

Contactor assembly for star-delta (wye-delta) start AC-3, 15/18.5 kW/400 V 110 V AC, 50/60 Hz, 3-pole Size S0, Spring-type terminal electrical and mechanical interlock 3 NO + 3 NC integrated



|                               |                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product brand name            | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Product designation           | Contactor assembly for star-delta (wye-delta) start                                                                                                                                                                                                                                                                                                                                                                             |
| Product type designation      | 3RA24                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Manufacturer's article number | <ul style="list-style-type: none"> <li>• 1 of the supplied contactor <a href="#">3RT2026-2AG20</a></li> <li>• 2 of the supplied contactor <a href="#">3RT2026-2AG20</a></li> <li>• 3 of the supplied contactor <a href="#">3RT2024-2AG20</a></li> <li>• of the supplied RS assembly kit <a href="#">3RA2923-2BB2</a></li> <li>• of the supplied function module for wye-delta circuits <a href="#">3RA2816-0EW20</a></li> </ul> |

| General technical data                                                                           |       |
|--------------------------------------------------------------------------------------------------|-------|
| Size of contactor                                                                                | S0    |
| Product extension                                                                                | No    |
| <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 at AC rated value</li> </ul> |       |
| Degree of pollution                                                                              | 3     |
| Surge voltage resistance rated value                                                             | 6 kV  |
| Protection class IP                                                                              |       |

|                                                              |                               |
|--------------------------------------------------------------|-------------------------------|
| • on the front                                               | IP20                          |
| <b>Shock resistance</b>                                      | 12.5g / 5 ms and 7.8g / 10 ms |
| <b>Shock resistance at rectangular impulse</b>               |                               |
| • at AC                                                      | 7,5g / 5 ms, 4,7g / 10 ms     |
| • at DC                                                      | 10g / 5 ms, 7,5g / 10 ms      |
| <b>Shock resistance with sine pulse</b>                      |                               |
| • at AC                                                      | 11,8g / 5 ms, 7,4g / 10 ms    |
| • at DC                                                      | 15g / 5 ms, 10g / 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      | 40 A      |
| — at ambient temperature 60 °C rated value      | 35 A      |
| • at AC-2 at 400 V rated value                  | 32 A      |
| • at AC-3                                       |           |
| — at 400 V rated value                          | 40 A      |
| <b>Operating power</b>                          |           |
| • at AC-2 at 400 V rated value                  | 15 kW     |
| • at AC-3                                       |           |
| — at 400 V rated value                          | 15 kW     |
| — at 500 V rated value                          | 19 kW     |
| — at 690 V rated value                          | 19 kW     |
| • at AC-4 at 400 V rated value                  | 3.5 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   |

#### Control circuit/ Control

|                                                                                       |             |
|---------------------------------------------------------------------------------------|-------------|
| <b>Type of voltage of the control supply voltage</b>                                  | AC          |
| <b>Control supply voltage 1 at AC</b>                                                 |             |
| • at 50 Hz rated value                                                                | 110 V       |
| • at 60 Hz rated value                                                                | 110 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                                                                            | 0.8 ... 1.1 |
| <b>Apparent pick-up power of magnet coil at AC</b>                                    |             |
| • at 50 Hz                                                                            | 164 V·A     |
| • at 60 Hz                                                                            | 160 V·A     |
| <b>Inductive power factor with closing power of the coil</b>                          |             |
| • at 50 Hz                                                                            | 0.72        |
| • at 60 Hz                                                                            | 0.74        |
| <b>Apparent holding power of magnet coil at AC</b>                                    |             |
| • at 50 Hz                                                                            | 23 V·A      |
| • at 60 Hz                                                                            | 19 V·A      |
| <b>Inductive power factor with the holding power of the coil</b>                      |             |
| • at 50 Hz                                                                            | 0.25        |
| • at 60 Hz                                                                            | 0.28        |

#### Auxiliary circuit

|                                                                 |                                            |
|-----------------------------------------------------------------|--------------------------------------------|
| <b>Number of NC contacts for auxiliary contacts</b>             |                                            |
| • instantaneous contact                                         | 3                                          |
| <b>Number of NO contacts for auxiliary contacts</b>             |                                            |
| • instantaneous contact                                         | 3                                          |
| <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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| Contact rating of auxiliary contacts according to UL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 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>                                                                                                                                                                                                                                     | gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 100 A<br>gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A<br>fuse gG: 10 A                                 |
| Installation/ mounting/ dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                      |
| Mounting position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| Mounting type                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | screw and snap-on mounting onto 35 mm standard mounting rail                                                                         |
| Height                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 114 mm                                                                                                                               |
| Width                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 135 mm                                                                                                                               |
| Depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 171 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> <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> | 6 mm<br>0 mm<br>6 mm<br>6 mm<br>6 mm<br><br>6 mm<br>0 mm<br>6 mm<br>6 mm<br>6 mm<br><br>6 mm<br>0 mm<br>6 mm<br>6 mm<br>6 mm         |
| 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>                                                                                                                                                                                                                                                                                                                                                                                                               | spring-loaded terminals<br>spring-loaded terminals                                                                                   |
| Type of connectable conductor cross-sections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                      |

|                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                         |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid</li> <li>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG conductors for main contacts</li> </ul>                                              | 2x (1 ... 10 mm <sup>2</sup> )<br>2x (1 ... 10 mm <sup>2</sup> )<br>2x (1 ... 6 mm <sup>2</sup> )<br>2x (1 ... 6 mm <sup>2</sup> )<br><br>1x (18 ... 8) |
| <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>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG conductors for auxiliary contacts</li> </ul> | 2x (0,5 ... 2,5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br><br>2x (20 ... 14)                       |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                         |
| <b>B10 value</b> <ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                                                                                                 | 1 000 000                                                                                                                                               |
| <b>Proportion of dangerous failures</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                         | 40 %<br>75 %                                                                                                                                            |
| <b>Failure rate [FIT]</b> <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                                                                                         | 100 FIT                                                                                                                                                 |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                                                                                                                                                                                                                                                                   | 20 y                                                                                                                                                    |
| <b>Communication/ Protocol</b>                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                         |
| <b>Product function Bus communication</b>                                                                                                                                                                                                                                                                                                                                   | No                                                                                                                                                      |
| <b>Protocol is supported</b> <ul style="list-style-type: none"> <li>• AS-Interface protocol</li> </ul>                                                                                                                                                                                                                                                                      | No                                                                                                                                                      |
| <b>Product function Control circuit interface with IO link</b>                                                                                                                                                                                                                                                                                                              | No                                                                                                                                                      |
| <b>Certificates/ approvals</b>                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                         |

|                          |                           |                   |                   |
|--------------------------|---------------------------|-------------------|-------------------|
| General Product Approval | Declaration of Conformity | Test Certificates | Marine / Shipping |
|--------------------------|---------------------------|-------------------|-------------------|



[Miscellaneous](#)

[Special Test Certificate](#)



|                   |       |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



LRS



PRS



RINA



RMRS



DNVGL.COM/AF

[Confirmation](#)

|         |
|---------|
| Railway |
|---------|

[Vibration and Shock](#)

#### Further information

**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=3RA2425-8XF32-2AG2>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2425-8XF32-2AG2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2425-8XF32-2AG2>

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

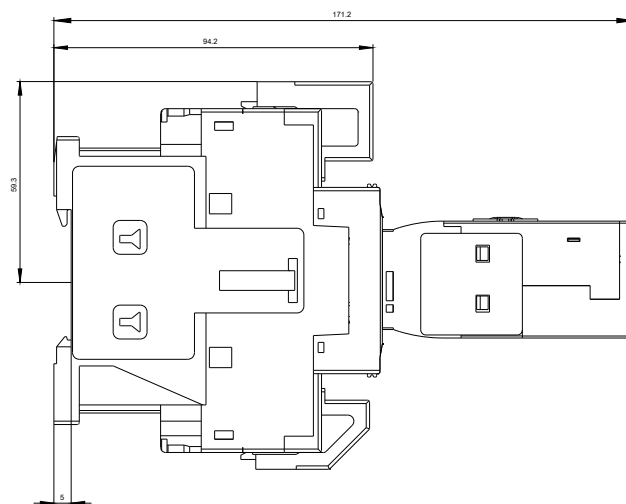
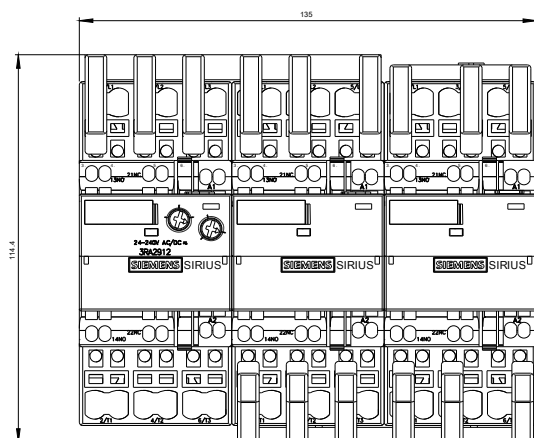
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2425-8XF32-2AG2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2425-8XF32-2AG2&lang=en)

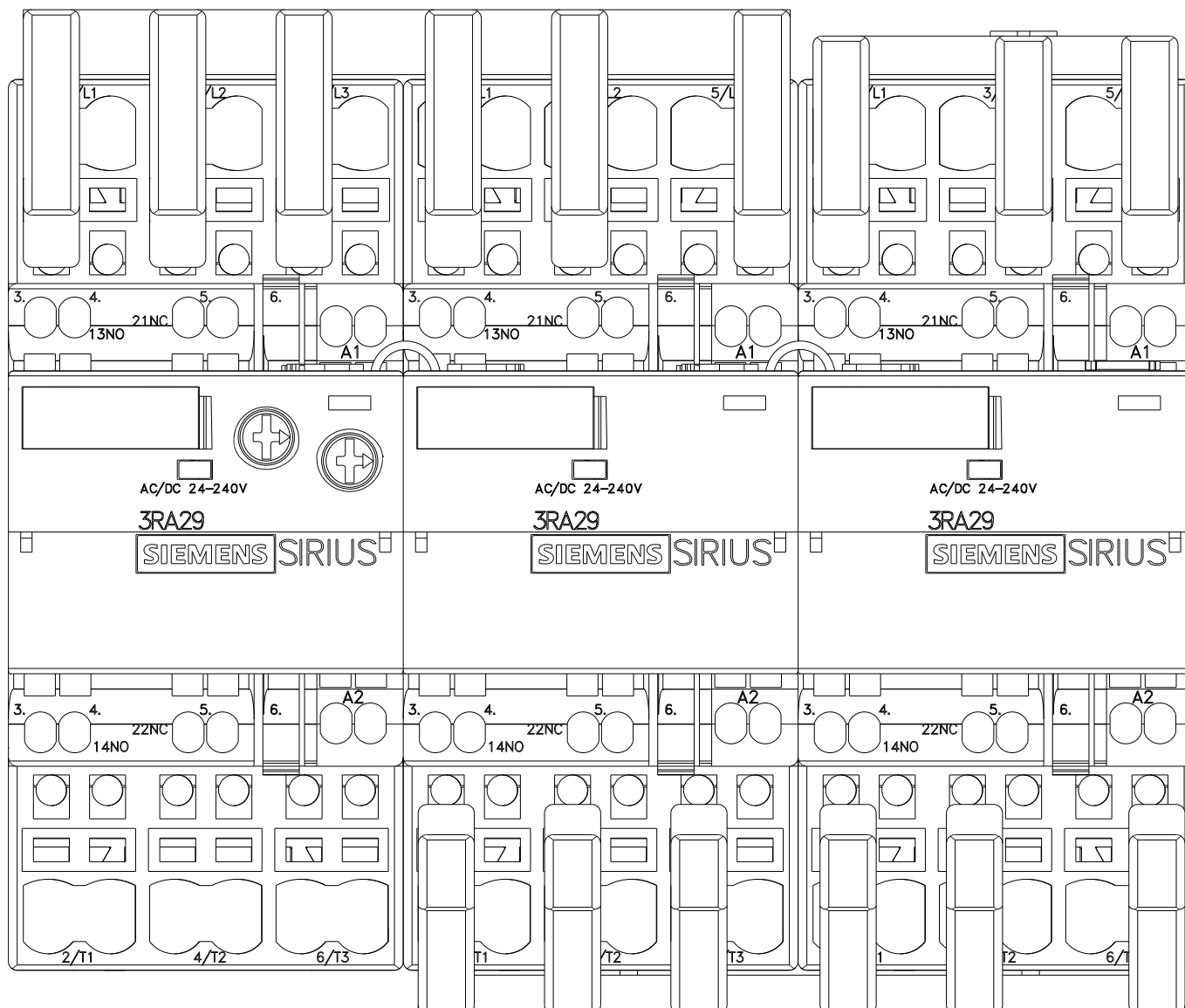
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

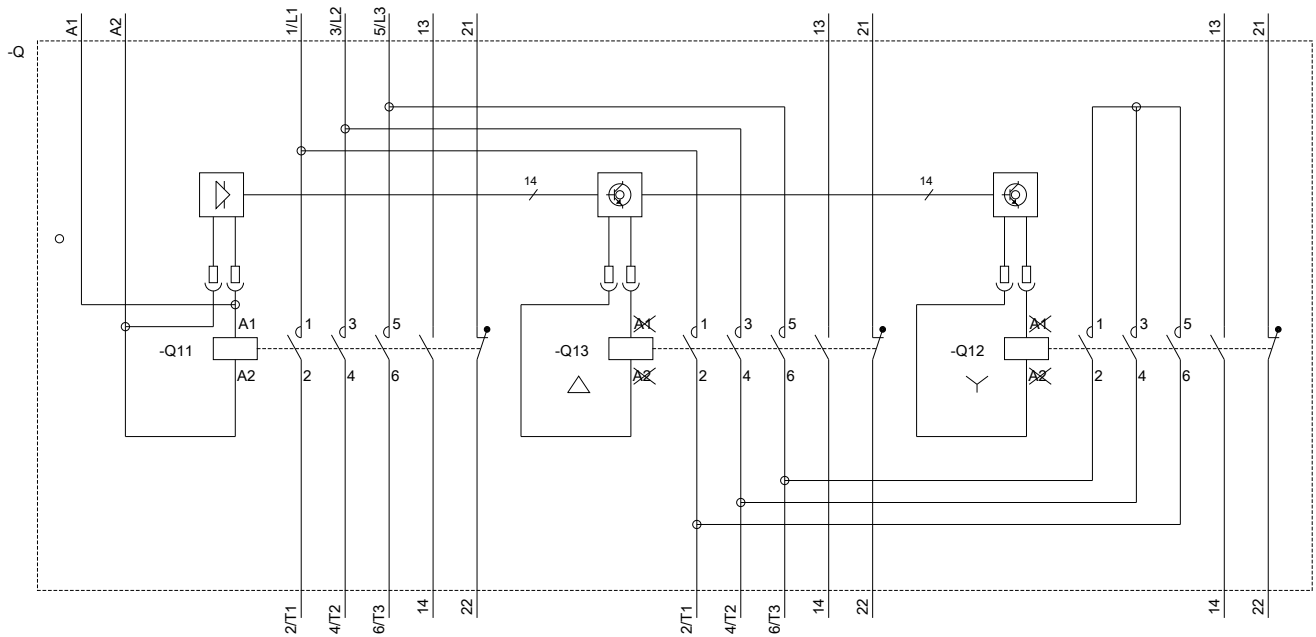
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2425-8XF32-2AG2/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2425-8XF32-2AG2&objecttype=14&gridview=view1>







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