

REV. COMB., AC3, 5.5KW/ 400V AC230V, 50/60HZ, 3-POLE, SZ S0  
SCREW TERMINAL ELECTR. AND MECH. INTERLOCK 2NO  
INTEGR.



|                                      |  |
|--------------------------------------|--|
| <b>Product brand name</b>            | SIRIUS   |
| <b>Product designation</b>           | Reversing contactor assembly   |
| <b>Product type designation</b>      | 3RA23  |
| <b>Manufacturer's article number</b> | <ul style="list-style-type: none"> <li>• 1 of the supplied contactor <a href="#">3RT2024-1AL20</a></li> <li>• 2 of the supplied contactor <a href="#">3RT2024-1AL20</a></li> <li>• of the supplied RH assembly kit <a href="#">3RA2923-2AA1</a></li> </ul> |

| General technical data   |                           |
|--|---------------------------|
| <b>Size of contactor</b>   | S0                        |
| <b>Product extension</b>   | Yes                       |
| <ul style="list-style-type: none"> <li>• Auxiliary switch</li> </ul>                       |                           |
| <b>Insulation voltage</b>  | 690 V                     |
| <ul style="list-style-type: none"> <li>• with degree of pollution 3 rated value</li> </ul> |                           |
| <b>Degree of pollution</b>   | 3                         |
| <b>Surge voltage resistance rated value</b>  | 6 kV                      |
| <b>Protection class IP</b>   | IP20                      |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                           |                           |
| <b>Shock resistance at rectangular impulse</b>   | 7,5g / 5 ms, 4,7g / 10 ms |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                  |                           |

|  |                            |
|--|----------------------------|
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>  | 10g / 5 ms, 7,5g / 10 ms   |
| <b>Shock resistance with sine pulse</b>  |                            |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>  | 11,8g / 5 ms, 7,4g / 10 ms |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>  | 15g / 5 ms, 10g / 10 ms    |
| <b>Mechanical service life (switching cycles)</b>  |                            |
| <ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>                                       | 10 000 000                 |
| <ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block typical</li> </ul> | 10 000 000                 |
| <b>Equipment marking</b>   |                            |
| <ul style="list-style-type: none"> <li>• acc. to DIN EN 81346-2</li> </ul>                                     | Q                          |

### Ambient conditions

|  |                |
|--|----------------|
| <b>Ambient temperature</b>   |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | -25 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | -55 ... +80 °C |

### Main circuit

|  |               |
|--|---------------|
| <b>Number of poles for main current circuit</b>  | 3             |
| <b>Number of NO contacts for main contacts</b>   | 3             |
| <b>Number of NC contacts for main contacts</b>   | 0             |
| <b>Operating voltage</b>   |               |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>  | 690 V         |
| <b>Operating current</b>   |               |
| <ul style="list-style-type: none"> <li>• at AC-1 at 400 V <ul style="list-style-type: none"> <li>— at ambient temperature 40 °C rated value</li> <li>— at ambient temperature 60 °C rated value</li> </ul> </li> </ul> | 40 A<br>35 A  |
| <ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> </ul>   | 12 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>  | 12 A          |
| <b>Operating 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> </ul> </li> </ul>                                 | 35 A<br>4.5 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> </ul> </li> </ul>                    | 35 A<br>35 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> </ul> </li> </ul>                    | 35 A<br>35 A  |
| <b>Operating 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 |

|  |  |
|--|--|
| <ul style="list-style-type: none"> <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> </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> </ul> </li> </ul> | 35 A<br>15 A<br>35 A<br>35 A                   |
| <b>No-load switching frequency</b>   | 1 500 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>1 000 1/h<br>1 000 1/h<br>300 1/h |

| Control circuit/ Control   |                            |
|--|----------------------------|
| <b>Type of voltage of the control supply voltage</b>   | AC                         |
| <b>Control supply voltage 1 at AC</b> <ul style="list-style-type: none"> <li>at 50 Hz rated value</li> <li>at 60 Hz rated value</li> </ul>                         | 230 V<br>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> <li>at 60 Hz</li> </ul> | 0.8 ... 1.1<br>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>  | 65 V·A                     |
| <b>Inductive power factor with closing power of the coil</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>  | 0.82                       |
| <b>Apparent holding power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>  | 8.5 V·A                    |
| <b>Inductive power factor with the holding power of the coil</b> <ul style="list-style-type: none"> <li>at 50 Hz</li> </ul>  | 0.25                       |

| Auxiliary circuit   |            |
|---|------------|
| <b>Number of NO contacts</b> <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>per direction of rotation</li> <li>instantaneous contact</li> </ul> </li> </ul> | 1<br>2     |
| <b>Operating current of auxiliary contacts at AC-12 maximum</b>   | 10 A       |
| <b>Operating current of auxiliary contacts at AC-15</b> <ul style="list-style-type: none"> <li>at 230 V</li> <li>at 400 V</li> </ul>  | 6 A<br>3 A |
| <b>Operating current of auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>at 24 V</li> </ul>   | 10 A       |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• at 60 V</li> <li>• at 110 V</li> <li>• at 220 V</li> </ul> | <p>2 A</p> <p>1 A</p> <p>0.3 A</p>         |
| <b>Contact reliability of auxiliary contacts</b>  | < 1 error per 100 million operating cycles |

### UL/CSA ratings

|   |  |
|---|--|
| <b>Full-load current (FLA) for three-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>  | <p>11 A</p> <p>11 A</p>  |
| <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 three-phase AC motor <ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul> | <p>1 hp</p> <p>2 hp</p> <p>3 hp</p> <p>7.5 hp</p> <p>10 hp</p> |
| <b>Contact rating of auxiliary contacts according to UL</b>   | A600 / Q600  |

### Short-circuit protection

|   |   |
|---|---|
| <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> | <p>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 63 A</p> <p>gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A</p> <p>fuse gL/gG: 10 A</p> |

### 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   |
| <b>Height</b>  | 101 mm   |
| <b>Width</b>   | 90 mm  |
| <b>Depth</b>   | 97 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>— 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> </ul> </li> </ul> | <p>6 mm</p> <p>0 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p> <p>6 mm</p>  |

|                  |      |
|------------------|------|
| — Backwards      | 0 mm |
| — upwards        | 6 mm |
| — at the side    | 6 mm |
| — downwards      | 6 mm |
| • for live parts |      |
| — forwards       | 6 mm |
| — Backwards      | 0 mm |
| — upwards        | 6 mm |
| — downwards      | 6 mm |
| — at the side    | 6 mm |

## Connections/Terminals

|   |   |
|---|---|
| <b>Type of electrical connection</b>                |   |
| • for main current circuit                          | screw-type terminals  |
| • for auxiliary and control current circuit         | screw-type terminals  |
| <b>Type of connectable conductor cross-sections</b> |   |
| • for main contacts                                 |   |
| — solid   | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )                       |
| — single or multi-stranded                          | 2x (1 ... 2,5 mm <sup>2</sup> ), 2x (2,5 ... 10 mm <sup>2</sup> )                       |
| — 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> |
| • at AWG conductors for main contacts               | 2x (16 ... 12), 2x (14 ... 8)   |
| <b>Type of connectable conductor cross-sections</b> |   |
| • for auxiliary contacts                            |   |
| — single or multi-stranded                          | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )                   |
| — finely stranded with core end processing          | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                   |
| • at AWG conductors for auxiliary contacts          | 2x (20 ... 16), 2x (18 ... 14)  |






## Safety related data






|   |           |
|---|-----------|
| <b>B10 value</b>  |           |
| • 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                                  | 75 %      |
| <b>Failure rate [FIT]</b>   |           |
| • with low demand rate acc. to SN 31920                                   | 100 FIT   |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y      |

## Communication/ Protocol

|   |    |
|---|----|
| <b>Product function Bus communication</b> | No |
| <b>Protocol is supported</b>              |    |
| • AS-interface protocol                   | No |

## Certificates/approvals

|   |   |   |  |  |
|---|---|---|--|--|
| <b>General Product Approval</b>   | <b>Declaration of Conformity</b>  | <b>Test Certificates</b>  | <b>Marine / Shipping</b>                 |  |
| <br>UL |  | <br>EG-Konf. | <a href="#">Special Test Certificate</a> | <br>ABS <br>BUREAU VERITAS |

|   |  |  |   |   |   |
|---|--|--|---|---|---|
| <b>Marine / Shipping</b>  |  |  |   |   | <b>other</b>                                |
| <br>GL | <br>LRS | <br>PRS | <br>RMRS | <br>DNV-GL<br>DNVGL.COM/AF | <a href="#">Environmental Confirmations</a> |

|                              |                                     |
|------------------------------|-------------------------------------|
| <b>other</b>                 | <b>Railway</b>                      |
| <a href="#">Confirmation</a> | <a href="#">Vibration and Shock</a> |

#### Further information

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

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

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2324-8XB30-1AL2>

**Cax online generator**

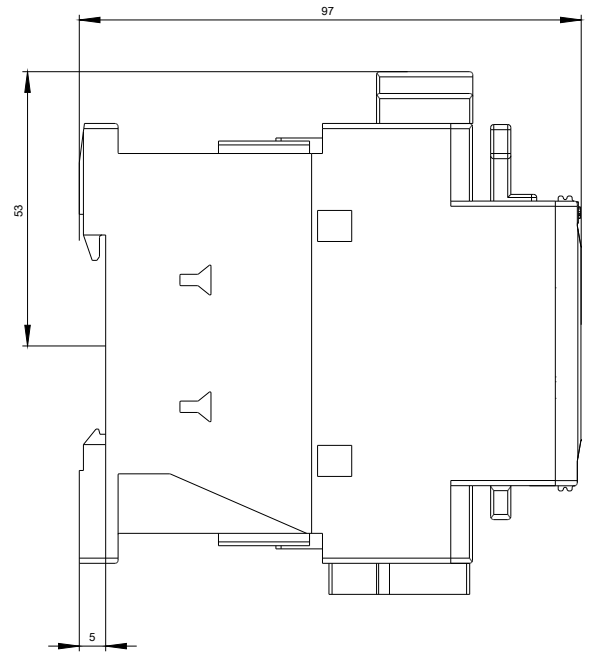
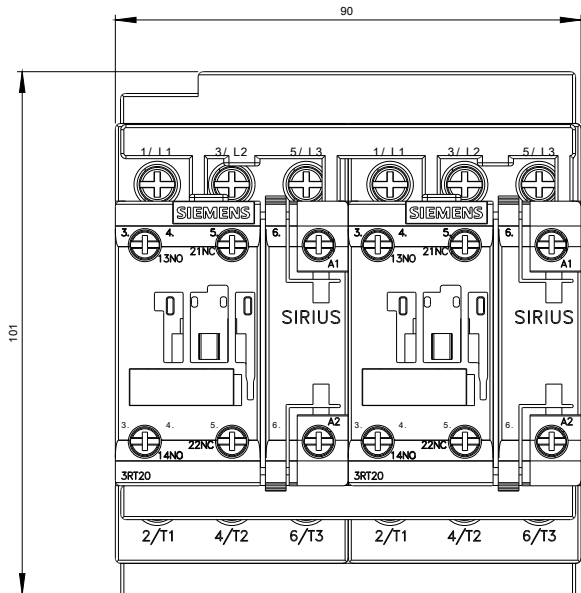
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2324-8XB30-1AL2>

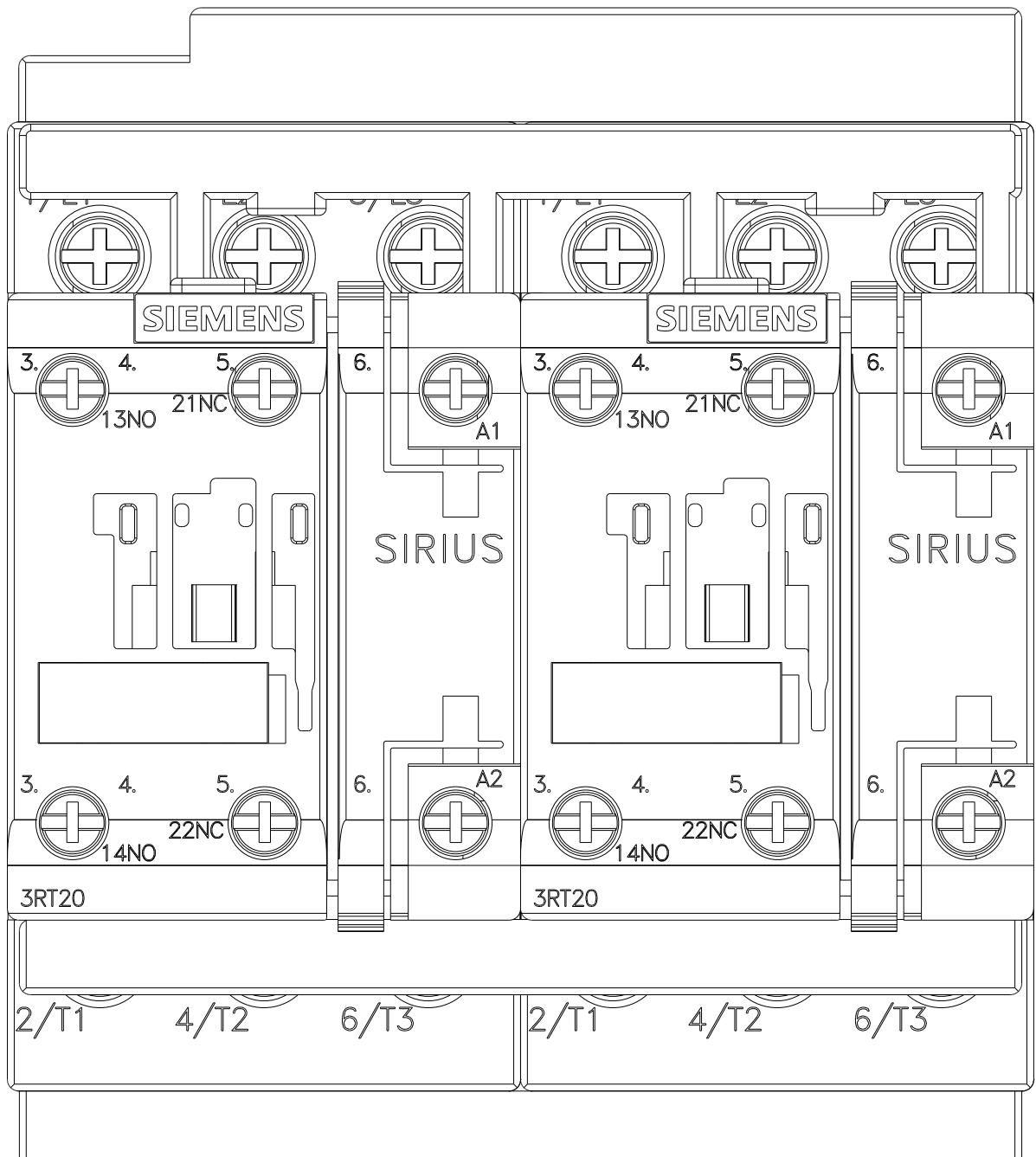
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2324-8XB30-1AL2>

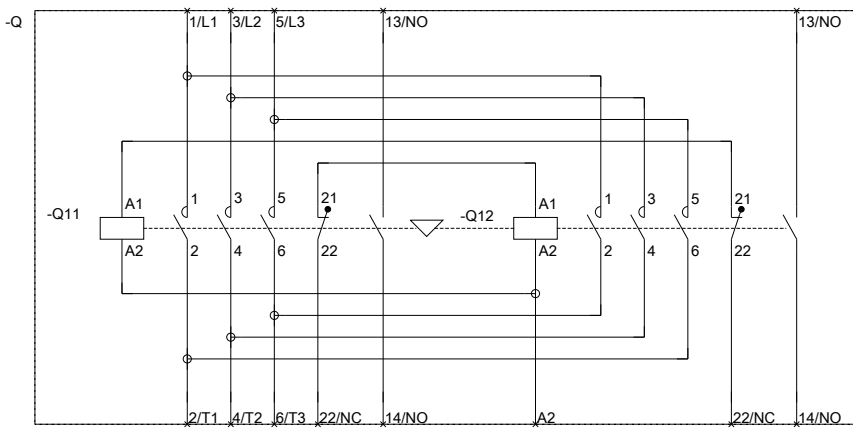
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2324-8XB30-1AL2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2324-8XB30-1AL2&lang=en)





WENDEKOMBINATION BGR. S0



REVERSING COMB. SZ S0

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