

Circuit breaker size S00 for motor protection, CLASS 10 with overload relay function A-release 3.5...5 A N release 65 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   |         |
| • Auxiliary switch  | Yes     |
| Power loss [W] for rated value of the current                             |         |
| • at AC in hot operating state  | 7.25 W  |
| • at AC in hot operating state per pole                                   | 2.4 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                            |         |
| • in networks with grounded star point between main and auxiliary circuit | 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>   | 3.5 ... 5 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>  | 5 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>   | 5 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> | 1 100 W<br>1 500 W<br>2 200 W<br>4 000 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  | 4 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                                    | 6 kA     |
| Response value current  |          |
| • of instantaneous short-circuit trip unit                      | 65 A     |

| UL/CSA ratings                                   |          |
|--|----------|
| Full-load current (FLA) for three-phase AC motor |          |
| • at 480 V rated value                           | 5 A      |
| • at 600 V rated value                           | 5 A      |
| Yielded mechanical performance [hp]              |          |
| • for single-phase AC motor                      |          |
| — at 110/120 V rated value                       | 0.167 hp |
| — at 230 V rated value                           | 0.5 hp   |
| • for three-phase AC motor                       |          |
| — at 200/208 V rated value                       | 1 hp     |
| — at 220/230 V rated value                       | 1 hp     |

|   |             |
|---|-------------|
| — at 460/480 V rated value                                  | 3 hp        |
| — at 575/600 V rated value                                  | 3 hp        |
| <b>Contact rating of auxiliary contacts according to UL</b> | C600 / 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><br><ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>  | fuse gL/gG: 6 A, quick: 10 A           |
| <b>Design of the fuse link for IT network for short-circuit protection of the main circuit</b><br><ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | gL/gG 32 A<br>gL/gG 32 A<br>gL/gG 25 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><br><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>— Backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— Backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— Backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>• for live parts at 500 V</li> </ul> | 30 mm<br>30 mm<br>0 mm<br>9 mm<br>0 mm<br><br>30 mm<br>30 mm<br>0 mm<br>9 mm<br>0 mm<br><br>30 mm<br>30 mm<br>0 mm<br>9 mm<br>0 mm |

|                               |       |
|-------------------------------|-------|
| — downwards                   | 30 mm |
| — upwards                     | 30 mm |
| — Backwards                   | 0 mm  |
| — at the side                 | 9 mm  |
| — forwards                    | 0 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 |

## 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 current 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  |   |
| — single or multi-stranded   | 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>              |
| — finely stranded with core end processing                           | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| • at AWG conductors for main contacts                                | 2x (18 ... 14), 2x 12   |
| <b>Type of connectable conductor cross-sections</b>                  |   |
| • for auxiliary contacts   |   |
| — single or multi-stranded   | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) |
| — finely stranded with core end processing                           | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| • at AWG conductors for auxiliary contacts                           | 2x (20 ... 16), 2x (18 ... 14)  |
| <b>Tightening torque</b>   |   |
| • for main contacts with screw-type terminals                        | 0.8 ... 1.2 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  | M3  |

- of the auxiliary and control contacts

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> </ul>  | 50 %   |
| <ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul> | 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

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



ABS



BUREAU VERITAS



LRS



PRS

#### 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=3RV2111-1FA10>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2111-1FA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-1FA10>

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

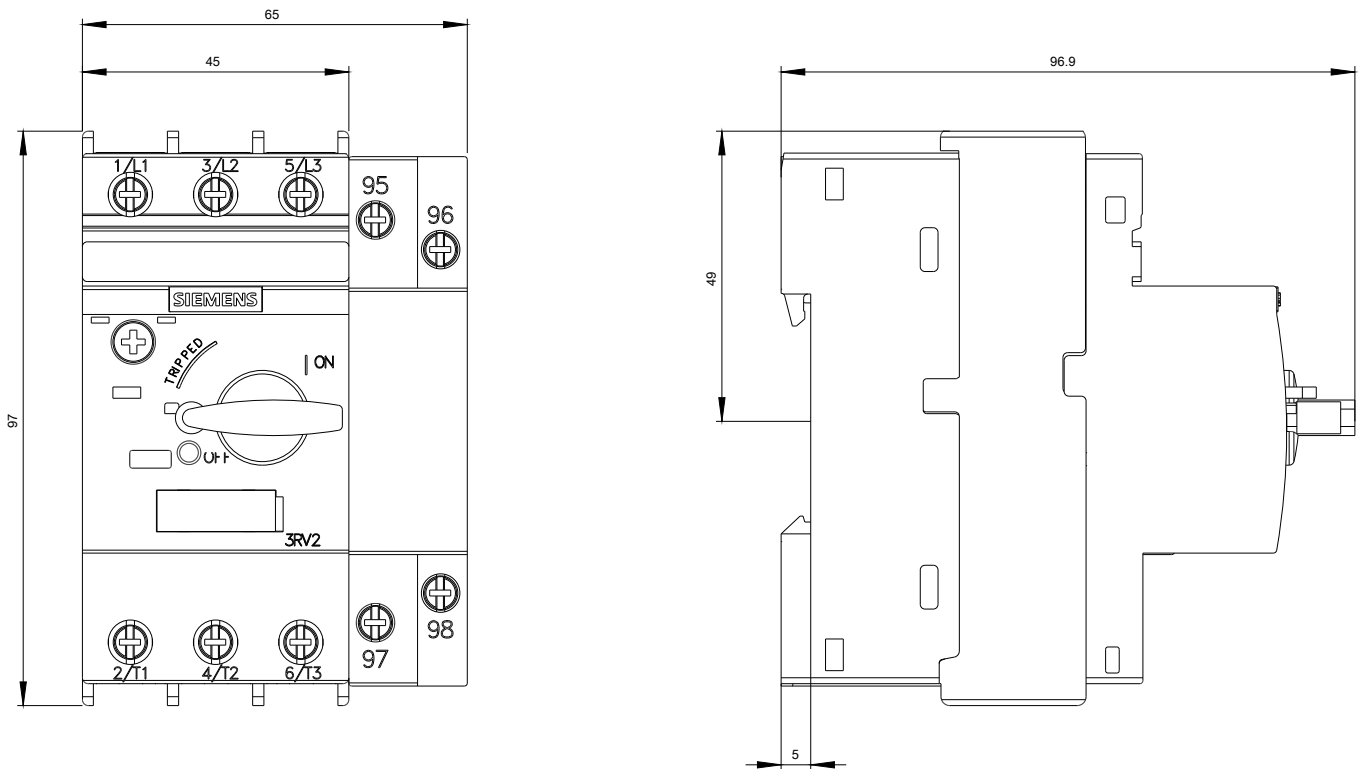
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2111-1FA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2111-1FA10&lang=en)

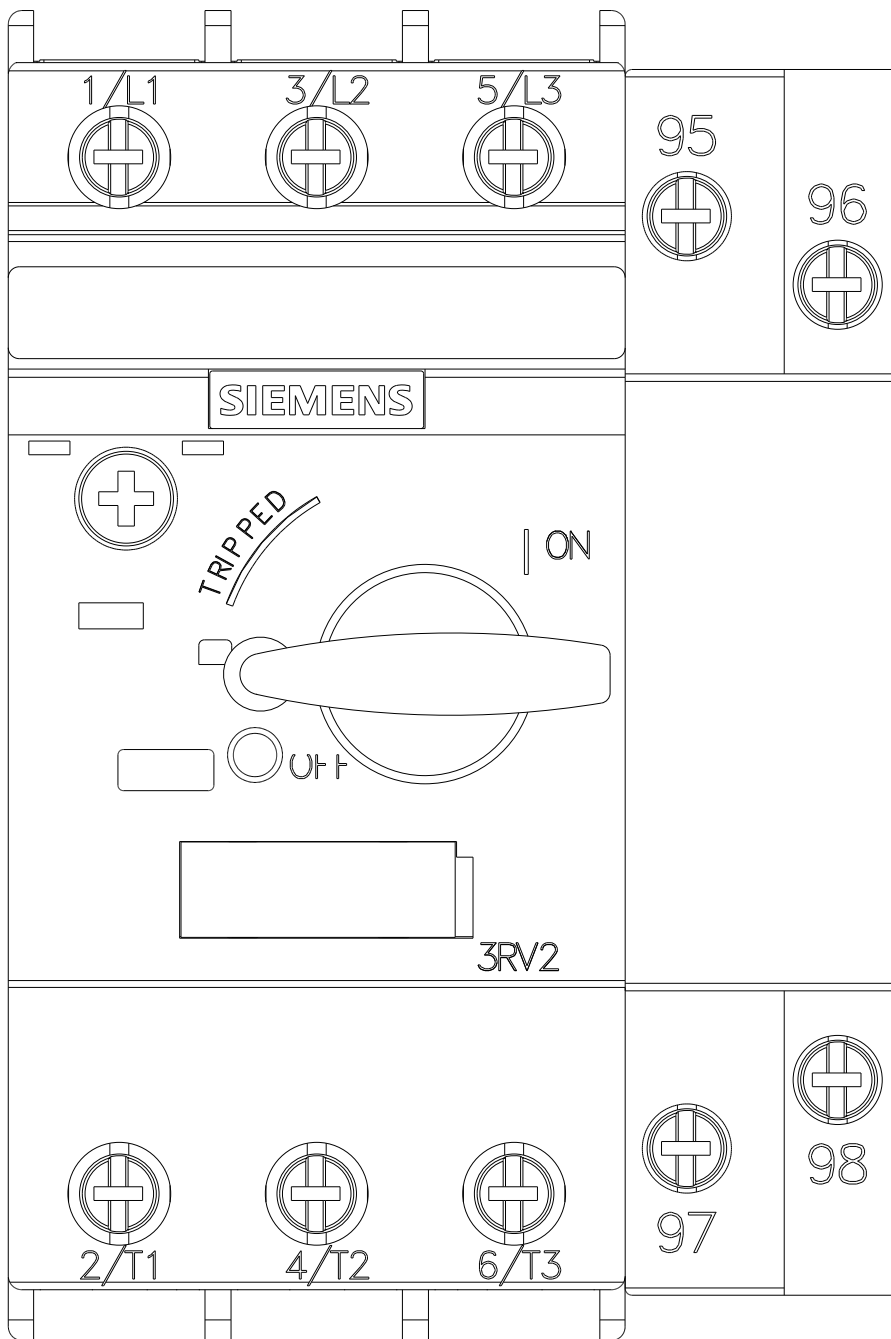
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-1FA10/char>

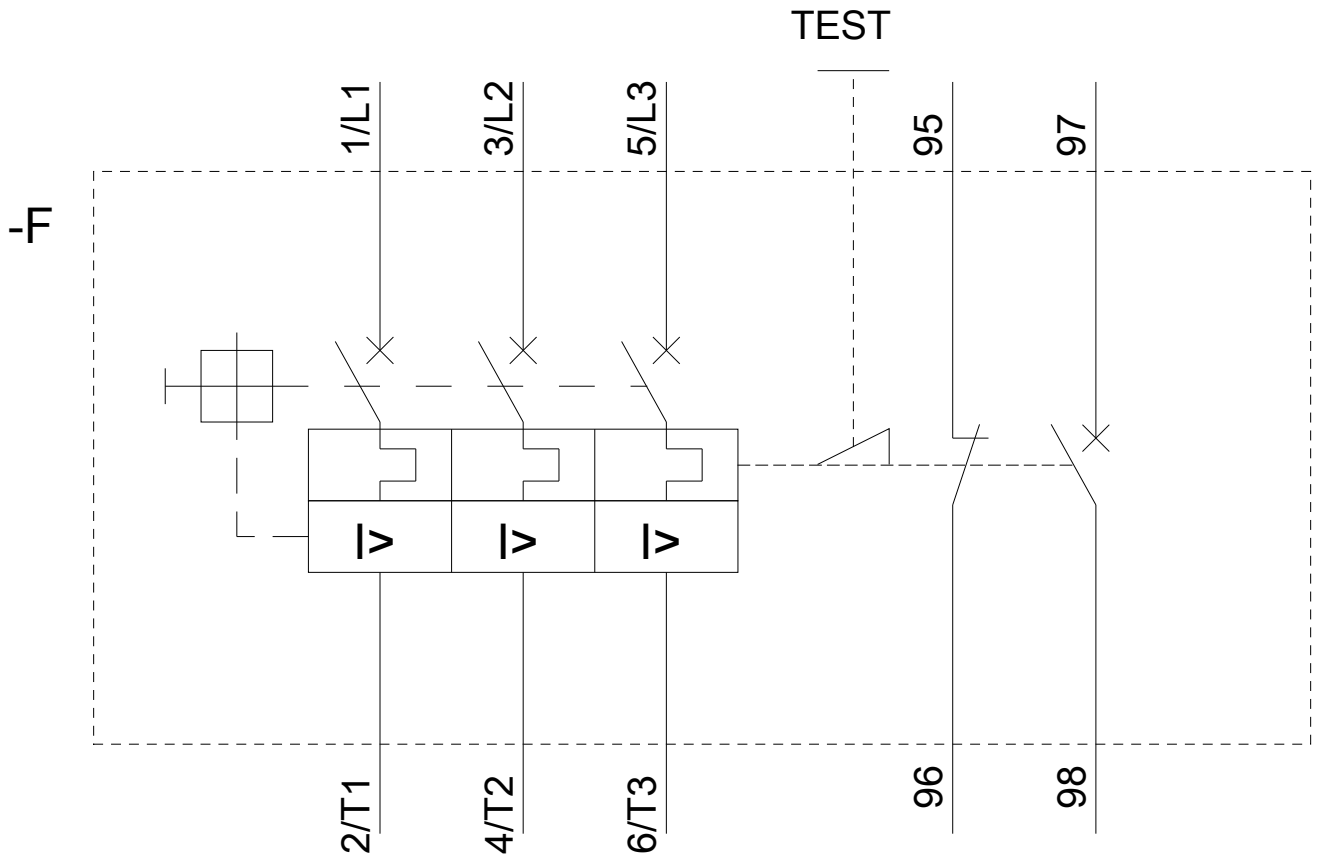
**Further characteristics (e.g. electrical endurance, switching frequency)**

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2111-1FA10&objectype=14&gridview=view1>









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