

Reversing contactor assembly AC-3,7,5 kW/400 V,AC24V,50/60Hz  
3-pole, Size S00 screw terminal electrical and mechanical 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="#">3RT2018-1AB02</a></li> <li>• 2 of the supplied contactor <a href="#">3RT2018-1AB02</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                                                                          | Yes                          |
| <ul style="list-style-type: none"> <li>• Auxiliary switch</li> </ul>                       |                              |
| Insulation voltage                                                                         | 690 V                        |
| <ul style="list-style-type: none"> <li>• with degree of pollution 3 rated value</li> </ul> |                              |
| Degree of pollution                                                                        | 3                            |
| Surge voltage resistance rated value                                                       | 6 kV                         |
| Protection class IP                                                                        | IP20                         |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                           |                              |
| Shock resistance                                                                           | 9.8g / 5 ms and 5.9g / 10 ms |
| Shock resistance at rectangular impulse                                                    |                              |

|                                                              |                            |
|--------------------------------------------------------------|----------------------------|
| • at AC                                                      | 7,3g / 5 ms, 4,7g / 10 ms  |
| • at DC                                                      | 7.3g / 5 ms, 4.7g / 10 ms  |
| <b>Shock resistance with sine pulse</b>                      |                            |
| • at AC                                                      | 11,4g / 5 ms, 7,3g / 10 ms |
| • at DC                                                      | 11,4g / 5 ms, 7,3g / 10 ms |
| <b>Mechanical service life (switching cycles)</b>            |                            |
| • of contactor typical                                       | 10 000 000                 |
| • of the contactor with added auxiliary switch block typical | 10 000 000                 |
| <b>Reference code acc. to DIN EN 81346-2</b>                 | Q                          |

#### Ambient conditions

|                                                        |                |
|--------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b> |                |
| • maximum                                              | 2 000 m        |
| <b>Ambient temperature</b>                             |                |
| • during operation                                     | -25 ... +60 °C |
| • during storage                                       | -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>                        |       |
| • at AC-3 rated value maximum                   | 690 V |
| <b>Operating current</b>                        |       |
| • at AC-1 at 400 V                              |       |
| — at ambient temperature 40 °C rated value      | 22 A  |
| — at ambient temperature 60 °C rated value      | 20 A  |
| • at AC-2 at 400 V rated value                  | 7 A   |
| • at AC-3                                       |       |
| — at 400 V rated value                          | 16 A  |
| <b>Operating current</b>                        |       |
| • at 1 current path at DC-1                     |       |
| — at 24 V rated value                           | 20 A  |
| — at 110 V rated value                          | 2.1 A |
| • with 2 current paths in series at DC-1        |       |
| — at 24 V rated value                           | 20 A  |
| — at 110 V rated value                          | 12 A  |
| • with 3 current paths in series at DC-1        |       |
| — at 24 V rated value                           | 20 A  |
| — at 110 V rated value                          | 20 A  |
| <b>Operating current</b>                        |       |
| • at 1 current path at DC-3 at DC-5             |       |

|                                                  |           |
|--------------------------------------------------|-----------|
| — at 24 V rated value                            | 20 A      |
| — at 110 V rated value                           | 0.15 A    |
| • with 2 current paths in series at DC-3 at DC-5 |           |
| — at 24 V rated value                            | 20 A      |
| — at 110 V rated value                           | 0.35 A    |
| • with 3 current paths in series at DC-3 at DC-5 |           |
| — at 24 V rated value                            | 20 A      |
| — at 110 V rated value                           | 20 A      |
| <b>Operating power</b>                           |           |
| • at AC-2 at 400 V rated value                   | 7.5 kW    |
| • at AC-3                                        |           |
| — at 400 V rated value                           | 7.5 kW    |
| — at 500 V rated value                           | 7.5 kW    |
| — at 690 V rated value                           | 7.5 kW    |
| • at AC-4 at 400 V rated value                   | 5.5 kW    |
| <b>No-load switching frequency</b>               | 1 500 1/h |
| <b>Operating frequency</b>                       |           |
| • at AC-1 maximum                                | 1 000 1/h |
| • at AC-2 maximum                                | 1 000 1/h |
| • at AC-3 maximum                                | 1 000 1/h |
| • at AC-4 maximum                                | 300 1/h   |

|                                                                                       |              |
|---------------------------------------------------------------------------------------|--------------|
| <b>Control circuit/ Control</b>                                                       |              |
| <b>Type of voltage of the control supply voltage</b>                                  | AC           |
| <b>Control supply voltage 1 at AC</b>                                                 |              |
| • at 50 Hz rated value                                                                | 24 V         |
| • at 60 Hz rated value                                                                | 24 V         |
| <b>Operating range factor control supply voltage rated value of magnet coil at AC</b> |              |
| • at 50 Hz                                                                            | 0.8 ... 1.1  |
| • at 60 Hz                                                                            | 0.85 ... 1.1 |
| <b>Apparent pick-up power of magnet coil at AC</b>                                    |              |
| • at 50 Hz                                                                            | 37 V·A       |
| <b>Inductive power factor with closing power of the coil</b>                          |              |
| • at 50 Hz                                                                            | 0.8          |
| <b>Apparent holding power of magnet coil at AC</b>                                    |              |
| • at 50 Hz                                                                            | 5.7 V·A      |
| <b>Inductive power factor with the holding power of the coil</b>                      |              |
| • at 50 Hz                                                                            | 0.28         |

#### 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>         |                                            |
| • at 230 V                                                      | 6 A                                        |
| • at 400 V                                                      | 3 A                                        |
| <b>Operating current of auxiliary contacts at DC-13</b>         |                                            |
| • at 24 V                                                       | 10 A                                       |
| • at 60 V                                                       | 2 A                                        |
| • at 110 V                                                      | 1 A                                        |
| • at 220 V                                                      | 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                                      | 14 A        |
| • at 600 V rated value                                      | 11 A        |
| <b>Yielded mechanical performance [hp]</b>                  |             |
| • for single-phase AC motor                                 |             |
| — at 110/120 V rated value                                  | 1 hp        |
| — at 230 V rated value                                      | 2 hp        |
| • for three-phase AC motor                                  |             |
| — at 200/208 V rated value                                  | 3 hp        |
| — at 220/230 V rated value                                  | 5 hp        |
| — at 460/480 V rated value                                  | 10 hp       |
| — at 575/600 V rated value                                  | 10 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                          | gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 50 A |
| — with type of assignment 2 required                            | gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 25 A |
| • for short-circuit protection of the auxiliary switch required | fuse 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   |

|                                                                    |      |
|--------------------------------------------------------------------|------|
| T1 value for proof test interval or service life acc. to IEC 61508 | 20 y |
|--------------------------------------------------------------------|------|

| Communication/ Protocol                                 |    |
|---------------------------------------------------------|----|
| Product function Bus communication                      | No |
| Protocol is supported                                   | No |
| • AS-Interface protocol                                 |    |
| Product function Control circuit interface with IO link | No |

### Certificates/ approvals

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

| Test Certificates                                  | Marine / Shipping                                                                                   |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| <a href="#">Type Test Certificates/Test Report</a> | <br>ABS            |
|                                                    | <br>BUREAU VERITAS |
|                                                    | <br>LRS            |
|                                                    | <br>PRS          |
|                                                    | <br>RINA         |

| Marine / Shipping                                                                           | other                                                                                                         | Railway                                                             |
|---------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|
| <br>RMRS | <br>DNV-GL<br>DNVGL.COM/AF | <a href="#">Confirmation</a><br><a href="#">Vibration and Shock</a> |

### Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2318-8XB30-1AB0>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2318-8XB30-1AB0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2318-8XB30-1AB0>

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

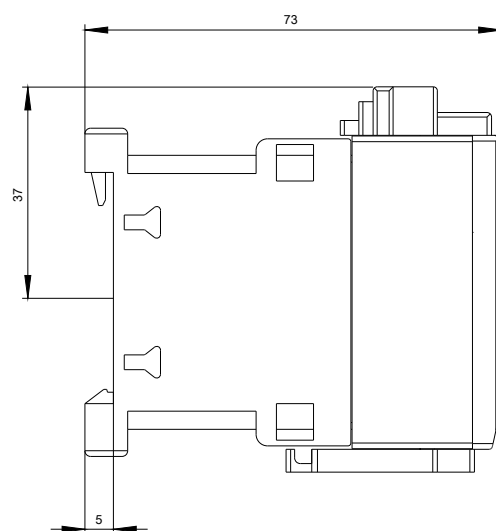
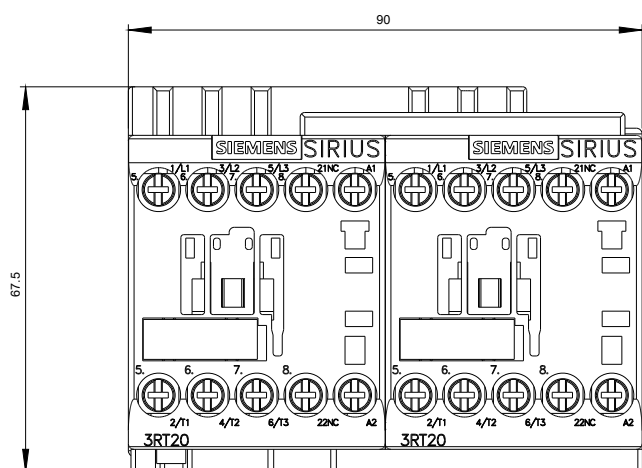
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2318-8XB30-1AB0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2318-8XB30-1AB0&lang=en)

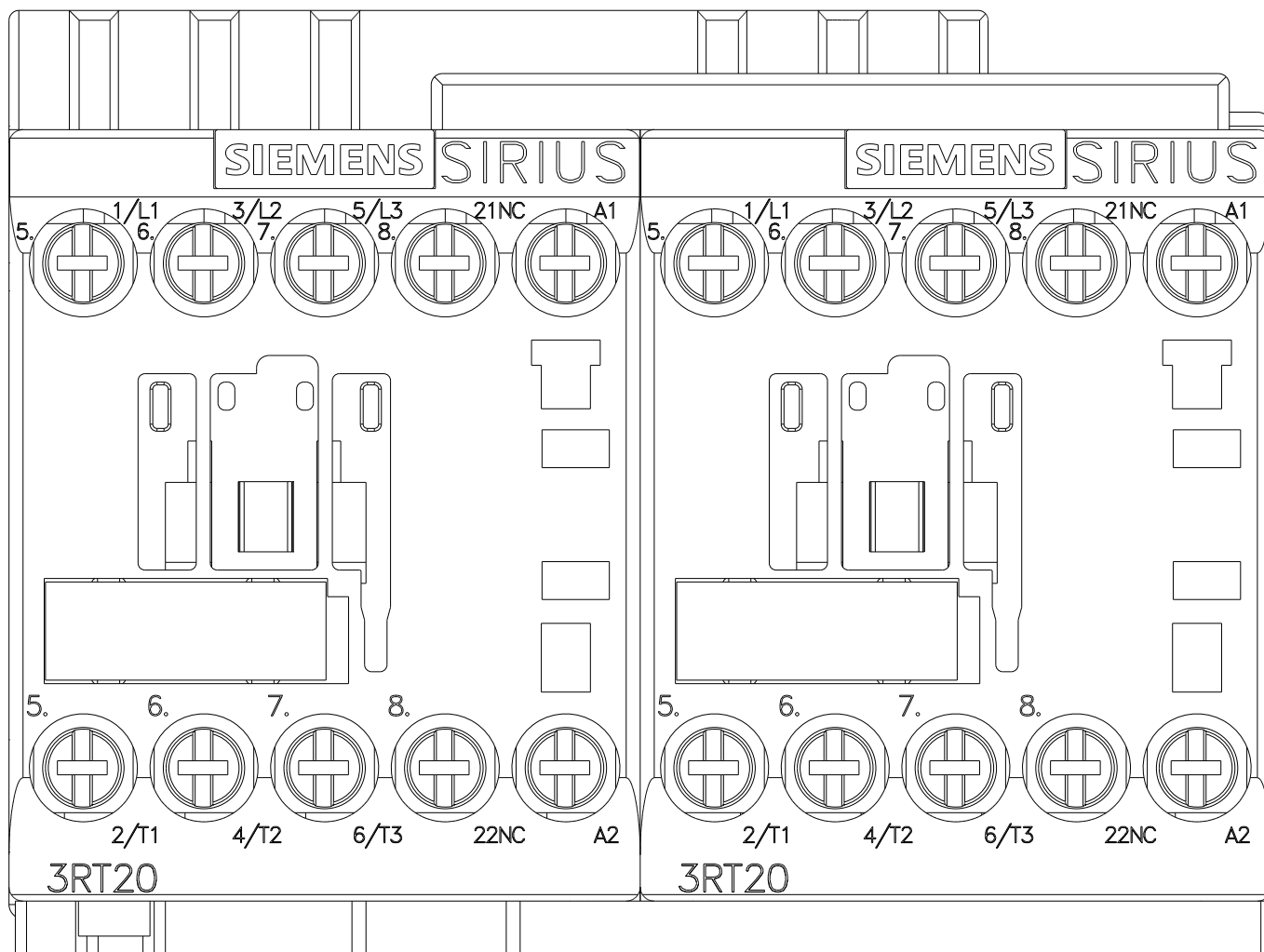
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2318-8XB30-1AB0/char>

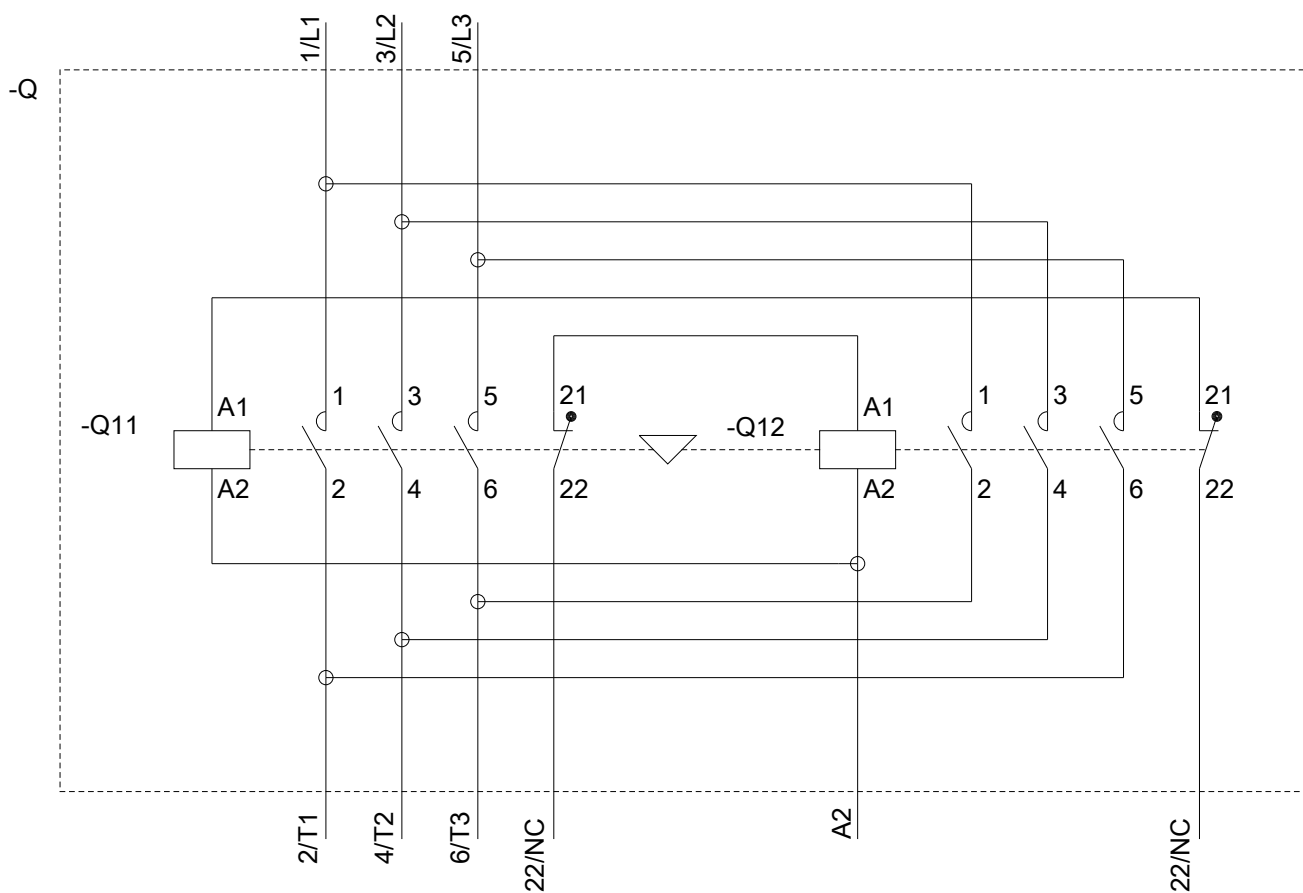
Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2318-8XB30-1AB0&objecttype=14&gridview=view1>









last modified:

08/01/2019