | 10 hp   |
| — at 460/480 V rated value   | 20 hp   |
| — at 575/600 V rated value   | 25 hp   |
| <b>contact rating of auxiliary contacts according to UL</b>        | A600 / P600   |
| <b>Short-circuit protection</b>                                    |   |
| <b>design of the fuse link</b>                                     |   |
| • for short-circuit protection of the main circuit                 |   |
| — with type of coordination 1 required                             | gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) |

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|---|--|
| — with type of assignment 2 required                              | gG: 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA)   |
| • for short-circuit protection of the auxiliary switch required   | gG: 10 A (500 V, 1 kA)   |
| <b>Installation/ mounting/ dimensions</b>                         |  |
| <b>mounting position</b>  | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <b>fastening method</b>   | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715   |
| • side-by-side mounting   | Yes  |
| <b>height</b>   | 102 mm   |
| <b>width</b>  | 45 mm  |
| <b>depth</b>  | 97 mm  |
| <b>required spacing</b>   |  |
| • with side-by-side mounting                                      |  |
| — forwards  | 10 mm  |
| — upwards   | 10 mm  |
| — downwards   | 10 mm  |
| — at the side   | 0 mm   |
| • for grounded parts  |  |
| — forwards  | 10 mm  |
| — upwards   | 10 mm  |
| — at the side   | 6 mm   |
| — downwards   | 10 mm  |
| • for live parts  |  |
| — forwards  | 10 mm  |
| — upwards   | 10 mm  |
| — downwards   | 10 mm  |
| — at the side   | 6 mm   |
| <b>Connections/ Terminals</b>                                     |  |
| <b>type of electrical connection</b>                              |  |
| • for main current circuit  | spring-loaded terminals  |
| • for auxiliary and control circuit                               | spring-loaded terminals  |
| • at contactor for auxiliary contacts                             | Spring-type terminals  |
| • of magnet coil  | Spring-type terminals  |
| <b>type of connectable conductor cross-sections</b>               |  |
| • for main contacts   |  |
| — solid   | 2x (1 ... 10 mm <sup>2</sup> )   |
| — solid or stranded   | 2x (1 ... 10 mm <sup>2</sup> )   |
| — finely stranded with core end processing                        | 2x (1 ... 6 mm <sup>2</sup> )  |
| — finely stranded without core end processing                     | 2x (1 ... 6 mm <sup>2</sup> )  |
| • at AWG cables for main contacts                                 | 2x (18 ... 8)  |
| <b>connectable conductor cross-section for main contacts</b>      |  |
| • solid   | 1 ... 10 mm <sup>2</sup>   |
| • stranded  | 1 ... 10 mm <sup>2</sup>   |
| • finely stranded with core end processing                        | 1 ... 6 mm <sup>2</sup>  |
| • finely stranded without core end processing                     | 1 ... 6 mm <sup>2</sup>  |
| <b>connectable conductor cross-section for auxiliary contacts</b> |  |
| • solid or stranded   | 0.5 ... 2.5 mm <sup>2</sup>  |
| • finely stranded with core end processing                        | 0.5 ... 1.5 mm <sup>2</sup>  |
| • finely stranded without core end processing                     | 0.5 ... 2.5 mm <sup>2</sup>  |
| <b>type of connectable conductor cross-sections</b>               |  |
| • for auxiliary contacts  |  |
| — solid or stranded   | 2x (0.5 ... 2.5 mm <sup>2</sup> )  |
| — finely stranded with core end processing                        | 2x (0.5 ... 1.5 mm <sup>2</sup> )  |
| — finely stranded without core end processing                     | 2x (0.5 ... 2.5 mm <sup>2</sup> )  |
| • at AWG cables for auxiliary contacts                            | 2x (20 ... 14)   |

- AWG number as coded connectable conductor cross section for main contacts
- AWG number as coded connectable conductor cross section for auxiliary contacts

18 ... 8

20 ... 14

#### Safety related data

|   |  |
|---|--|
| B10 value with high demand rate acc. to SN 31920                          | 1 000 000  |
| <b>proportion of dangerous failures</b>                                   |  |
| • with low demand rate acc. to SN 31920                                   | 40 %   |
| • with high demand rate acc. to SN 31920                                  | 73 %   |
| failure rate [FIT] with low demand rate acc. to SN 31920                  | 100 FIT  |
| <b>product function</b>   |  |
| • mirror contact acc. to IEC 60947-4-1                                    | Yes  |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y   |
| <b>protection class IP on the front acc. to IEC 60529</b>                 | IP20   |
| <b>touch protection on the front acc. to IEC 60529</b>                    | finger-safe, for vertical contact from the front |
| suitability for use safety-related switching OFF                          | Yes  |

#### Certificates/ approvals

General Product Approval

EMC



[KC](#)



Declaration of Conformity

Test Certificates

Marine / Shipping

[Miscellaneous](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

other



[Confirmation](#)

#### Further information







