

Circuit breaker size S00 for transformer protection A-release 1.4...2 A  
N release 42 A Spring-type terminal Standard switching capacity



|                          |                            |
|--------------------------|----------------------------|
| Product brand name       | SIRIUS                     |
| Product designation      | Circuit breaker            |
| Design of the product    | For transformer protection |
| 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> | 1.4 ... 2 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>                                              | 2 A          |
| <b>Operating current</b>                                                          |              |
| <ul style="list-style-type: none"> <li>• at AC-3</li> </ul>                       |              |
| <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul>          | 2 A          |
| <b>Operating power</b>                                                            |              |
| <ul style="list-style-type: none"> <li>• at AC-3</li> </ul>                       |              |
| <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul>          | 370 W        |
| <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul>          | 750 W        |
| <ul style="list-style-type: none"> <li>— at 500 V rated value</li> </ul>          | 750 W        |
| <ul style="list-style-type: none"> <li>— at 690 V rated value</li> </ul>          | 1 100 W      |
| <b>Operating frequency</b>                                                        |              |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>               | 15 1/h       |

|                                                                                                |            |
|------------------------------------------------------------------------------------------------|------------|
| <b>Auxiliary circuit</b>                                                                       |            |
| <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>                                                                   |            |
| • for auxiliary contacts                                                                       | 0          |
| <b>Protective and monitoring functions</b>                                                     |            |
| <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>Operational short-circuit current breaking capacity (Ics) at AC</b>                         |            |
| • 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                                                                         | 10 kA      |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>                                   |            |
| • 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                                                                   | 10 kA      |
| <b>Response value current</b>                                                                  |            |
| • of instantaneous short-circuit trip unit                                                     | 42 A       |
| <b>UL/CSA ratings</b>                                                                          |            |
| <b>Full-load current (FLA) for three-phase AC motor</b>                                        |            |
| • at 480 V rated value                                                                         | 2 A        |
| • at 600 V rated value                                                                         | 2 A        |
| <b>Yielded mechanical performance [hp]</b>                                                     |            |
| • for single-phase AC motor                                                                    |            |
| — at 230 V rated value                                                                         | 0.125 hp   |
| • for three-phase AC motor                                                                     |            |
| — at 460/480 V rated value                                                                     | 0.75 hp    |
| — at 575/600 V rated value                                                                     | 1 hp       |
| <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> |            |
| • at 400 V                                                                                     | gL/gG 25 A |
| • at 500 V                                                                                     | gL/gG 25 A |

- at 690 V

gL/gG 20 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 106 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 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> </ul> </li> </ul> |                                                                                        |

|               |       |
|---------------|-------|
| — 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                                           | spring-loaded 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 (0,5 ... 4 mm <sup>2</sup> )   |
| — finely stranded with core end processing                           | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing                        | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| • at AWG conductors for main contacts                                | 2x (20 ... 12)                    |
| <b>Design of screwdriver shaft</b>                                   | Diameter 3 mm                     |
| <b>Size of the screwdriver tip</b>                                   | 3,0 x 0,5 mm                      |

## 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

| General Product Approval | Declaration of Conformity |
|--------------------------|---------------------------|
|--------------------------|---------------------------|



[Miscellaneous](#)

| Test Certificates | Marine / Shipping |
|-------------------|-------------------|
|-------------------|-------------------|

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)



[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=3RV2411-1BA20>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2411-1BA20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-1BA20>

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

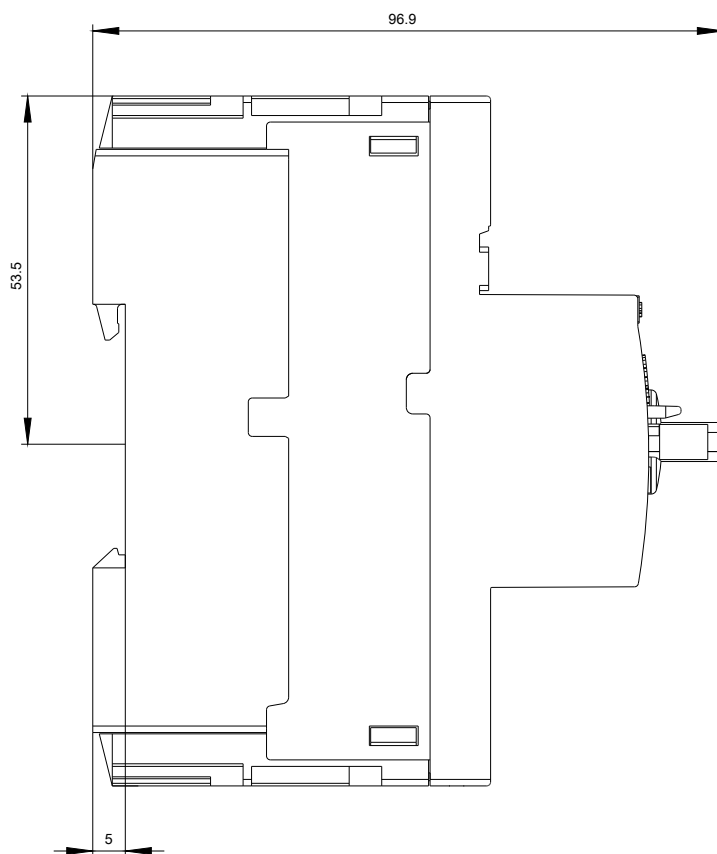
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2411-1BA20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2411-1BA20&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-1BA20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2411-1BA20&objecttype=14&gridview=view1>







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