



Power contactor, AC-3 7 A, 3 kW / 400 V 1 NO, 100 V AC, 50 Hz 100-110 V, 60 Hz, 3-pole, Size S00, ring cable lug connection

|   |  |
|---|--|
| <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>  | S00  |
| <b>product extension</b>  |  |
| <ul style="list-style-type: none"> <li>function module for communication</li> <li>auxiliary switch</li> </ul>   | <p>No</p> <p>Yes</p>                                 |
| <b>power loss [W] for rated value of the current</b>  |  |
| <ul style="list-style-type: none"> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> <li>without load current share typical</li> </ul>   | <p>0.6 W</p> <p>0.2 W</p> <p>4.8 W</p>               |
| <b>insulation voltage</b>   |  |
| <ul style="list-style-type: none"> <li>of main circuit with degree of pollution 3 rated value</li> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>   | <p>690 V</p> <p>690 V</p>                            |
| <b>surge voltage resistance</b>   |  |
| <ul style="list-style-type: none"> <li>of main circuit rated value</li> <li>of auxiliary circuit rated value</li> </ul>   | <p>6 kV</p> <p>6 kV</p>                              |
| maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1   | 400 V  |
| <b>shock resistance at rectangular impulse</b>  |  |
| <ul style="list-style-type: none"> <li>at AC</li> </ul>   | 6,7g / 5 ms, 4,2g / 10 ms                            |
| <b>shock resistance with sine pulse</b>   |  |
| <ul style="list-style-type: none"> <li>at AC</li> </ul>   | 10,5g / 5 ms, 6,6g / 10 ms                           |
| <b>mechanical service life (switching cycles)</b>   |  |
| <ul style="list-style-type: none"> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> </ul> | <p>30 000 000</p> <p>5 000 000</p> <p>10 000 000</p> |
| <b>reference code according to IEC 81346-2</b>  | Q  |
| <b>Substance Prohibitance (Date)</b>  | 10/01/2009   |
| <b>Ambient conditions</b>   |  |
| installation altitude at height above sea level maximum   | 2 000 m  |
| <b>ambient temperature</b>  |  |
| <ul style="list-style-type: none"> <li>during operation</li> <li>during storage</li> </ul>  | <p>-25 ... +60 °C</p> <p>-55 ... +80 °C</p>          |
| <b>relative humidity minimum</b>  | 10 %   |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>   | 95 %   |

## Main circuit

|  |                     |
|--|---------------------|
| <b>number of poles for main current circuit</b>                        | 3                   |
| <b>number of NO contacts for main contacts</b>                         | 3                   |
| <b>operating voltage</b>   |                     |
| • at AC-3 rated value maximum  | 690 V               |
| • at AC-3e rated value maximum   | 690 V               |
| <b>operational current</b>   |                     |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value            | 18 A                |
| • at AC-1  |                     |
| — up to 690 V at ambient temperature 40 °C rated value                 | 18 A                |
| — up to 690 V at ambient temperature 60 °C rated value                 | 16 A                |
| • at AC-3  |                     |
| — at 400 V rated value   | 7 A                 |
| — at 500 V rated value   | 6 A                 |
| — at 690 V rated value   | 4.9 A               |
| • at AC-3e   |                     |
| — at 400 V rated value   | 7 A                 |
| — at 500 V rated value   | 6 A                 |
| — at 690 V rated value   | 4.9 A               |
| • at AC-4 at 400 V rated value   | 6.5 A               |
| • at AC-5a up to 690 V rated value                                     | 15.8 A              |
| • at AC-5b up to 400 V rated value                                     | 5.8 A               |
| • at AC-6a   |                     |
| — up to 230 V for current peak value n=20 rated value                  | 4 A                 |
| — up to 400 V for current peak value n=20 rated value                  | 4 A                 |
| — up to 500 V for current peak value n=20 rated value                  | 3.8 A               |
| — up to 690 V for current peak value n=20 rated value                  | 3.6 A               |
| • at AC-6a   |                     |
| — up to 230 V for current peak value n=30 rated value                  | 2.7 A               |
| — up to 400 V for current peak value n=30 rated value                  | 2.7 A               |
| — up to 500 V for current peak value n=30 rated value                  | 2.5 A               |
| — up to 690 V for current peak value n=30 rated value                  | 2.4 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value      | 2.5 mm <sup>2</sup> |
| <b>operational current for approx. 200000 operating cycles at AC-4</b> |                     |
| • at 400 V rated value   | 2.6 A               |
| • at 690 V rated value   | 1.8 A               |
| <b>operational current</b>   |                     |
| • <b>at 1 current path at DC-1</b>                                     |                     |
| — at 24 V rated value  | 15 A                |
| — at 110 V rated value   | 1.5 A               |
| — at 220 V rated value   | 0.6 A               |
| — at 440 V rated value   | 0.42 A              |
| — at 600 V rated value   | 0.42 A              |
| • <b>with 2 current paths in series at DC-1</b>                        |                     |
| — at 24 V rated value  | 15 A                |
| — at 110 V rated value   | 8.4 A               |
| — at 220 V rated value   | 1.2 A               |
| — at 440 V rated value   | 0.6 A               |
| — at 600 V rated value   | 0.5 A               |
| • <b>with 3 current paths in series at DC-1</b>                        |                     |

|   |   |
|---|---|
| <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>   | 15 A<br>15 A<br>15 A<br>0.9 A<br>0.7 A  |
| <ul style="list-style-type: none"> <li>● <b>at 1 current path at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> </ul>   | 15 A<br>0.1 A   |
| <ul style="list-style-type: none"> <li>● <b>with 2 current paths in series at DC-3 at DC-5</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 110 V rated value</li> </ul> </li> </ul>  | 15 A<br>0.25 A  |
| <ul style="list-style-type: none"> <li>● <b>with 3 current paths in series at DC-3 at DC-5</b> <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>  | 15 A<br>15 A<br>1.2 A<br>0.14 A<br>0.14 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> <li>● at AC-3e           <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> | 1.5 kW<br>3 kW<br>3 kW<br>4 kW<br><br>1.5 kW<br>3 kW<br>3 kW<br>4 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>  | 1.15 kW<br>1.15 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>  | 1.5 kVA<br>2.7 kVA<br>3.3 kVA<br>4.3 kVA  |
| <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>  | 1 kVA<br>1.8 kVA<br>2.2 kVA<br>2.9 kVA  |
| <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>   | 120 A; Use minimum cross-section acc. to AC-1 rated value<br>86 A; Use minimum cross-section acc. to AC-1 rated value<br>67 A; Use minimum cross-section acc. to AC-1 rated value<br>52 A; Use minimum cross-section acc. to AC-1 rated value<br>43 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>   | 10 000 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-3e maximum</li> <li>● at AC-4 maximum</li> </ul>  | 1 000 1/h<br>750 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> <li>• at 60 Hz rated value</li> </ul>  | 100 V<br>110 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> <li>• at 60 Hz</li> </ul>  | 0.8 ... 1.1<br>0.85 ... 1.1                          |
| <b>apparent pick-up power of magnet coil at AC</b>  |  |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>  | 26.4 VA<br>31.7 VA                                   |
| <b>inductive power factor with closing power of the coil</b>  |  |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>  | 0.81<br>0.81   |
| <b>apparent holding power of magnet coil at AC</b>  |  |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>  | 4.4 VA<br>4.8 VA                                     |
| <b>inductive power factor with the holding power of the coil</b>  |  |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>  | 0.24<br>0.25   |
| <b>closing delay</b>  |  |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>   | 9 ... 35 ms  |
| <b>opening delay</b>  |  |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>   | 7 ... 13 ms  |
| <b>arcing time</b>  | 10 ... 15 ms   |
| <b>control version of the switch operating mechanism</b>  | Standard A1 - A2                                     |
| <b>Auxiliary circuit</b>  |  |
| 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>   |  |
| <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>  | 10 A<br>3 A<br>2 A<br>1 A                            |
| <b>operational current at DC-12</b>   |  |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>                                     | 10 A<br>6 A<br>6 A<br>3 A<br>2 A<br>1 A<br>0.15 A    |
| <b>operational current at DC-13</b>   |  |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>                                     | 10 A<br>2 A<br>2 A<br>1 A<br>0.9 A<br>0.3 A<br>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>   |  |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>  | 4.8 A<br>6.1 A                                       |
| <b>yielded mechanical performance [hp]</b>  |  |
| <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> </ul> </li> </ul> | 0.25 hp<br>0.75 hp<br>1.5 hp                         |

|   |  |
|---|--|
| — at 220/230 V rated value  | 2 hp   |
| — at 460/480 V rated value  | 3 hp   |
| — at 575/600 V rated value  | 5 hp   |
| <b>contact rating of auxiliary contacts according to UL</b>   | A600 / Q600  |
| <b>Short-circuit protection</b>   |  |
| <b>design of the fuse link</b>  |  |
| <ul style="list-style-type: none"> <li>● for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul> </li> <li>● for short-circuit protection of the auxiliary switch required</li> </ul>   | gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)<br>gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA)<br>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   |
| <ul style="list-style-type: none"> <li>● side-by-side mounting</li> </ul>   | Yes  |
| <b>height</b>   | 58 mm  |
| <b>width</b>  | 45 mm  |
| <b>depth</b>  | 73 mm  |
| <b>required spacing</b>   |  |
| <ul style="list-style-type: none"> <li>● with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>● for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>● for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | 10 mm<br>10 mm<br>10 mm<br>0 mm<br>10 mm<br>10 mm<br>6 mm<br>10 mm<br>10 mm<br>10 mm<br>6 mm   |
| <b>Connections/ Terminals</b>   |  |
| <b>type of electrical connection</b>  |  |
| <ul style="list-style-type: none"> <li>● for main current circuit</li> <li>● for auxiliary and control circuit</li> <li>● at contactor for auxiliary contacts</li> <li>● of magnet coil</li> </ul>  | Ring cable lug connection<br>ring terminal lug connection<br>Ring cable lug connection<br>Ring cable lug connection  |
| <b>Safety related data</b>  |  |
| <b>product function</b>   |  |
| <ul style="list-style-type: none"> <li>● mirror contact according to IEC 60947-4-1</li> </ul>   | Yes; with 3RH29  |
| B10 value with high demand rate according to SN 31920   | 1 000 000  |
| <b>proportion of dangerous failures</b>   |  |
| <ul style="list-style-type: none"> <li>● with low demand rate according to SN 31920</li> <li>● with high demand rate according to SN 31920</li> </ul>   | 40 %<br>73 %   |
| failure rate [FIT] with low demand rate according to SN 31920   | 100 FIT  |
| T1 value for proof test interval or service life according to IEC 61508   | 20 y   |
| <b>protection class IP on the front according to IEC 60529</b>  | IP00   |
| <b>suitability for use</b>  |  |
| <ul style="list-style-type: none"> <li>● safety-related switching OFF</li> </ul>  | Yes  |
| <b>Certificates/ approvals</b>  |  |
| <b>General Product Approval</b>   |  |



[Confirmation](#)



[KC](#)



|     |                                       |                           |                   |  |
|-----|---------------------------------------|---------------------------|-------------------|--|
| EMC | Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates |  |
|-----|---------------------------------------|---------------------------|-------------------|--|



[Type Examination Certificate](#)



EG-Konf.



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

### Marine / Shipping



ABS



DNV



LRS



PRS



RINA

### Marine / Shipping other



RMRS

[Confirmation](#)



VDE

### Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2015-4AG61>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-4AG61>

Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-4AG61>

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2015-4AG61&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-4AG61&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-4AG61/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-4AG61&objecttype=14&gridview=view1>

last modified:

6/2/2022