

REV. COMB., AC3, 4KW/400V AC24V, 50/60 HZ, 3-POLE, SZ S00  
SCREW TERMINAL ELECTR. AND MECH. INTERLOCK



|                               |                                                                                                                                                                                                                                                            |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product brand name            | SIRIUS                                                                                                                                                                                                                                                     |
| Product designation           | Reversing contactor assembly                                                                                                                                                                                                                               |
| Product type designation      | 3RA23                                                                                                                                                                                                                                                      |
| Manufacturer's article number | <ul style="list-style-type: none"> <li>• 1 of the supplied contactor <a href="#">3RT2016-1AB02</a></li> <li>• 2 of the supplied contactor <a href="#">3RT2016-1AB02</a></li> <li>• of the supplied RH assembly kit <a href="#">3RA2913-2AA1</a></li> </ul> |

| General technical data                  |                                                                                                  |
|-----------------------------------------|--------------------------------------------------------------------------------------------------|
| Size of contactor                       | S00                                                                                              |
| Product extension                       | <ul style="list-style-type: none"> <li>• Auxiliary switch Yes</li> </ul>                         |
| Insulation voltage                      | <ul style="list-style-type: none"> <li>• with degree of pollution 3 rated value 690 V</li> </ul> |
| Degree of pollution                     | 3                                                                                                |
| Surge voltage resistance rated value    | 6 kV                                                                                             |
| Protection class IP                     | <ul style="list-style-type: none"> <li>• on the front IP20</li> </ul>                            |
| Shock resistance at rectangular impulse | <ul style="list-style-type: none"> <li>• at AC 6,7g / 5 ms, 4,2g / 10 ms</li> </ul>              |

|                                                                                                                |                            |
|----------------------------------------------------------------------------------------------------------------|----------------------------|
| <ul style="list-style-type: none"> <li>• at DC</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 |
| <ul style="list-style-type: none"> <li>• at DC</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> </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> <li>• at AC-2 at 400 V rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>                                                                                                                                                  | 18 A<br>16 A<br>7 A<br>9 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> <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> <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> | 20 A<br>2.1 A<br>20 A<br>12 A<br>20 A<br>20 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>0.15 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> | 20 A<br>0.35 A<br><br>20 A<br>20 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>750 1/h<br>750 1/h<br>250 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>                         | 24 V<br>24 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> </ul>                                                        | 27 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>                                              | 0.8                         |
| <b>Apparent holding power of magnet coil at AC</b> <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>                                                        | 4.2 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>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> <li>• at 60 V</li> <li>• at 110 V</li> <li>• at 220 V</li> </ul> | 10 A<br>2 A<br>1 A<br>0.3 A                |
| <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>         |                                                                                                                                      |
| • at 480 V rated value                                          | 7.6 A                                                                                                                                |
| • at 600 V rated value                                          | 9 A                                                                                                                                  |
| <b>Yielded mechanical performance [hp]</b>                      |                                                                                                                                      |
| • for single-phase AC motor                                     |                                                                                                                                      |
| — at 110/120 V rated value                                      | 0.33 hp                                                                                                                              |
| — at 230 V rated value                                          | 1 hp                                                                                                                                 |
| • for three-phase AC motor                                      |                                                                                                                                      |
| — at 200/208 V rated value                                      | 2 hp                                                                                                                                 |
| — at 220/230 V rated value                                      | 3 hp                                                                                                                                 |
| — at 460/480 V rated value                                      | 5 hp                                                                                                                                 |
| — at 575/600 V rated value                                      | 7.5 hp                                                                                                                               |
| <b>Contact rating of auxiliary contacts according to UL</b>     | A600 / Q600                                                                                                                          |
| Short-circuit protection                                        |                                                                                                                                      |
| <b>Design of the fuse link</b>                                  |                                                                                                                                      |
| • for short-circuit protection of the main circuit              |                                                                                                                                      |
| — with type of coordination 1 required                          | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A                                                                                       |
| — with type of assignment 2 required                            | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A                                                                                       |
| • for short-circuit protection of the auxiliary switch required | 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                                                                         |
| <b>Height</b>                                                   | 68 mm                                                                                                                                |
| <b>Width</b>                                                    | 90 mm                                                                                                                                |
| <b>Depth</b>                                                    | 73 mm                                                                                                                                |
| <b>Required spacing</b>                                         |                                                                                                                                      |
| • with side-by-side mounting                                    |                                                                                                                                      |
| — forwards                                                      | 6 mm                                                                                                                                 |
| — Backwards                                                     | 0 mm                                                                                                                                 |
| — upwards                                                       | 6 mm                                                                                                                                 |
| — downwards                                                     | 6 mm                                                                                                                                 |
| — at the side                                                   | 6 mm                                                                                                                                 |
| • for grounded parts                                            |                                                                                                                                      |
| — forwards                                                      | 6 mm                                                                                                                                 |
| — 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 (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>            |
| — single or multi-stranded                          | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x (0,5 ... 4 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 main contacts               | 2x (20 ... 16), 2x (18 ... 14)                                                                         |
| <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

| General Product Approval                                                          |                                                                                   |                                                                                   | Declaration of Conformity                                                         | Test Certificates                                  |                                          |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------|------------------------------------------|
|  |  |  |  | <a href="#">Type Test Certificates/Test Report</a> | <a href="#">Special Test Certificate</a> |
| CSA                                                                               | UL                                                                                |                                                                                   | EG-Konf.                                                                          |                                                    |                                          |

| Marine / Shipping                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| ABS                                                                               | BUREAU VERITAS                                                                    | GL                                                                                | LRS                                                                               | PRS                                                                                 | RMRS                                                                                |

| Marine / Shipping                                                                 | other                                       | Railway                      |                                     |
|-----------------------------------------------------------------------------------|---------------------------------------------|------------------------------|-------------------------------------|
|  | <a href="#">Environmental Confirmations</a> | <a href="#">Confirmation</a> | <a href="#">Vibration and Shock</a> |
| DNV GL                                                                            |                                             |                              |                                     |

#### 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=3RA2316-8XB30-1AB0>

##### Cax online generator

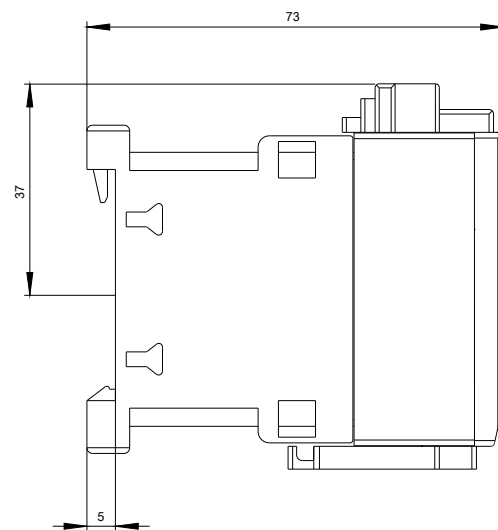
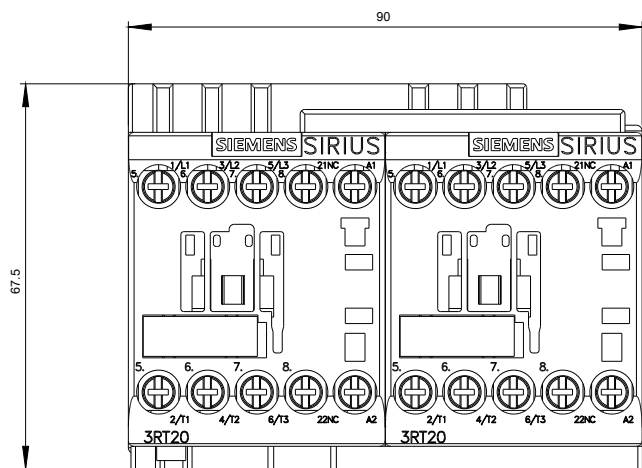
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2316-8XB30-1AB0>

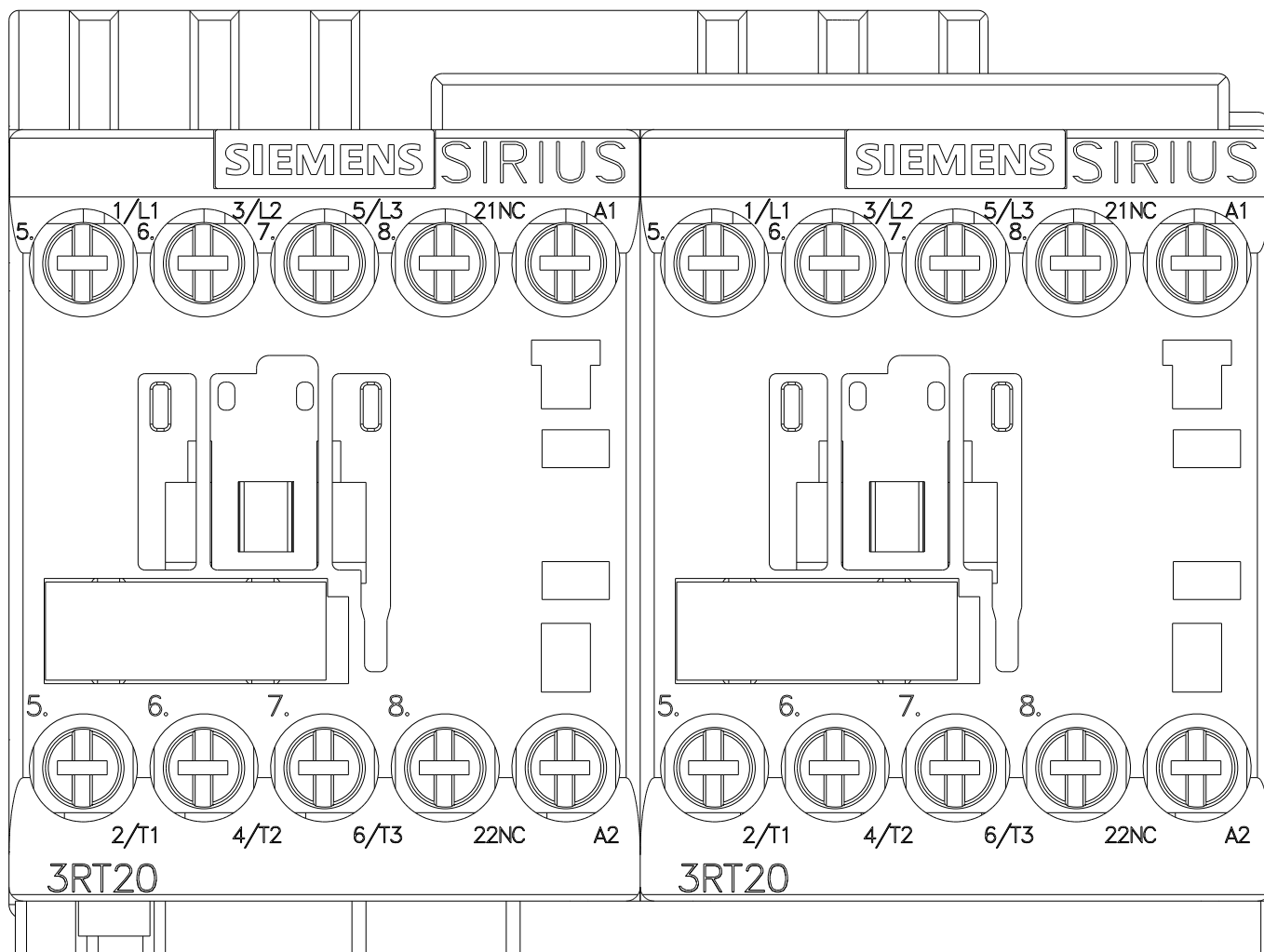
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2316-8XB30-1AB0>

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

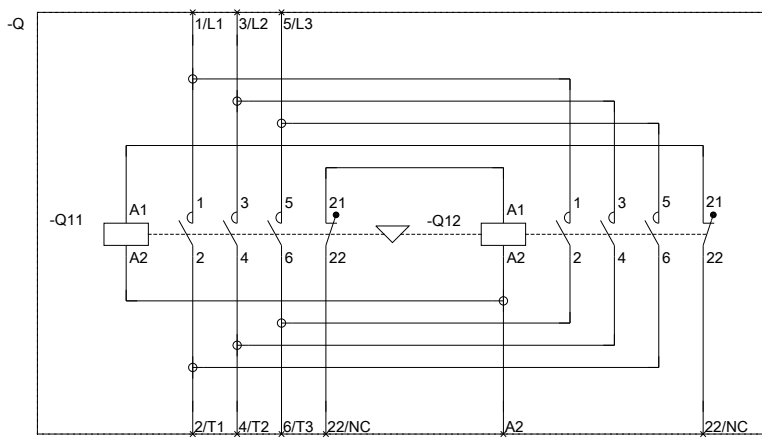
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2316-8XB30-1AB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2316-8XB30-1AB0&lang=en)







WENDEKOMBINATION BGR. S00



REVERSING COMB. SZ S00

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