



contactor AC-1, 50 A, 400 V / 40 °C, 4-pole, 24 V DC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

|   |                          |
|---|--------------------------|
| <b>product brand name</b>   | SIRIUS                   |
| <b>product designation</b>  | Contacteur               |
| <b>product type designation</b>   | 3RT23                    |
| <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</b>                          |                          |
| • at AC in hot operating state  | 12 W                     |
| • at AC in hot operating state per pole                                       | 3 W                      |
| • without load current share typical  | 5.9 W                    |
| <b>type of calculation of power loss depending on pole</b>                    | quadratic                |
| <b>insulation voltage</b>   |                          |
| • of main circuit with degree of pollution 3 rated value                      | 690 V                    |
| • of the auxiliary and control circuit with degree of pollution 3 rated value | 690 V                    |
| <b>surge voltage resistance</b>   |                          |
| • of main circuit rated value   | 6 kV                     |
| • of auxiliary circuit rated value  | 6 kV                     |
| <b>shock resistance at rectangular impulse</b>                                |                          |
| • at DC   | 10g / 5 ms, 7,5g / 10 ms |
| <b>shock resistance with sine pulse</b>                                       |                          |
| • at DC   | 15g / 5 ms, 10g / 10 ms  |
| <b>mechanical service life (operating cycles)</b>                             |                          |
| • of contactor typical  | 10 000 000               |
| • of the contactor with added auxiliary switch block typical                  | 10 000 000               |
| <b>reference code according to IEC 81346-2</b>                                | Q                        |
| <b>Substance Prohibition (Date)</b>   | 10/01/2009               |
| <b>Weight</b>   | 0.66 kg                  |
| <b>Ambient conditions</b>   |                          |
| installation altitude at height above sea level maximum                       | 2 000 m                  |
| <b>ambient temperature</b>  |                          |
| • during operation  | -25 ... +60 °C           |
| • during storage  | -55 ... +80 °C           |
| <b>relative humidity minimum</b>  | 10 %                     |
| <b>relative humidity at 55 °C according to IEC 60068-2-30 maximum</b>         | 95 %                     |
| <b>Environmental footprint</b>  |                          |
| Environmental Product Declaration (EPD)                                       | Yes                      |
| global warming potential [CO <sub>2</sub> eq] total                           | 293 kg                   |

|   |                                       |
|---|---------------------------------------|
| global warming potential [CO2 eq] during manufacturing  | 3.36 kg                               |
| global warming potential [CO2 eq] during operation  | 290 kg                                |
| global warming potential [CO2 eq] after end of life   | -0.566 kg                             |
| <b>Main circuit</b>   |                                       |
| <b>number of poles for main current circuit</b>   | 4                                     |
| <b>number of NO contacts for main contacts</b>  | 4                                     |
| <b>type of voltage for main current circuit</b>   | AC                                    |
| <b>operational current</b>  |                                       |
| <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> </ul> </li> </ul>   | 15.5 A                                |
| <ul style="list-style-type: none"> <li>● at AC-4 at 400 V rated value</li> </ul>  | 15.5 A                                |
| minimum cross-section in main circuit at maximum AC-1 rated value   | 10 mm <sup>2</sup>                    |
| <b>operational current</b>  |                                       |
| <ul style="list-style-type: none"> <li>● <b>at 1 current path at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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> </ul> </li> </ul>                      | 42 A<br>20 A<br>4.5 A<br>1 A<br>0.4 A |
| <ul style="list-style-type: none"> <li>● <b>with 2 current paths in series at DC-1</b> <ul style="list-style-type: none"> <li>— at 24 V rated value</li> <li>— at 60 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> </ul> </li> </ul>         | 42 A<br>42 A<br>42 A<br>1 A<br>1 A    |
| <ul style="list-style-type: none"> <li>● <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 60 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> </ul> </li> </ul>         | 42 A<br>42 A<br>42 A<br>42 A<br>2.9 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 60 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> </ul> </li> </ul>              | 20 A<br>5 A<br>2.5 A<br>1 A<br>0.09 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 60 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> </ul> </li> </ul> | 42 A<br>42 A<br>15 A<br>3 A<br>0.27 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 60 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> </ul> </li> </ul> | 42 A<br>42 A<br>42 A<br>10 A<br>0.6 A |
| <b>operating power</b>  |                                       |
| <ul style="list-style-type: none"> <li>● at AC-3 at 400 V rated value</li> <li>● at AC-4 at 400 V rated value</li> </ul>  | 7.5 kW<br>7.5 kW                      |
| <b>no-load switching frequency</b>  |                                       |
| <ul style="list-style-type: none"> <li>● at DC</li> </ul>   | 1 500 1/h                             |

|   |  |
|---|--|
| operating frequency at AC-1 maximum   | 1 000 1/h  |
| <b>Control circuit/ Control</b>   |  |
| <b>type of voltage</b>  | DC   |
| <b>type of voltage of the control supply voltage</b>  | DC   |
| <b>control supply voltage at DC rated value</b>   | 24 V   |
| <b>operating range factor control supply voltage rated value of magnet coil at DC</b>                     |  |
| • initial value   | 0.8  |
| • full-scale value  | 1.1  |
| <b>closing power of magnet coil at DC</b>   | 5.9 W  |
| <b>holding power of magnet coil at DC</b>   | 5.9 W  |
| <b>closing delay</b>  |  |
| • at DC   | 50 ... 170 ms  |
| <b>opening delay</b>  |  |
| • at DC   | 15 ... 18 ms   |
| <b>arcing time</b>  | 10 ... 10 ms   |
| <b>control version of the switch operating mechanism</b>  | Standard A1 - A2   |
| <b>Auxiliary circuit</b>  |  |
| <b>number of NC contacts for auxiliary contacts</b>   | 1  |
| • attachable  | 2  |
| • instantaneous contact   | 1  |
| <b>number of NO contacts for auxiliary contacts</b>   | 1  |
| • attachable  | 2  |
| • 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 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>contact rating of auxiliary contacts according to UL</b>   | A600 / Q600  |
| <b>Category Control Number (CCN)</b>  | E31519 (NLDX, NLDX7)   |
| <b>Short-circuit protection</b>   |  |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V | C characteristic: 10 A; 0.4 kA   |
| <b>design of the fuse link</b>  |  |
| • for short-circuit protection of the main circuit  |  |
| — with type of coordination 1 required  | gG: 63 A (690 V, 100 kA)   |
| — with type of coordination 2 required  | gG: 20 A (690 V, 100 kA)   |
| • for short-circuit protection of the auxiliary switch required   | gG: 10 A (690 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 |
| fastening method side-by-side mounting  | Yes  |

|  |  |
|--|--|
| <b>fastening method</b>  | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| <b>height</b>  | 85 mm  |
| <b>width</b>   | 60 mm  |
| <b>depth</b>   | 107 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 10 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>● for grounded parts <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— upwards 10 mm</li> <li>— at the side 6 mm</li> <li>— downwards 10 mm</li> </ul> </li> <li>● for live parts <ul style="list-style-type: none"> <li>— forwards 10 mm</li> <li>— upwards 10 mm</li> <li>— downwards 10 mm</li> <li>— at the side 6 mm</li> </ul> </li> </ul> |  |

### Connections/ Terminals

|  |           |
|--|-----------|
| <b>type of electrical connection</b>   |           |
| <ul style="list-style-type: none"> <li>● for main current circuit screw-type terminals</li> <li>● for auxiliary and control circuit screw-type terminals</li> <li>● at contactor for auxiliary contacts Screw-type terminals</li> <li>● of magnet coil Screw-type terminals</li> </ul>   |           |
| <b>type of connectable conductor cross-sections</b>  |           |
| <ul style="list-style-type: none"> <li>● for main contacts <ul style="list-style-type: none"> <li>— solid 2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)</li> <li>— solid or stranded 2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></li> </ul> </li> <li>● for AWG cables for main contacts 2x (16 ... 12), 2x (14 ... 8)</li> </ul>   |           |
| <b>connectable conductor cross-section for main contacts</b>   |           |
| <ul style="list-style-type: none"> <li>● solid 1 ... 10 mm<sup>2</sup></li> <li>● solid or stranded 1 ... 10 mm<sup>2</sup></li> <li>● stranded 1 ... 10 mm<sup>2</sup></li> <li>● finely stranded with core end processing 1 ... 10 mm<sup>2</sup></li> </ul>   |           |
| <b>connectable conductor cross-section for auxiliary contacts</b>  |           |
| <ul style="list-style-type: none"> <li>● solid or stranded 0.5 ... 2.5 mm<sup>2</sup></li> <li>● finely stranded with core end processing 0.5 ... 2.5 mm<sup>2</sup></li> </ul>  |           |
| <b>type of connectable conductor cross-sections</b>  |           |
| <ul style="list-style-type: none"> <li>● for auxiliary contacts <ul style="list-style-type: none"> <li>— solid 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> <li>— solid or stranded 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>), 2x (0.75 ... 2.5 mm<sup>2</sup>)</li> </ul> </li> <li>● for AWG cables for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14)</li> </ul> |           |
| <b>AWG number as coded connectable conductor cross section for main contacts</b>   | 16 ... 8  |
| <b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>  | 20 ... 14 |

### Safety related data

|  |  |
|--|--|
| <b>product function</b>  |  |
| <ul style="list-style-type: none"> <li>● mirror contact according to IEC 60947-4-1 Yes</li> <li>● positively driven operation according to IEC 60947-5-1 No</li> </ul> |  |

### Electrical Safety

|  |  |
|--|--|
| <b>protection class IP on the front according to IEC 60529</b> | IP20   |
| <b>touch protection on the front according to IEC 60529</b>    | finger-safe, for vertical contact from the front |

### Communication/ Protocol

|   |    |
|---|----|
| <b>product function bus communication</b> | No |
|---|----|

### Approvals Certificates

|                                 |     |
|---------------------------------|-----|
| <b>General Product Approval</b> | EMV |
|---------------------------------|-----|



Test Certificates

Maritime application

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Maritime application

other

Railway



[Miscellaneous](#)



[Confirmation](#)

[Special Test Certificate](#)

Dangerous goods

Environment

[Transport Information](#)



[Environmental Confirmations](#)

Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RT2327-1BB40>

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2327-1BB40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-1BB40>

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

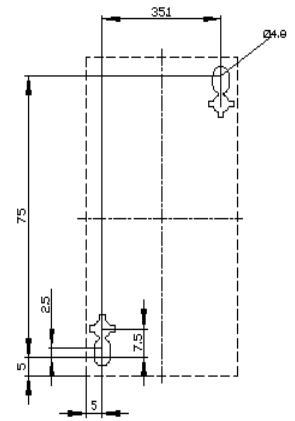
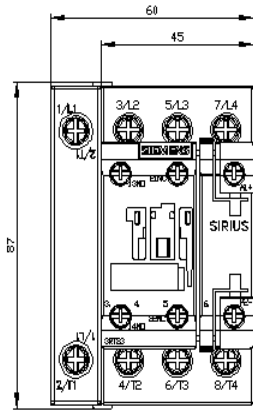
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2327-1BB40&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2327-1BB40&lang=en)

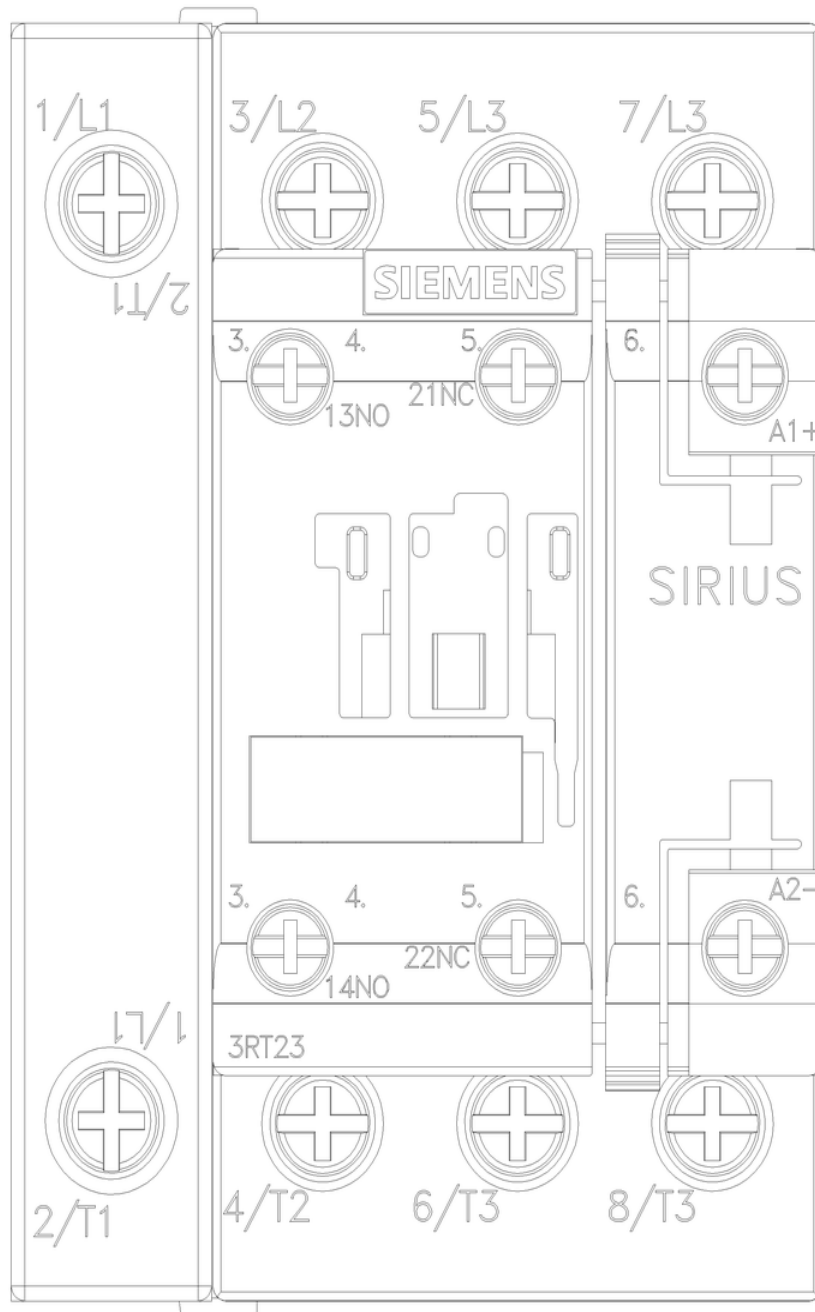
Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

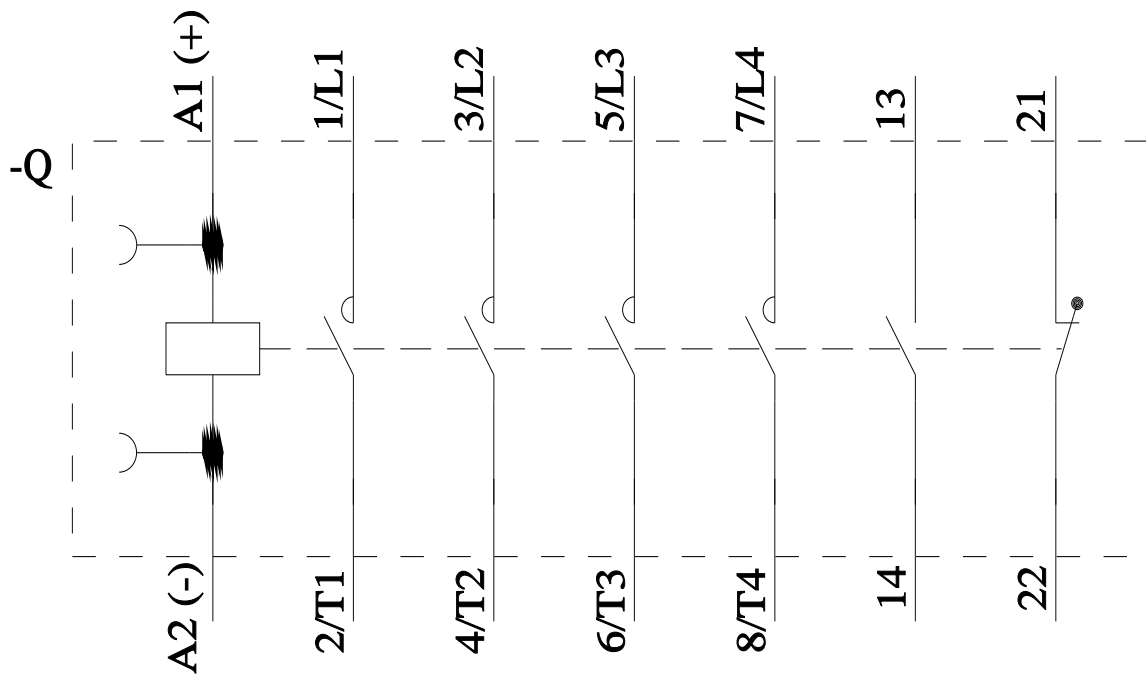
<https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-1BB40/char>

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

<https://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2327-1BB40&objecttype=14&gridview=view1>







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