

Circuit breaker size S0 for motor protection, CLASS 10 A-release  
18...25 A N-release 325 A Screw terminal Standard switching  
capacity with transverse auxiliary switches 1 NO+1 NC



|                          |                      |
|--------------------------|----------------------|
| product brand name       | SIRIUS               |
| product designation      | Circuit breaker      |
| design of the product    | For motor protection |
| product type designation | 3RV2                 |

| General technical data                                                                                                        |                 |
|-------------------------------------------------------------------------------------------------------------------------------|-----------------|
| size of the circuit-breaker                                                                                                   | S0              |
| size of contactor can be combined company-specific                                                                            | S00, S0         |
| product extension                                                                                                             | Yes             |
| <ul style="list-style-type: none"> <li>auxiliary switch</li> </ul>                                                            |                 |
| power loss [W] for rated value of the current                                                                                 |                 |
| <ul style="list-style-type: none"> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> </ul> | 10.5 W<br>3.5 W |
| insulation voltage with degree of pollution 3 at AC rated value                                                               | 690 V           |
| surge voltage resistance rated value                                                                                          | 6 kV            |
| maximum permissible voltage for safe isolation                                                                                |                 |
| <ul style="list-style-type: none"> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul>     | 400 V           |

|                                                                                                                             |                   |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------|
| <ul style="list-style-type: none"> <li>• in networks with grounded star point between main and auxiliary circuit</li> </ul> | 400 V             |
| <b>protection class IP</b>                                                                                                  |                   |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                                                            | IP20              |
| <ul style="list-style-type: none"> <li>• of the terminal</li> </ul>                                                         | IP20              |
| <b>shock resistance</b>                                                                                                     |                   |
| <ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>                                                  | 25g / 11 ms       |
| <b>mechanical service life (switching cycles)</b>                                                                           |                   |
| <ul style="list-style-type: none"> <li>• of the main contacts typical</li> </ul>                                            | 100 000           |
| <ul style="list-style-type: none"> <li>• of auxiliary contacts typical</li> </ul>                                           | 100 000           |
| <b>electrical endurance (switching cycles)</b>                                                                              |                   |
| <ul style="list-style-type: none"> <li>• typical</li> </ul>                                                                 | 100 000           |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                                                            | Ex II (2) GD      |
| certificate of suitability according to ATEX directive 2014/34/EU                                                           | DMT 02 ATEX F 001 |
| <b>reference code acc. to IEC 81346-2</b>                                                                                   | Q                 |

#### Ambient conditions

|                                                                                                             |                |
|-------------------------------------------------------------------------------------------------------------|----------------|
| <ul style="list-style-type: none"> <li>• installation altitude at height above sea level maximum</li> </ul> | 2 000 m        |
| <b>ambient temperature</b>                                                                                  |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul>                                        | -20 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>                                          | -50 ... +80 °C |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul>                                        | -50 ... +80 °C |
| <b>temperature compensation</b>                                                                             | -20 ... +60 °C |
| relative humidity during operation                                                                          | 10 ... 95 %    |

#### Main circuit

|                                                                                                                                                                       |                     |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| <b>number of poles for main current circuit</b>                                                                                                                       | 3                   |
| <b>adjustable current response value current of the current-dependent overload release</b>                                                                            | 18 ... 25 A         |
| <b>operating voltage</b>                                                                                                                                              |                     |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                       | 690 V               |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>                                                                                       | 690 V               |
| <b>operating frequency rated value</b>                                                                                                                                | 50 ... 60 Hz        |
| <b>operational current rated value</b>                                                                                                                                | 25 A                |
| <b>operational current</b>                                                                                                                                            |                     |
| <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>                                 | 25 A                |
| <b>operating power</b>                                                                                                                                                |                     |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> </ul> </li> </ul> | 5 500 W<br>11 000 W |

|                            |          |
|----------------------------|----------|
| — at 500 V rated value     | 15 000 W |
| — at 690 V rated value     | 22 000 W |
| <b>operating frequency</b> |          |
| • at AC-3 maximum          | 15 1/h   |

#### Auxiliary circuit

|                                                           |            |
|-----------------------------------------------------------|------------|
| <b>design of the auxiliary switch</b>                     | transverse |
| <b>number of NC contacts for auxiliary contacts</b>       | 1          |
| <b>number of NO contacts for auxiliary contacts</b>       | 1          |
| <b>number of CO contacts</b>                              |            |
| • for auxiliary contacts                                  | 0          |
| <b>operational current of auxiliary contacts at AC-15</b> |            |
| • at 24 V                                                 | 2 A        |
| • at 120 V                                                | 0.5 A      |
| • at 125 V                                                | 0.5 A      |
| • at 230 V                                                | 0.5 A      |
| <b>operational current of auxiliary contacts at DC-13</b> |            |
| • at 24 V                                                 | 1 A        |
| • at 60 V                                                 | 0.15 A     |

#### Protective and monitoring functions

|                                                                      |          |
|----------------------------------------------------------------------|----------|
| <b>product function</b>                                              |          |
| • ground fault detection                                             | No       |
| • phase failure detection                                            | Yes      |
| <b>trip class</b>                                                    | CLASS 10 |
| <b>design of the overload release</b>                                | thermal  |
| <b>breaking capacity operating short-circuit current (Ics) at AC</b> |          |
| • at 240 V rated value                                               | 100 kA   |
| • at 400 V rated value                                               | 25 kA    |
| • at 500 V rated value                                               | 5 kA     |
| • at 690 V rated value                                               | 2 kA     |
| <b>breaking capacity maximum short-circuit current (Icu)</b>         |          |
| • at AC at 240 V rated value                                         | 100 kA   |
| • at AC at 400 V rated value                                         | 55 kA    |
| • at AC at 500 V rated value                                         | 10 kA    |
| • at AC at 690 V rated value                                         | 4 kA     |
| <b>response value current</b>                                        |          |
| • of instantaneous short-circuit trip unit                           | 325 A    |

#### UL/CSA ratings

|                                                     |      |
|-----------------------------------------------------|------|
| <b>full-load current (FLA) for 3-phase AC motor</b> |      |
| • at 480 V rated value                              | 25 A |
| • at 600 V rated value                              | 25 A |

|                                                                                                                                                                                                                                                                                                                                                                                   |                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <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 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul> </li> </ul> | 2 hp<br>3 hp<br><br>5 hp<br>7.5 hp<br>15 hp |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                       | C300 / R300                                 |

| Short-circuit protection                                                                                          |                                                                                         |
|-------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>product function short circuit protection</b>                                                                  | Yes                                                                                     |
| <b>design of the short-circuit trip</b>                                                                           | magnetic                                                                                |
| <b>design of the fuse link</b>                                                                                    |                                                                                         |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul> | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A) |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>                    |                                                                                         |
| <ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>              | gL/gG 63 A<br>gL/gG 50 A<br>gL/gG 50 A                                                  |

| Installation/ mounting/ dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | any                                                                                             |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715          |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 97 mm                                                                                           |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 45 mm                                                                                           |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 97 mm                                                                                           |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                 |
| <ul style="list-style-type: none"> <li>• for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul> | 30 mm<br>30 mm<br>9 mm<br><br>30 mm<br>30 mm<br>9 mm<br><br>30 mm<br>30 mm<br>9 mm<br><br>30 mm |

|                               |       |
|-------------------------------|-------|
| — upwards                     | 30 mm |
| — at the side                 | 9 mm  |
| • for grounded parts at 690 V |       |
| — downwards                   | 50 mm |
| — upwards                     | 50 mm |
| — backwards                   | 0 mm  |
| — at the side                 | 30 mm |
| — forwards                    | 0 mm  |
| • for live parts at 690 V     |       |
| — downwards                   | 50 mm |
| — upwards                     | 50 mm |
| — backwards                   | 0 mm  |
| — at the side                 | 30 mm |
| — forwards                    | 0 mm  |

## Connections/ Terminals

|                                                                                     |                                                                                         |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>product function</b>                                                             |                                                                                         |
| • removable terminal for auxiliary and control circuit                              | No                                                                                      |
| <b>type of electrical connection</b>                                                |                                                                                         |
| • for main current circuit                                                          | screw-type terminals                                                                    |
| • for auxiliary and control circuit                                                 | screw-type terminals                                                                    |
| <b>arrangement of electrical connectors for main current circuit</b>                | Top and bottom                                                                          |
| <b>type of connectable conductor cross-sections</b>                                 |                                                                                         |
| • for main contacts                                                                 |                                                                                         |
| — solid or 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 cables for main contacts                                                   | 2x (16 ... 12), 2x (14 ... 8)                                                           |
| • type of connectable conductor cross-sections for auxiliary contacts               |                                                                                         |
| — solid or 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> )                   |
| • type of connectable conductor cross-sections at AWG cables for auxiliary contacts | 2x (20 ... 16), 2x (18 ... 14)                                                          |
| <b>tightening torque</b>                                                            |                                                                                         |
| • for main contacts with screw-type terminals                                       | 2 ... 2.5 N·m                                                                           |
| • for auxiliary contacts with screw-type terminals                                  | 0.8 ... 1.2 N·m                                                                         |
| <b>design of screwdriver shaft</b>                                                  | Diameter 5 to 6 mm                                                                      |
| <b>size of the screwdriver tip</b>                                                  | Pozidriv 2                                                                              |
| <b>design of the thread of the connection screw</b>                                 |                                                                                         |
| • for main contacts                                                                 | M4                                                                                      |
| • of the auxiliary and control contacts                                             | M3                                                                                      |

## Safety related data

|                                                                           |        |
|---------------------------------------------------------------------------|--------|
| <b>B10 value</b>                                                          |        |
| • with high demand rate acc. to SN 31920                                  | 5 000  |
| <b>proportion of dangerous failures</b>                                   |        |
| • with low demand rate acc. to SN 31920                                   | 50 %   |
| • with high demand rate acc. to SN 31920                                  | 50 %   |
| <b>failure rate [FIT]</b>                                                 |        |
| • with low demand rate acc. to SN 31920                                   | 50 FIT |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 10 y   |
| <b>display version</b>                                                    |        |
| • for switching status                                                    | Handle |

## Certificates/ approvals

|                                 |                                       |
|---------------------------------|---------------------------------------|
| <b>General Product Approval</b> | <b>For use in hazardous locations</b> |
|---------------------------------|---------------------------------------|



[KC](#)



|                                       |                                  |                          |                          |
|---------------------------------------|----------------------------------|--------------------------|--------------------------|
| <b>For use in hazardous locations</b> | <b>Declaration of Conformity</b> | <b>Test Certificates</b> | <b>Marine / Shipping</b> |
|---------------------------------------|----------------------------------|--------------------------|--------------------------|



IECEX



EG-Konf.

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

## Marine / Shipping



LRS



PRS



RINA



RMRS



DNVGL.COM/AF

## other

[Confirmation](#)



VDE

[Vibration and Shock](#)

[Confirmation](#)

## 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=3RV2021-4DA15>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4DA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4DA15>

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

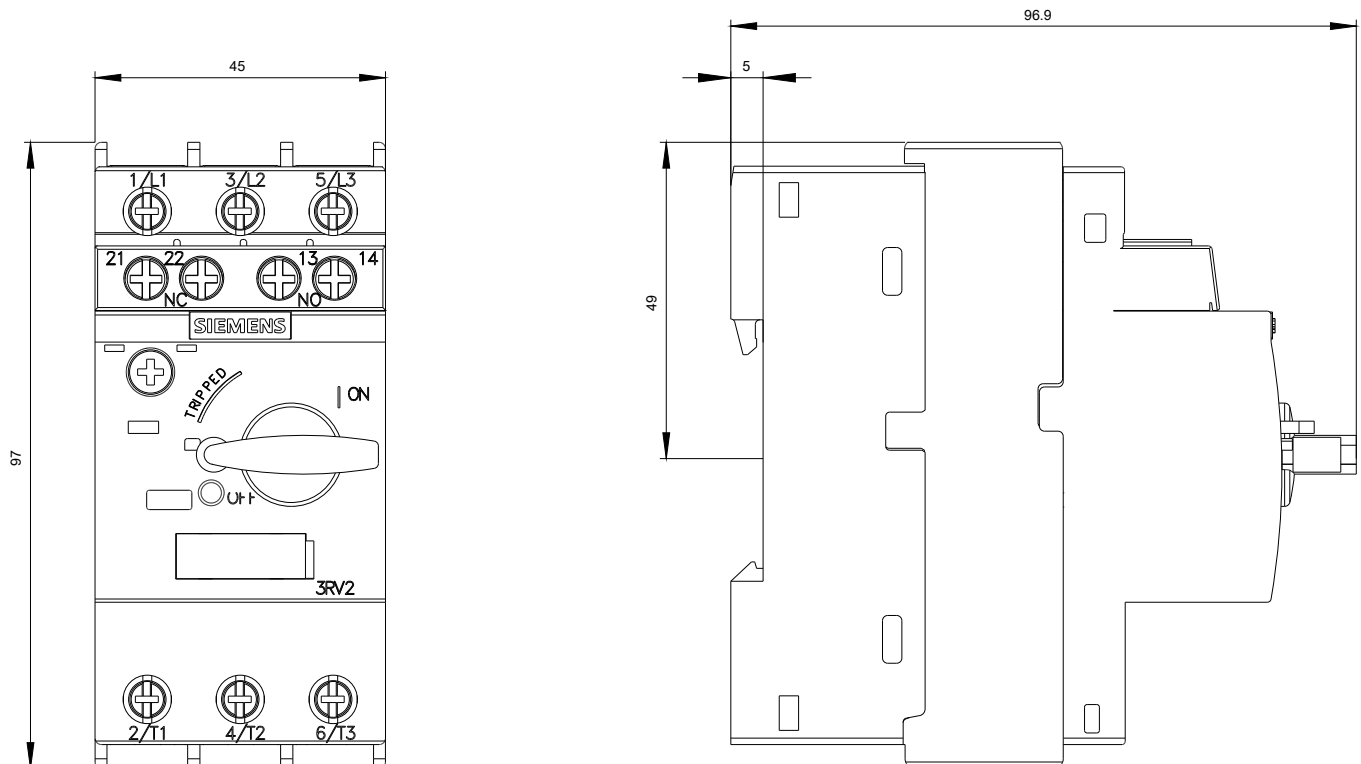
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4DA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4DA15&lang=en)

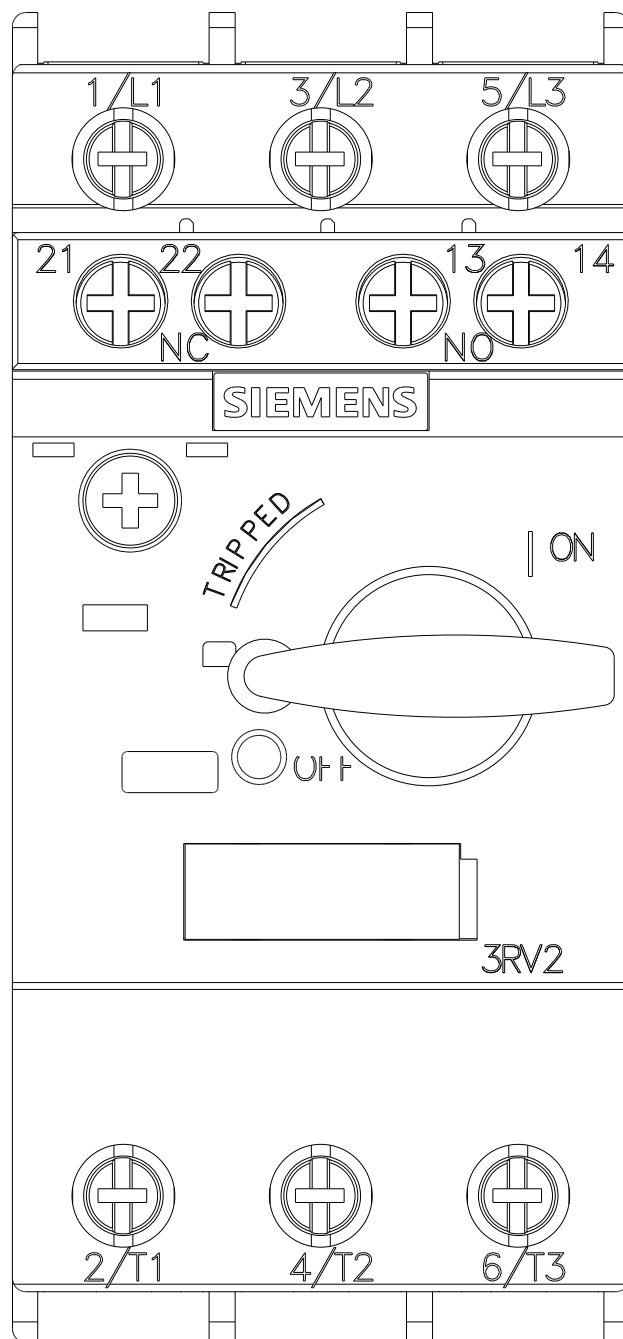
**Characteristic: Tripping characteristics,  $I^2t$ , Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4DA15/char>

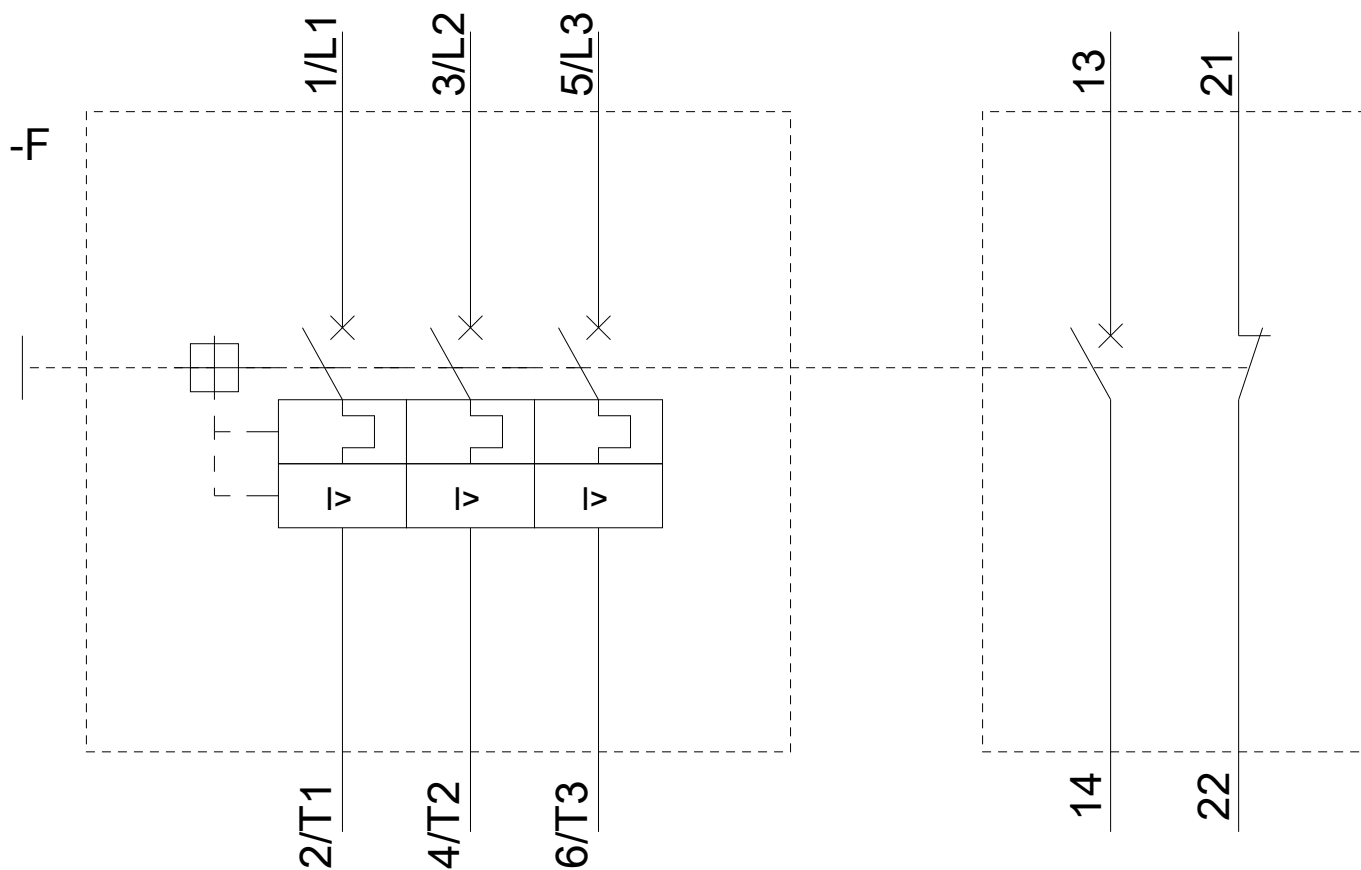
**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4DA15&objecttype=14&gridview=view1>









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