

Circuit breaker size S00 for motor protection, CLASS 10 with overload relay function A-release 0.22...0.32 A N-release 4.2 A screw terminal Standard switching capacity



|                                                                                                                           |                                                   |
|---------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| Product brand name                                                                                                        | SIRIUS                                            |
| Product designation                                                                                                       | Circuit breaker                                   |
| Design of the product                                                                                                     | For motor protection with overload relay function |
| Product type designation                                                                                                  | 3RV2                                              |
| General technical data                                                                                                    |                                                   |
| Size of the circuit-breaker                                                                                               | S00                                               |
| 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> </ul>                                            | 5.5 W                                             |
| <ul style="list-style-type: none"> <li>at AC in hot operating state per pole</li> </ul>                                   | 1.8 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>Reference code acc. to DIN EN 81346-2</b>                                                                                | Q           |

#### Ambient conditions

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b>               |                |
| <ul style="list-style-type: none"> <li>• 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 pick-up value current of the current-dependent overload release</b>                                                                                                                                                     | 0.22 ... 0.32 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>Operating current rated value</b>                                                                                                                                                                                                  | 0.32 A                         |
| <b>Operating 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>                                                                                                 | 0.32 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> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul> | 40 W<br>90 W<br>120 W<br>120 W |
| <b>Operating frequency</b>                                                                                                                                                                                                            |                                |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                                                                                                                                   | 15 1/h                         |

| Auxiliary circuit                                |           |
|--------------------------------------------------|-----------|
| Design of the auxiliary switch                   | laterally |
| Number of NC contacts for auxiliary contacts     | 0         |
| Number of NO contacts for auxiliary contacts     | 0         |
| Number of CO contacts                            |           |
| • for auxiliary contacts                         | 0         |
| Operating current of auxiliary contacts at AC-15 |           |
| • at 24 V                                        | 1.5 A     |
| • at 230 V                                       | 1.5 A     |
| Operating current of auxiliary contacts at DC-13 |           |
| • at 24 V                                        | 1 A       |

| Protective and monitoring functions                             |          |
|-----------------------------------------------------------------|----------|
| Product function                                                |          |
| • Ground fault detection                                        | No       |
| • Phase failure detection                                       | Yes      |
| Trip class                                                      | CLASS 10 |
| Design of the overload release                                  | thermal  |
| Operational short-circuit current breaking capacity (Ics) at AC |          |
| • at 240 V rated value                                          | 100 kA   |
| • at 400 V rated value                                          | 100 kA   |
| • at 500 V rated value                                          | 100 kA   |
| • at 690 V rated value                                          | 100 kA   |
| Maximum short-circuit current breaking capacity (Icu)           |          |
| • at AC at 240 V rated value                                    | 100 kA   |
| • at AC at 400 V rated value                                    | 100 kA   |
| • at AC at 500 V rated value                                    | 100 kA   |
| • at AC at 690 V rated value                                    | 100 kA   |
| Response value current                                          |          |
| • of instantaneous short-circuit trip unit                      | 4.2 A    |

| UL/CSA ratings                                       |             |
|------------------------------------------------------|-------------|
| Full-load current (FLA) for three-phase AC motor     |             |
| • at 480 V rated value                               | 0.32 A      |
| • at 600 V rated value                               | 0.32 A      |
| Contact rating of auxiliary contacts according to UL | C600 / R300 |

| Short-circuit protection                                        |                              |
|-----------------------------------------------------------------|------------------------------|
| Product function Short circuit protection                       | Yes                          |
| Design of the short-circuit trip                                | magnetic                     |
| Design of the fuse link                                         |                              |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 6 A, quick: 10 A |

## Installation/ mounting/ dimensions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                        |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | any                                                                                    |
| <b>Mounting type</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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 65 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 30 mm</li> <li>— upwards 30 mm</li> <li>— Backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— Backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— Backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— Backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards 50 mm</li> <li>— upwards 50 mm</li> <li>— Backwards 0 mm</li> <li>— at the side 30 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards 50 mm</li> <li>— upwards 50 mm</li> </ul> </li> </ul> |                                                                                        |

- Backwards
- at the side

0 mm  
30 mm

## Connections/ Terminals

|                                                                                                                                                                                                                                                                        |                                                                                                                                                                                  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product function</b>                                                                                                                                                                                                                                                |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>                                                                                                                                                                 | No                                                                                                                                                                               |
| <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>                                                                                                                                          | screw-type terminals<br>screw-type terminals                                                                                                                                     |
| <b>Arrangement of electrical connectors for main current circuit</b>                                                                                                                                                                                                   | Top and bottom                                                                                                                                                                   |
| <b>Type of connectable conductor cross-sections</b>                                                                                                                                                                                                                    |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>for main contacts               <ul style="list-style-type: none"> <li>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for main contacts</li> </ul>           | 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup><br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (18 ... 14), 2x 12                       |
| <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> </ul> </li> <li>at AWG conductors for auxiliary contacts</li> </ul> | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14) |
| <b>Tightening torque</b>                                                                                                                                                                                                                                               |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>                                                                                                                | 0.8 ... 1.2 N·m<br>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>                                                                                                                                                                                                                    |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>for main contacts</li> <li>of the auxiliary and control contacts</li> </ul>                                                                                                                                                     | M3<br>M3                                                                                                                                                                         |

## Safety related data

|                                                                                                                                         |              |
|-----------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>B10 value</b>                                                                                                                        |              |
| <ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul>                                                | 5 000        |
| <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> | 50 %<br>50 % |
| <b>Failure rate [FIT]</b>                                                                                                               |              |
| <ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> </ul>                                                 | 50 FIT       |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                               | 10 y         |
| <b>Display version</b>                                                                                                                  |              |
| <ul style="list-style-type: none"> <li>for switching status</li> </ul>                                                                  | Handle       |

## Certificates/ approvals

### General Product Approval



CCC



CSA



UL



EG-Konf.

[Miscellaneous](#)

### Test Certificates

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS



LRS



PRS

### Marine / Shipping

### Marine / Shipping



RINA



RMRS



DNV-GL  
DNVGL.COM/AF

### other

[Confirmation](#)



VDE

### Railway

[Vibration and Shock](#)

### Railway

[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=3RV2111-0DA10>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2111-0DA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-0DA10>

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

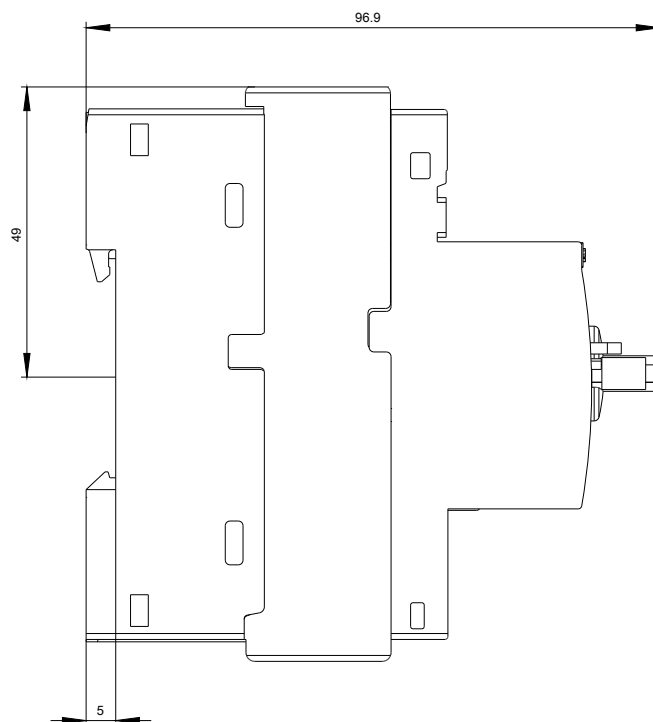
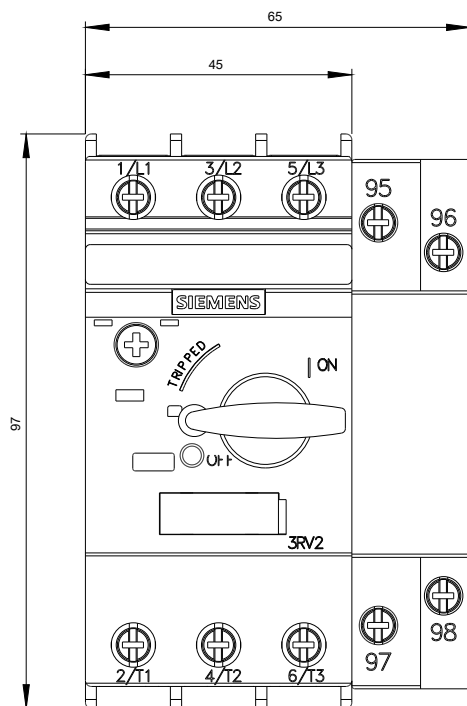
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2111-0DA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2111-0DA10&lang=en)

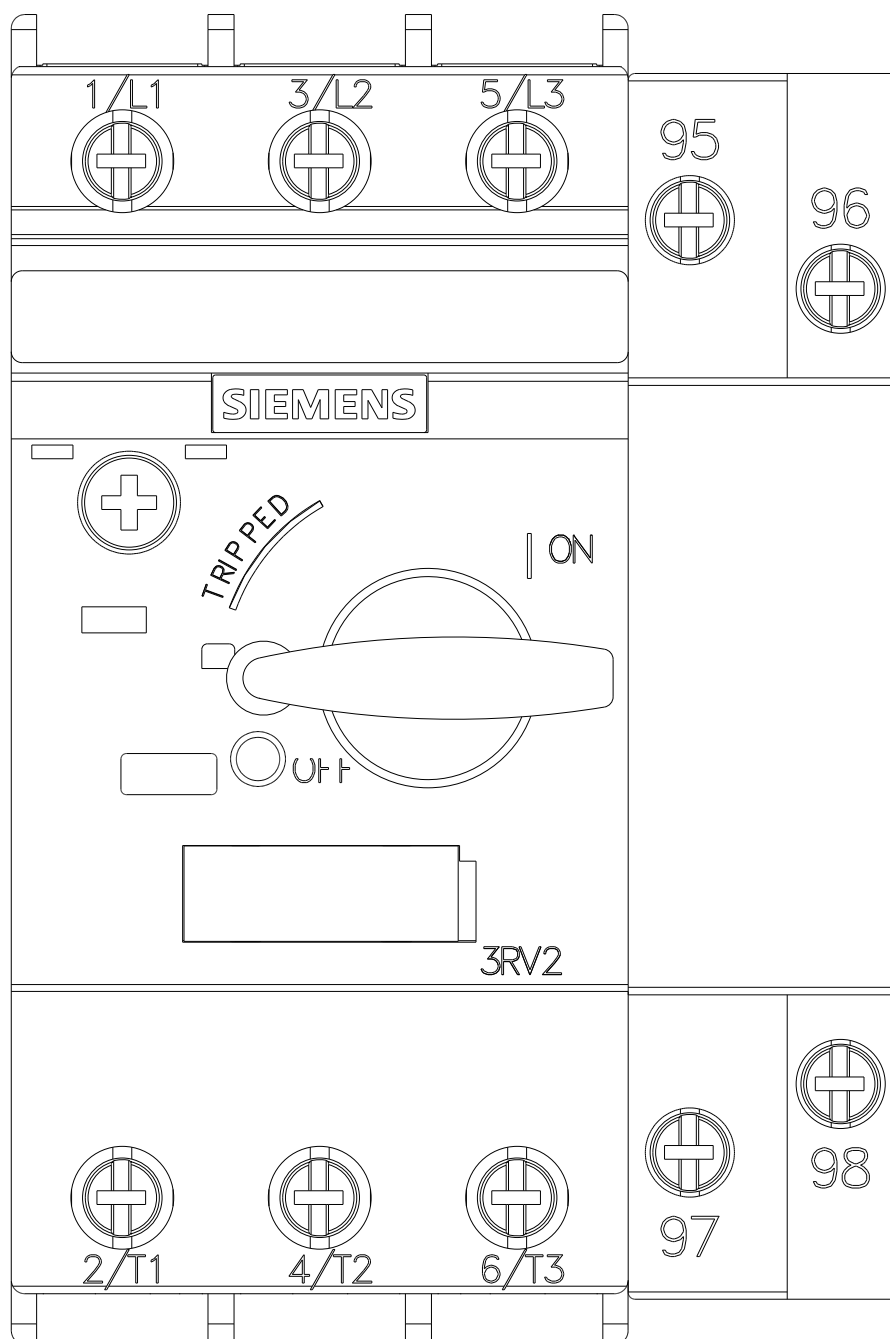
**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

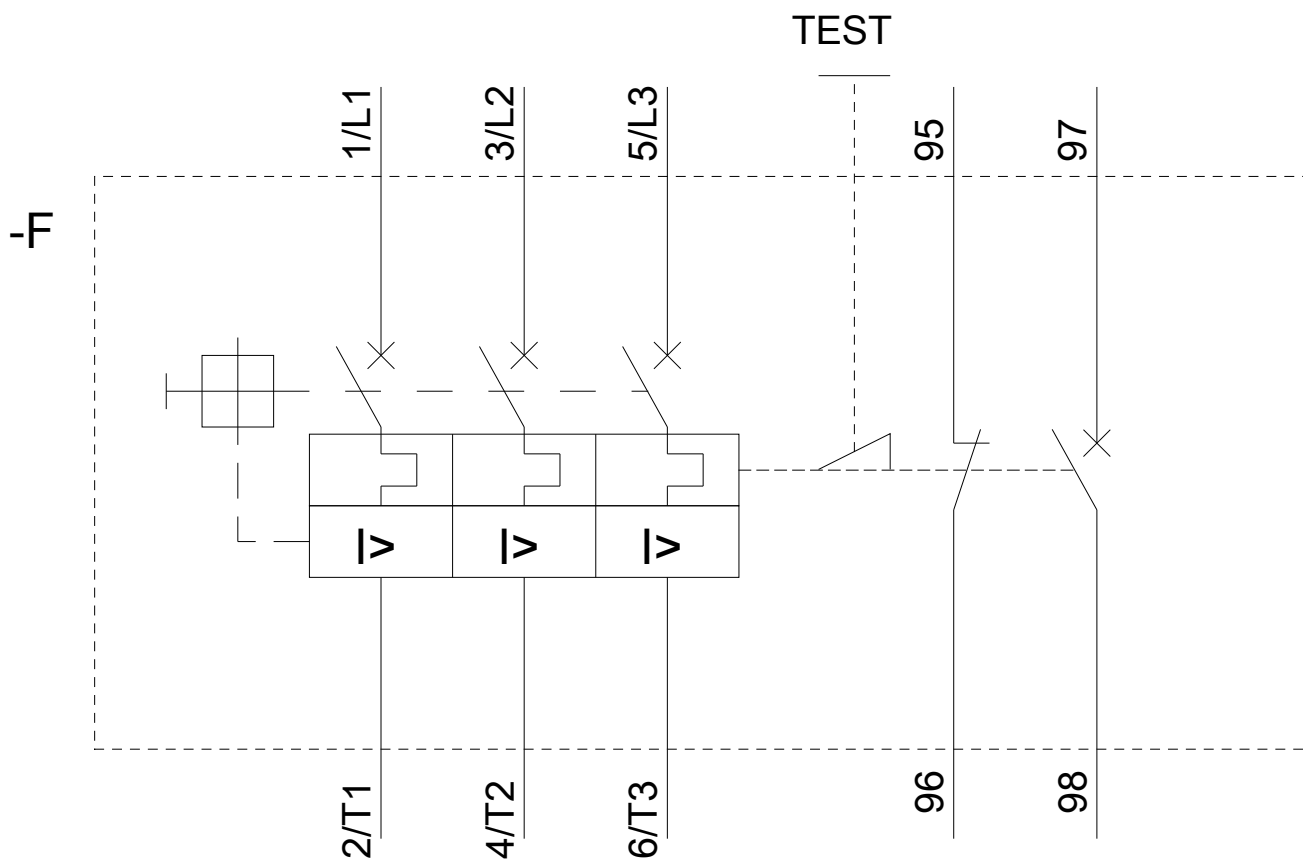
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-0DA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2111-0DA10&objecttype=14&gridview=view1>







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