



Circuit breaker size S00 for transformer protection A-release 0.14...0.2 A N-release 4.2 A screw terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

|                                                                                     |                            |
|-------------------------------------------------------------------------------------|----------------------------|
| product brand name                                                                  | SIRIUS                     |
| product designation                                                                 | Circuit breaker            |
| design of the product                                                               | For transformer protection |
| product type designation                                                            | 3RV2                       |
| <b>General technical data</b>                                                       |                            |
| 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                                                      | 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                      |
| • between main and auxiliary circuit                                                | 400 V                      |
| shock resistance acc. to IEC 60068-2-27                                             | 25g / 11 ms                |
| mechanical service life (switching cycles)                                          |                            |
| • of the main contacts typical                                                      | 100 000                    |
| • of auxiliary contacts typical                                                     | 100 000                    |
| electrical endurance (switching cycles) typical                                     | 100 000                    |
| reference code acc. to IEC 81346-2                                                  | Q                          |
| Substance Prohibition (Date)                                                        | 01.10.2009 00:00:00        |
| <b>Ambient conditions</b>                                                           |                            |
| installation altitude at height above sea level maximum                             | 2 000 m                    |
| • ambient temperature during operation                                              | -20 ... +60 °C             |
| • ambient temperature during storage                                                | -50 ... +80 °C             |
| • ambient temperature during transport                                              | -50 ... +80 °C             |
| temperature compensation                                                            | -20 ... +60 °C             |
| relative humidity during operation                                                  | 10 ... 95 %                |
| <b>Main circuit</b>                                                                 |                            |
| number of poles for main current circuit                                            | 3                          |
| adjustable current response value current of the current-dependent overload release | 0.14 ... 0.2 A             |
| • operating voltage rated value                                                     | 690 V                      |
| • operating voltage at AC-3 rated value maximum                                     | 690 V                      |

|                                                                      |                                                                                                  |
|----------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>operating frequency rated value</b>                               | 50 ... 60 Hz                                                                                     |
| <b>operational current rated value</b>                               | 0.2 A                                                                                            |
| operational current at AC-3 at 400 V rated value                     | 0.2 A                                                                                            |
| operating power at AC-3                                              |                                                                                                  |
| • at 230 V rated value                                               | 30 W                                                                                             |
| • at 400 V rated value                                               | 60 W                                                                                             |
| • at 500 V rated value                                               | 60 W                                                                                             |
| • at 690 V rated value                                               | 90 W                                                                                             |
| operating frequency at AC-3 maximum                                  | 15 1/h                                                                                           |
| <b>Auxiliary circuit</b>                                             |                                                                                                  |
| <b>design of the auxiliary switch</b>                                | transverse                                                                                       |
| <b>number of NC contacts for auxiliary contacts</b>                  | 1                                                                                                |
| <b>number of NO contacts for auxiliary contacts</b>                  | 1                                                                                                |
| number of CO contacts for auxiliary contacts                         | 0                                                                                                |
| <b>operational current of auxiliary contacts at AC-15</b>            |                                                                                                  |
| • at 24 V                                                            | 2 A                                                                                              |
| • at 120 V                                                           | 0.5 A                                                                                            |
| • at 125 V                                                           | 0.5 A                                                                                            |
| • at 230 V                                                           | 0.5 A                                                                                            |
| <b>operational current of auxiliary contacts at DC-13</b>            |                                                                                                  |
| • at 24 V                                                            | 1 A                                                                                              |
| • at 60 V                                                            | 0.15 A                                                                                           |
| <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>breaking capacity operating short-circuit current (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                                               | 100 kA                                                                                           |
| <b>breaking capacity maximum short-circuit current (Icu)</b>         |                                                                                                  |
| • at AC at 240 V rated value                                         | 100 kA                                                                                           |
| • at AC at 400 V rated value                                         | 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                                                                                            |
| <b>UL/CSA ratings</b>                                                |                                                                                                  |
| <b>full-load current (FLA) for 3-phase AC motor</b>                  |                                                                                                  |
| • at 480 V rated value                                               | 0.2 A                                                                                            |
| • at 600 V rated value                                               | 0.2 A                                                                                            |
| <b>contact rating of auxiliary contacts according to UL</b>          | C300 / R300                                                                                      |
| <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</b>                                       |                                                                                                  |
| • for short-circuit protection of the auxiliary switch required      | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A) |
| <b>Installation/ mounting/ dimensions</b>                            |                                                                                                  |
| <b>mounting position</b>                                             | any                                                                                              |
| <b>fastening method</b>                                              | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715           |
| <b>height</b>                                                        | 97 mm                                                                                            |
| <b>width</b>                                                         | 45 mm                                                                                            |
| <b>depth</b>                                                         | 97 mm                                                                                            |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>for grounded parts at 400 V <ul style="list-style-type: none"> <li>downwards</li> <li>upwards</li> <li>at the side</li> </ul> </li> <li>for live parts at 400 V <ul style="list-style-type: none"> <li>downwards</li> <li>upwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts at 500 V <ul style="list-style-type: none"> <li>downwards</li> <li>upwards</li> <li>at the side</li> </ul> </li> <li>for live parts at 500 V <ul style="list-style-type: none"> <li>downwards</li> <li>upwards</li> <li>at the side</li> </ul> </li> <li>for grounded parts at 690 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 690 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> </ul> | 30 mm<br>30 mm<br>9 mm<br><br>30 mm<br>30 mm<br>9 mm<br><br>30 mm<br>30 mm<br>9 mm<br><br>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm<br><br>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                  |
| product function removable terminal for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                                                                                                               |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control 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>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG cables 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>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG cables 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) |
| <ul style="list-style-type: none"> <li>tightening torque for main contacts with screw-type terminals</li> <li>tightening torque 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                                                                                                                                                                         |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                  |
| <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>                                   |                                                  |
| • 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>protection class IP on the front acc. to IEC 60529</b>                 | IP20                                             |
| <b>touch protection on the front acc. to IEC 60529</b>                    | finger-safe, for vertical contact from the front |
| <b>display version for switching status</b>                               | Handle                                           |

#### Certificates/ approvals

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



[Miscellaneous](#)



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

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)



[Vibration and Shock](#)

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

[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=3RV2411-0BA15>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2411-0BA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-0BA15>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2411-0BA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2411-0BA15&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-0BA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2411-0BA15&objecttype=14&gridview=view1>





