

Circuit breaker size S00 for transformer protection with approval  
circuit breaker UL 489, CSA C22.2 No.5-02 A-release 1 A N-release  
21 A screw terminal Standard switching capacity



|                          |   |
|--------------------------|---|
| Product brand name       | SIRIUS  |
| Product designation      | Circuit breaker   |
| Design of the product    | For transformer protection according to UL 489/CSA C22.2 No.5 |
| Product type designation | 3RV2  |

| General technical data  |       |
|---|-------|
| Size of the circuit-breaker   | S00   |
| Product extension   |       |
| • Auxiliary switch  | Yes   |
| Power loss [W] for rated value of the current                             |       |
| • at AC in hot operating state  | 5.5 W |
| • at AC in hot operating state per pole                                   | 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                            |       |
| • in networks with grounded star point between main and auxiliary circuit | 400 V |
| • in networks with grounded star point between main and auxiliary circuit | 400 V |

|   |             |
|---|-------------|
| <b>Protection class IP</b>                        |             |
| • on the front                                    | IP20        |
| • of the terminal                                 | IP00        |
| <b>Shock resistance</b>                           |             |
| • acc. to IEC 60068-2-27                          | 25g / 11 ms |
| <b>Mechanical service life (switching cycles)</b> |             |
| • of the main contacts typical                    | 100 000     |
| • of auxiliary contacts typical                   | 100 000     |
| <b>Electrical endurance (switching cycles)</b>    |             |
| • typical   | 100 000     |
| <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                                     | -20 ... +60 °C |
| • during storage                                       | -50 ... +80 °C |
| • during transport                                     | -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>Operating voltage</b>                        |              |
| • rated value                                   | 690 V        |
| • at AC-3 rated value maximum                   | 690 V        |
| <b>Operating frequency rated value</b>          | 50 ... 60 Hz |
| <b>Operating current rated value</b>            | 1 A          |
| <b>Operating current</b>                        |              |
| • at AC-3                                       |              |
| — at 400 V rated value                          | 1 A          |
| <b>Operating power</b>                          |              |
| • at AC-3                                       |              |
| — at 230 V rated value                          | 180 W        |
| — at 400 V rated value                          | 250 W        |
| — at 500 V rated value                          | 370 W        |
| — at 690 V rated value                          | 550 W        |
| <b>Operating frequency</b>                      |              |
| • at AC-3 maximum                               | 15 1/h       |

### Auxiliary circuit

|   |   |
|---|---|
| <b>Number of NC contacts for auxiliary contacts</b> | 0 |
| <b>Number of NO contacts for auxiliary contacts</b> | 0 |

|  |  |
|--|--|
| <b>Number of CO contacts</b>   |  |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts</li> </ul>   | 0  |
| <b>Protective and monitoring functions</b>   |  |
| <b>Product function</b>  |  |
| <ul style="list-style-type: none"> <li>• Ground fault detection</li> </ul>   | No   |
| <ul style="list-style-type: none"> <li>• Phase failure detection</li> </ul>  | No   |
| <b>Design of the overload release</b>  | thermal  |
| <b>Operational short-circuit current breaking capacity (Ics) at AC</b>   |  |
| <ul style="list-style-type: none"> <li>• at 240 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>   | 100 kA   |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>   |  |
| <ul style="list-style-type: none"> <li>• at AC at 240 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at AC at 400 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at AC at 500 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at AC at 690 V rated value</li> </ul>   | 100 kA   |
| <ul style="list-style-type: none"> <li>• at 480 AC Y/277 V acc. to UL 489 rated value</li> </ul>   | 65 000 A   |
| <b>Response value current</b>  |  |
| <ul style="list-style-type: none"> <li>• of instantaneous short-circuit trip unit</li> </ul>   | 21 A   |
| <b>Short-circuit protection</b>  |  |
| <b>Product function Short circuit protection</b>   | Yes  |
| <b>Design of the short-circuit trip</b>  | magnetic   |
| <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 500 V</li> </ul>   | gL/gG 10 A   |
| <ul style="list-style-type: none"> <li>• at 690 V</li> </ul>   | gL/gG 10 A   |
| <b>Installation/ mounting/ dimensions</b>  |  |
| <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>  | 144 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> </ul> </li> </ul> | 30 mm  |
| <ul style="list-style-type: none"> <li>— upwards</li> </ul>  | 30 mm  |
| <ul style="list-style-type: none"> <li>— Backwards</li> </ul>  | 0 mm   |
| <ul style="list-style-type: none"> <li>— at the side</li> </ul>  | 30 mm  |

|                               |       |
|-------------------------------|-------|
| — forwards                    | 0 mm  |
| • for live parts at 400 V     |       |
| — downwards                   | 30 mm |
| — upwards                     | 30 mm |
| — Backwards                   | 0 mm  |
| — at the side                 | 30 mm |
| — forwards                    | 0 mm  |
| • for grounded parts at 500 V |       |
| — downwards                   | 30 mm |
| — upwards                     | 30 mm |
| — Backwards                   | 0 mm  |
| — at the side                 | 30 mm |
| — forwards                    | 0 mm  |
| • for live parts at 500 V     |       |
| — downwards                   | 30 mm |
| — upwards                     | 30 mm |
| — Backwards                   | 0 mm  |
| — at the side                 | 30 mm |
| — forwards                    | 0 mm  |
| • for grounded parts at 690 V |       |
| — downwards                   | 70 mm |
| — upwards                     | 70 mm |
| — Backwards                   | 0 mm  |
| — at the side                 | 30 mm |
| — forwards                    | 0 mm  |
| • for live parts at 690 V     |       |
| — downwards                   | 70 mm |
| — upwards                     | 70 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                                  |
| <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   | 1 ... 10 mm <sup>2</sup> , max. 2x 10 mm <sup>2</sup> |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> <li>• at AWG conductors for main contacts</li> </ul> | 1 ... 16 mm <sup>2</sup> , max. 6 + 16 mm <sup>2</sup><br>2x (14 ... 10) |
| <b>Tightening torque</b> <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>                    | 2.5 ... 3 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> </ul>                   | M4   |

### 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

|                                 |                                  |
|---------------------------------|----------------------------------|
| <b>General Product Approval</b> | <b>Declaration of Conformity</b> |
|---------------------------------|----------------------------------|



[Miscellaneous](#)

|                          |                          |              |
|--------------------------|--------------------------|--------------|
| <b>Test Certificates</b> | <b>Marine / Shipping</b> | <b>other</b> |
|--------------------------|--------------------------|--------------|

[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



[Confirmation](#)

|              |                |
|--------------|----------------|
| <b>other</b> | <b>Railway</b> |
|--------------|----------------|



[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=3RV2811-0JD10>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2811-0JD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2811-0JD10>

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

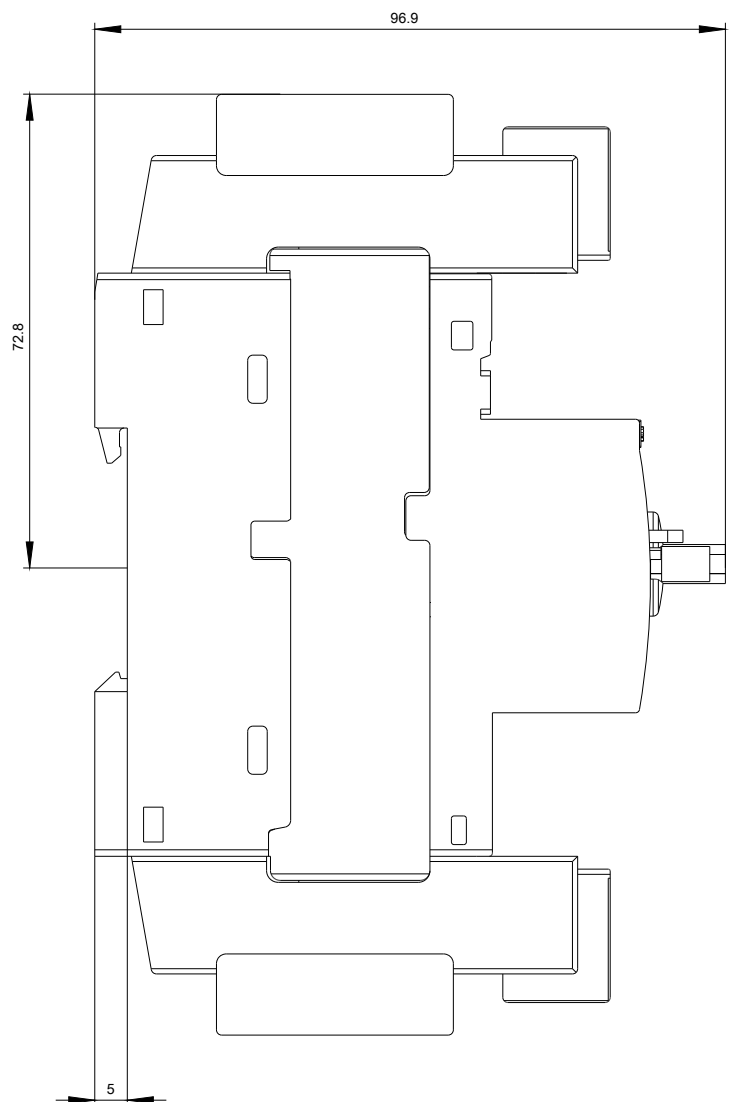
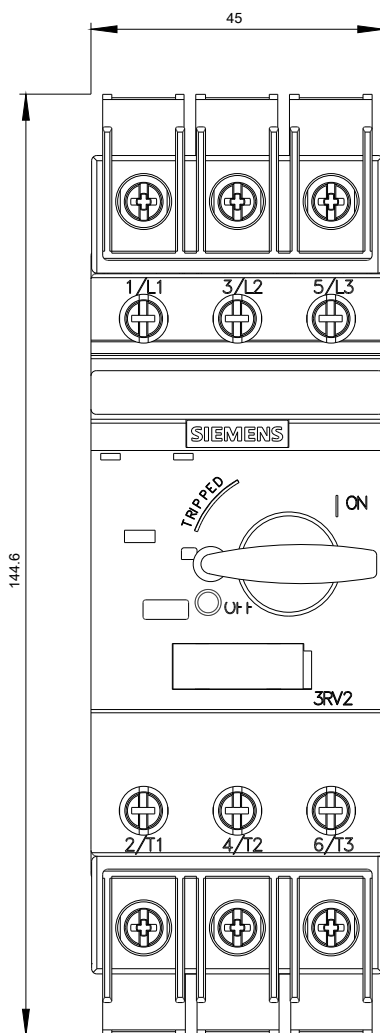
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2811-0JD10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2811-0JD10&lang=en)

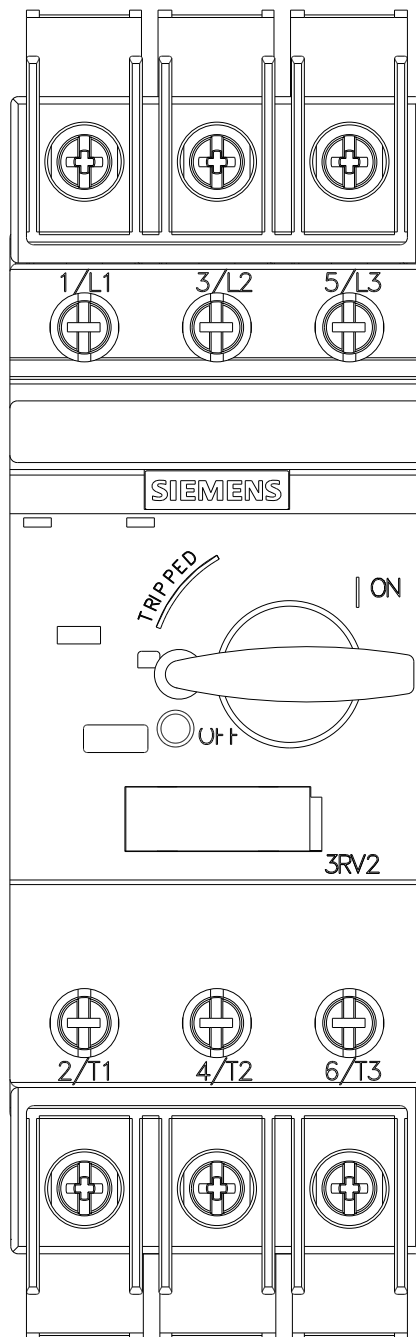
**Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current**

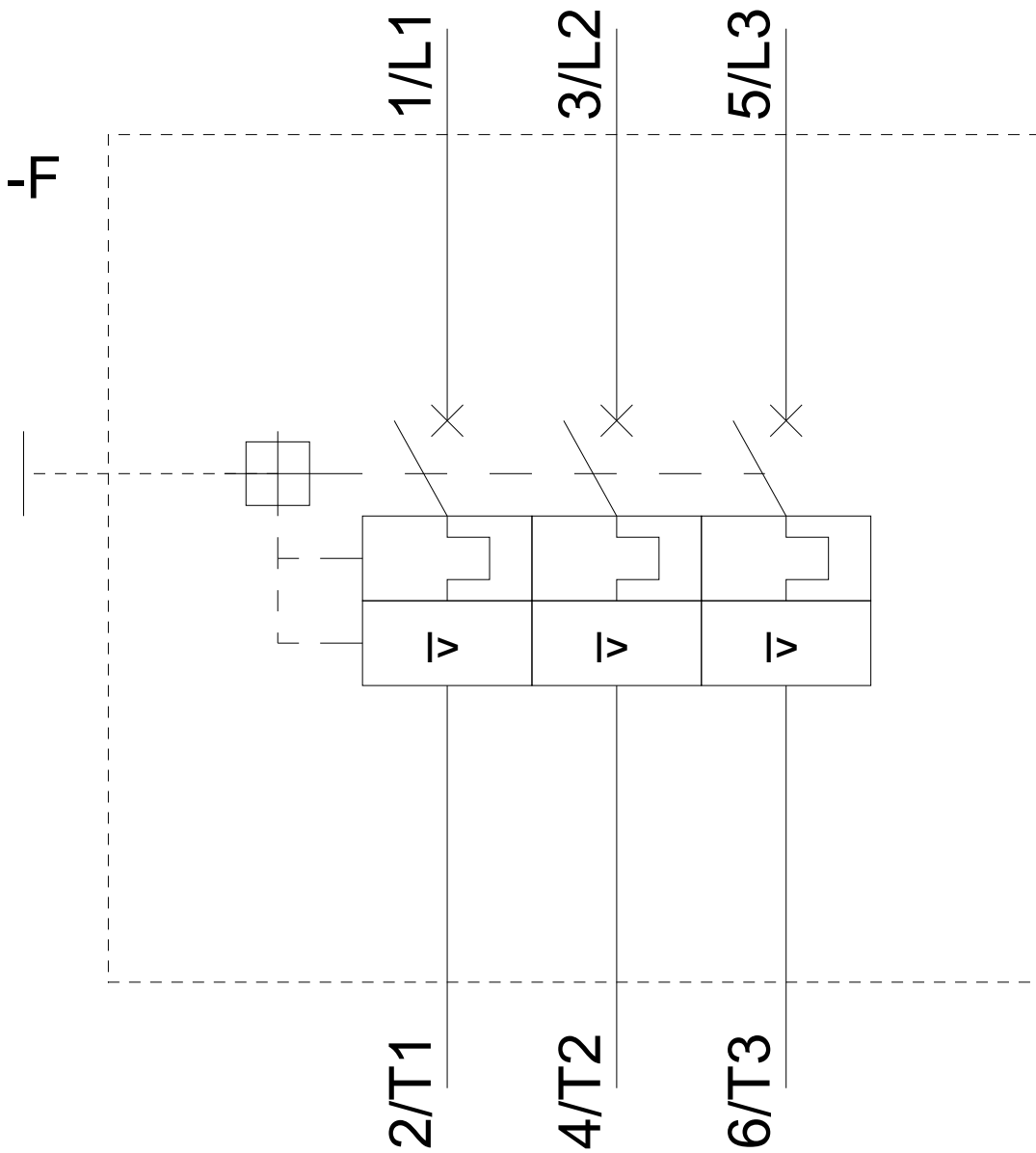
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2811-0JD10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2811-0JD10&objecttype=14&gridview=view1>







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