



CONTACTOR, AC-3, 3KW/400V, 1NC, DC 24V, 3-POLE, SZ S00 SCREW TERMINAL

|                     |                |
|---------------------|----------------|
| product brand name  | SIRIUS         |
| Product designation | 3RT2 contactor |

General technical data:

|   |    |            |
|---|----|------------|
| <b>Insulation voltage</b>   |    |            |
| <ul style="list-style-type: none"> <li>Rated value</li> </ul>   | V  | 690        |
| <b>Degree of pollution</b>  |    | 3          |
| <b>Surge voltage resistance Rated value</b>   | kV | 6          |
| <b>Mechanical service life (switching cycles)</b>   |    |            |
| <ul style="list-style-type: none"> <li>of the contactor typical</li> </ul>  |    | 30 000 000 |
| <ul style="list-style-type: none"> <li>of the contactor with added electronics-compatible auxiliary switch block typical</li> </ul> |    | 5 000 000  |
| <ul style="list-style-type: none"> <li>of the contactor with added auxiliary switch block typical</li> </ul>                        |    | 10 000 000 |
| <b>Thermal short-time current restricted to 10 s</b>  | A  | 56         |
| <b>Protection class IP</b>  |    |            |
| <ul style="list-style-type: none"> <li>on the front</li> </ul>  |    | IP20       |
| <ul style="list-style-type: none"> <li>of the terminal</li> </ul>   |    | IP20       |
| <b>Equipment marking</b>  |    |            |
| <ul style="list-style-type: none"> <li>acc. to DIN EN 61346-2</li> </ul>  |    | Q          |
| <ul style="list-style-type: none"> <li>acc. to DIN EN 81346-2</li> </ul>  |    | Q          |

Main circuit:

|   |  |   |
|---|--|---|
| <b>Number of poles for main current circuit</b> |  | 3 |
| <b>Number of NC contacts for main contacts</b>  |  | 0 |
| <b>Number of NO contacts for main contacts</b>  |  | 3 |
| <b>Operating voltage</b>                        |  |   |

|   |   |      |
|---|---|------|
| • at AC-3 Rated value maximum                             | V | 690  |
| <b>Operating current</b>                                  |   |      |
| • at AC-1   |   |      |
| — at 400 V at ambient temperature 40 °C<br>Rated value    | A | 18   |
| — up to 690 V at ambient temperature 40 °C<br>Rated value | A | 18   |
| — up to 690 V at ambient temperature 60 °C<br>Rated value | A | 16   |
| • at AC-2 at 400 V Rated value                            | A | 7    |
| • at AC-3   |   |      |
| — at 400 V Rated value                                    | A | 7    |
| — at 500 V Rated value                                    | A | 6    |
| — at 690 V Rated value                                    | A | 4.9  |
| • at AC-4 at 400 V Rated value                            | A | 6.5  |
| <b>Operating current with 1 current path</b>              |   |      |
| • at DC-1   |   |      |
| — at 24 V Rated value                                     | A | 15   |
| — at 110 V Rated value                                    | A | 1.5  |
| — at 220 V Rated value                                    | A | 0.6  |
| — at 440 V Rated value                                    | A | 0.42 |
| — at 600 V Rated value                                    | A | 0.42 |
| • at DC-3 at DC-5   |   |      |
| — at 24 V Rated value                                     | A | 15   |
| — at 110 V Rated value                                    | A | 0.1  |
| <b>Operating current with 2 current paths in series</b>   |   |      |
| • at DC-1   |   |      |
| — at 24 V Rated value                                     | A | 15   |
| — at 110 V Rated value                                    | A | 8.4  |
| — at 220 V Rated value                                    | A | 1.2  |
| — at 440 V Rated value                                    | A | 0.6  |
| — at 600 V Rated value                                    | A | 0.5  |
| • at DC-3 at DC-5   |   |      |
| — at 110 V Rated value                                    | A | 0.25 |
| — at 24 V Rated value                                     | A | 15   |
| <b>Operating current with 3 current paths in series</b>   |   |      |
| • at DC-1   |   |      |
| — at 24 V Rated value                                     | A | 15   |
| — at 110 V Rated value                                    | A | 15   |
| — at 220 V Rated value                                    | A | 15   |
| — at 440 V Rated value                                    | A | 0.9  |
| — at 600 V Rated value                                    | A | 0.7  |

|   |     |      |
|---|-----|------|
| <ul style="list-style-type: none"> <li>• at DC-3 at DC-5               <ul style="list-style-type: none"> <li>— at 110 V Rated value</li> <li>— at 220 V Rated value</li> <li>— at 24 V Rated value</li> <li>— at 440 V Rated value</li> <li>— at 600 V Rated value</li> </ul> </li> </ul>  | A   | 15   |
|   | A   | 1.2  |
|   | A   | 15   |
|   | A   | 0.14 |
|   | A   | 0.14 |
| <b>Operating power</b>  |     |      |
| <ul style="list-style-type: none"> <li>• at AC-1 at 400 V Rated value</li> <li>• at AC-2 at 400 V Rated value</li> <li>• at AC-4 at 400 V Rated value</li> </ul>  | kW  | 11   |
|   | kW  | 3    |
|   | kW  | 3    |
| <b>Operating power</b>  |     |      |
| <ul style="list-style-type: none"> <li>• at AC-1               <ul style="list-style-type: none"> <li>— at 230 V at 60 °C Rated value</li> <li>— at 230 V Rated value</li> <li>— at 400 V at 60 °C Rated value</li> <li>— at 690 V at 60 °C Rated value</li> <li>— at 690 V Rated value</li> </ul> </li> <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 690 V Rated value</li> </ul> </li> </ul> | kW  | 6    |
|   | kW  | 6.3  |
|   | kW  | 10.5 |
|   | kW  | 18   |
|   | kW  | 19   |
|   | kW  | 1.5  |
|   | kW  | 3    |
|   | kW  | 4    |
| <b>Operating power for <math>\geq 200000</math> 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>  | kW  | 1.15 |
|   | kW  | 1.15 |
| <b>Operating frequency</b>  |     |      |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>   | 1/h | 750  |

#### Control circuit/ Control:

|  |   |             |
|--|---|-------------|
| <b>Type of voltage of the control supply voltage</b>                                       |   | DC          |
| <b>Control supply voltage for DC</b>   |   |             |
| <ul style="list-style-type: none"> <li>• Rated value</li> </ul>                            | V | 24          |
| <b>Operating range factor control supply voltage rated value of the magnet coil for DC</b> |   | 0.8 ... 1.1 |
| <b>Closing power of the magnet coil for DC</b>   | W | 4           |
| <b>Holding power of the magnet coil for DC</b>   | W | 4           |

#### Auxiliary circuit:

|   |  |   |
|---|--|---|
| <b>Number of NC contacts</b>  |  |   |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts               <ul style="list-style-type: none"> <li>— instantaneous contact</li> </ul> </li> </ul> |  | 1 |
| <b>Number of NO contacts</b>  |  |   |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>  |  |   |

|  |   |   |
|--|---|---|
| — instantaneous contact                              |   | 0   |
| <b>Product expansion Auxiliary switch</b>            |   | Yes   |
| <b>Operating current at AC-15</b>                    |   |   |
| • at 230 V Rated value                               | A | 10  |
| • at 400 V Rated value                               | A | 3   |
| • at 690 V Rated value                               | A | 1   |
| <b>Operating current</b>                             |   |   |
| • at DC-12 at 125 V Rated value                      | A | 2   |
| • at DC-12 at 220 V Rated value                      | A | 1   |
| • at DC-12 at 600 V Rated value                      | A | 0.15  |
| • at DC-13 at 125 V Rated value                      | A | 0.9   |
| • at DC-13 at 220 V Rated value                      | A | 0.3   |
| • at DC-13 at 600 V Rated value                      | A | 0.1   |
| <b>Operating current</b>                             |   |   |
| • at DC-12   |   |   |
| — at 60 V Rated value                                | A | 6   |
| — at 110 V Rated value                               | A | 3   |
| • at DC-13   |   |   |
| — at 24 V Rated value                                | A | 10  |
| — at 60 V Rated value                                | A | 2   |
| — at 110 V Rated value                               | A | 1   |
| <b>Contact reliability of the auxiliary contacts</b> |   | 1 faulty switching per 100 million (17 V, 1 mA) |

#### UL/CSA ratings:

|  |           |             |
|--|-----------|-------------|
| <b>Full-load current (FLA) for three-phase AC motor</b>    |           |             |
| • at 480 V Rated value                                     | A         | 4.8         |
| • at 600 V Rated value                                     | A         | 6.1         |
| <b>yielded mechanical performance [hp]</b>                 |           |             |
| • for single-phase AC motor at 110/120 V Rated value       | metric hp | 0.25        |
| • for single-phase AC motor at 230 V Rated value           | metric hp | 0.75        |
| • for three-phase AC motor at 200/208 V Rated value        | metric hp | 1.5         |
| • for three-phase AC motor at 220/230 V Rated value        | metric hp | 2           |
| • for three-phase AC motor at 460/480 V Rated value        | metric hp | 3           |
| • for three-phase AC motor at 575/600 V Rated value        | metric hp | 5           |
| <b>Contact rating of the auxiliary contacts acc. to UL</b> |           | A600 / Q600 |

#### Short-circuit:

|                                |  |  |
|--------------------------------|--|--|
| <b>Design of the fuse link</b> |  |  |
|--------------------------------|--|--|

- for short-circuit protection of the main circuit
  - with type of assignment 1 required
  - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:  
35 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE:  
20 A

fuse gL/gG: 10 A

#### Installation/ mounting/ dimensions:

|  |    |  |
|--|----|--|
| <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>Mounting type</b>   |    | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022   |
| <ul style="list-style-type: none"> <li>• Side-by-side mounting</li> </ul>  |    | Yes  |
| <b>Height</b>  | mm | 57.5   |
| <b>Width</b>   | mm | 45   |
| <b>Depth</b>   | mm | 73   |
| <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>— Backwards</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>— Backwards</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>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | mm | 0<br>0<br>0<br>0<br>0<br><br>0<br>0<br>0<br>6<br>0<br><br>0<br>0<br>0<br>0<br>6  |

#### Connections/ Terminals:

|   |  |  |
|---|--|--|
| <b>Type of electrical connection</b>  |  |  |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul> |  | screw-type terminals<br>screw-type terminals |
| <b>Type of connectable conductor cross-section</b>  |  |  |
| <ul style="list-style-type: none"> <li>• for main contacts</li> </ul>   |  |  |

- single or multi-stranded
- finely stranded with core end processing
- for AWG conductors for main contacts
- for auxiliary contacts
  - single or multi-stranded
  - finely stranded with core end processing
- for AWG conductors for auxiliary contacts

|  |   |
|--|---|
|  | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
|  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                       |
|  | 2x (20 ... 16), 2x (18 ... 14), 2x 12   |
|  | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup> |
|  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                       |
|  | 2x (20 ... 16), 2x (18 ... 14), 2x 12   |

#### Safety related data:

|   |     |             |
|---|-----|-------------|
| <b>B10 value with high demand rate acc. to SN 31920</b>                   |     | 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          |
| <b>Failure rate [FIT] with low demand rate acc. to SN 31920</b>           | FIT | 100         |
| <b>Product function Mirror contact acc. to IEC 60947-4-1</b>              |     | Yes         |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | y   | 20          |
| <b>Protection against electrical shock</b>                                |     | finger-safe |

#### Mechanical data:

|                          |  |     |
|--------------------------|--|-----|
| <b>Size of contactor</b> |  | S00 |
|--------------------------|--|-----|

#### Ambient conditions:

|  |    |             |
|--|----|-------------|
| <b>Installation altitude at height above sea level maximum</b> | m  | 2 000       |
| <b>Ambient temperature</b>                                     |    |             |
| • during operation   | °C | -25 ... +60 |
| • during storage   | °C | -55 ... +80 |

#### Certificates/ approvals:

|                          |                                       |                           |
|--------------------------|---------------------------------------|---------------------------|
| General Product Approval | Functional Safety/Safety of Machinery | Declaration of Conformity |
|--------------------------|---------------------------------------|---------------------------|



[Type Examination](#)



|                   |                   |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                   |       |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



[Confirmation](#)

[Environmental Confirmations](#)

|       |
|-------|
| other |
|-------|



### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<http://www.siemens.com/industrymall>

**Cax online generator**

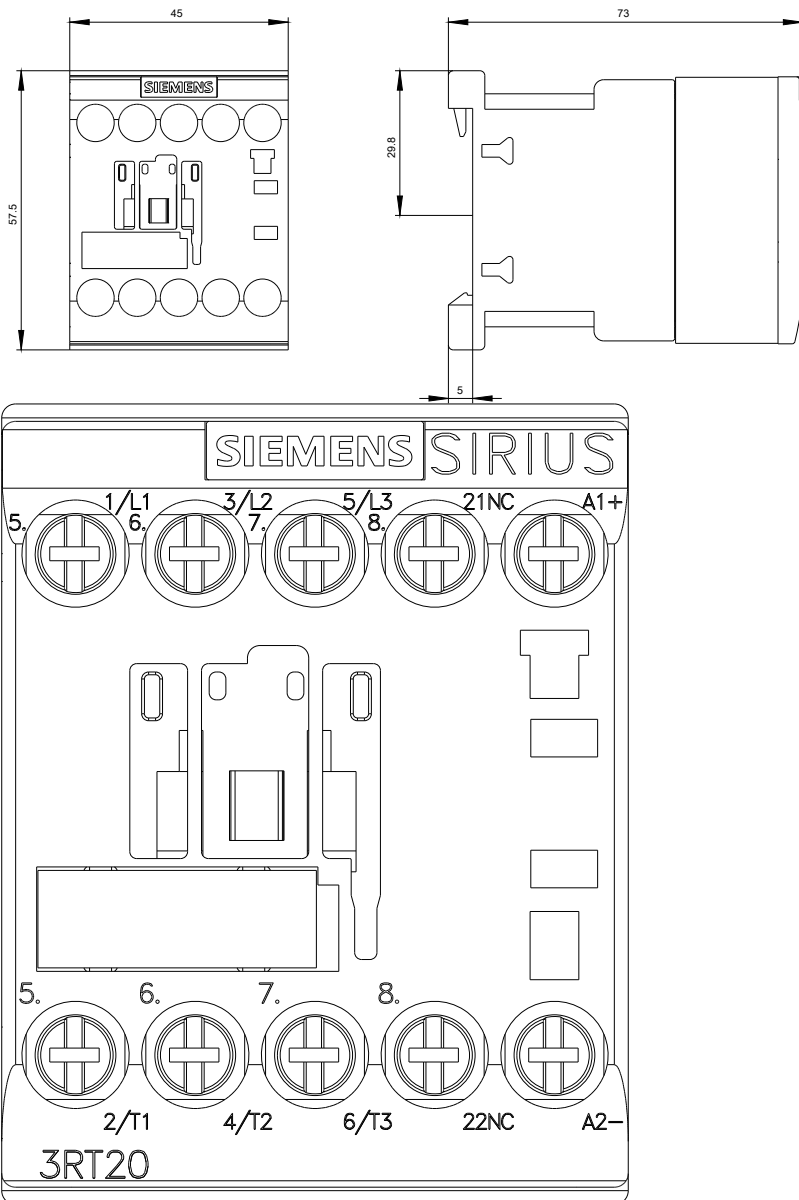
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RT20151BB42>

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

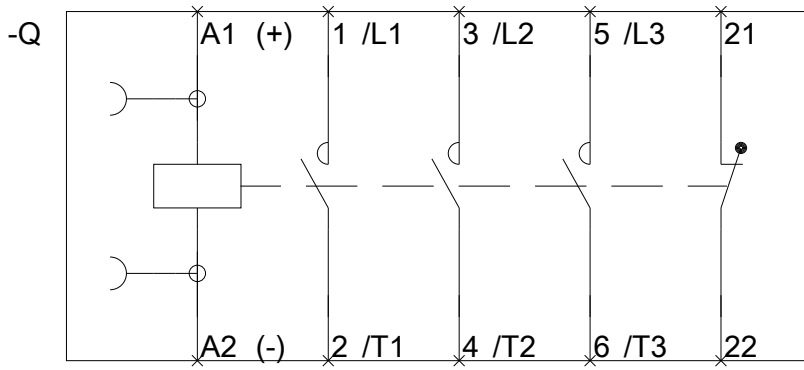
<http://support.automation.siemens.com/WW/view/en/3RT20151BB42/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RT20151BB42&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RT20151BB42&lang=en)







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