



circuit breaker frame size S00 for transformer protection thermal release 5.5...8 A short-circuit release 163 A screw terminal standard switching capacity with transverse auxiliary switch 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                                                      | 9.25 W                     |
| • at AC in hot operating state per pole                                             | 3.1 W                      |
| insulation voltage with degree of pollution 3 at AC rated value                     | 690 V                      |
| surge voltage resistance rated value                                                | 6 kV                       |
| shock resistance according to IEC 60068-2-27                                        | 25g / 11 ms                |
| mechanical service life (operating cycles)                                          |                            |
| • of the main contacts typical                                                      | 100 000                    |
| • of auxiliary contacts typical                                                     | 100 000                    |
| electrical endurance (operating cycles) typical                                     | 100 000                    |
| reference code according to IEC 81346-2                                             | Q                          |
| Substance Prohibitance (Date)                                                       | 10/01/2009                 |
| Net Weight                                                                          | 365 g                      |
| <b>Ambient conditions</b>                                                           |                            |
| installation altitude at height above sea level maximum                             | 2 000 m                    |
| ambient temperature                                                                 |                            |
| • during operation                                                                  | -20 ... +60 °C             |
| • during storage                                                                    | -50 ... +80 °C             |
| • during transport                                                                  | -50 ... +80 °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 | 5.5 ... 8 A                |
| type of voltage for main current circuit                                            | AC                         |
| operating voltage                                                                   |                            |
| • rated value                                                                       | 20 ... 690 V               |
| • at AC-3 rated value maximum                                                       | 690 V                      |

|                                                                      |              |
|----------------------------------------------------------------------|--------------|
| • at AC-3e rated value maximum                                       | 690 V        |
| <b>operating frequency rated value</b>                               | 50 ... 60 Hz |
| <b>operational current rated value</b>                               | 8 A          |
| <b>operational current</b>                                           |              |
| • at AC-3 at 400 V rated value                                       | 8 A          |
| • at AC-3e at 400 V rated value                                      | 8 A          |
| <b>operating power</b>                                               |              |
| • at AC-3                                                            |              |
| — at 230 V rated value                                               | 1.5 kW       |
| — at 400 V rated value                                               | 3 kW         |
| — at 500 V rated value                                               | 4 kW         |
| — at 690 V rated value                                               | 5.5 kW       |
| • at AC-3e                                                           |              |
| — at 230 V rated value                                               | 1.5 kW       |
| — at 400 V rated value                                               | 3 kW         |
| — at 500 V rated value                                               | 4 kW         |
| — at 690 V rated value                                               | 5.5 kW       |
| <b>operating frequency</b>                                           |              |
| • at AC-3 maximum                                                    | 15 1/h       |
| • at AC-3e maximum                                                   | 15 1/h       |
| <b>Auxiliary circuit</b>                                             |              |
| <b>design of the auxiliary switch</b>                                | transverse   |
| <b>type of voltage for auxiliary and control circuit</b>             | AC/DC        |
| <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>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                                         | 42 kA        |
| • at AC at 690 V rated value                                         | 6 kA         |
| <b>operating 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                                               | 42 kA        |
| • at 690 V rated value                                               | 4 kA         |
| response value current of instantaneous short-circuit trip unit      | 163 A        |
| <b>UL/CSA ratings</b>                                                |              |
| <b>full-load current (FLA) for 3-phase AC motor</b>                  |              |
| • at 480 V rated value                                               | 8 A          |
| • at 600 V rated value                                               | 8 A          |
| <b>yielded mechanical performance [hp]</b>                           |              |
| • for single-phase AC motor                                          |              |
| — at 110/120 V rated value                                           | 0.33 hp      |
| — at 230 V rated value                                               | 1 hp         |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 2 hp<br>2 hp<br>5 hp<br>5 hp                                                                                                                                                                 |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | C300 / R300                                                                                                                                                                                  |
| <b>UL File Number (CCN)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | E47705 (NLRV, NLRV7)                                                                                                                                                                         |
| <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> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A)                                                                                                      |
| <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 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | gL/gG 50 A<br>gL/gG 40 A<br>gL/gG 35 A                                                                                                                                                       |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                              |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | any                                                                                                                                                                                          |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | screw and snap-on mounting onto 35 mm DIN 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>• with side-by-side mounting at the side</li> <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> | 0 mm<br><br>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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                              |
| <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> </ul> </li> </ul>      | 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>              |
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>                                                    | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>for AWG cables for main contacts</li> </ul>                                                              | 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> </ul> </li> </ul> | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>                                                    | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>for AWG cables for auxiliary contacts</li> </ul>                                                         | 2x (20 ... 16), 2x (18 ... 14)                                        |
| <b>tightening torque</b>                                                                                                                        |                                                                       |
| <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>                                                   | 0.8 ... 1.2 N·m                                                       |
| <ul style="list-style-type: none"> <li>for auxiliary contacts with screw-type terminals</li> </ul>                                              | 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 size 2                                                       |
| <b>design of the thread of the connection screw</b>                                                                                             |                                                                       |
| <ul style="list-style-type: none"> <li>for main contacts</li> </ul>                                                                             | M3                                                                    |
| <ul style="list-style-type: none"> <li>of the auxiliary and control contacts</li> </ul>                                                         | M3                                                                    |

#### Safety related data

|                                                                                               |        |
|-----------------------------------------------------------------------------------------------|--------|
| product function suitable for safety function                                                 | Yes    |
| <b>suitability for use</b>                                                                    |        |
| <ul style="list-style-type: none"> <li>safety-related switching on</li> </ul>                 | No     |
| <ul style="list-style-type: none"> <li>safety-related switching OFF</li> </ul>                | Yes    |
| <b>service life maximum</b>                                                                   | 10 a   |
| <b>test wear-related service life necessary</b>                                               | Yes    |
| <b>proportion of dangerous failures</b>                                                       |        |
| <ul style="list-style-type: none"> <li>with low demand rate according to SN 31920</li> </ul>  | 40 %   |
| <ul style="list-style-type: none"> <li>with high demand rate according to SN 31920</li> </ul> | 50 %   |
| <b>B10 value with high demand rate according to SN 31920</b>                                  | 5 000  |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>                          | 50 FIT |

#### ISO 13849

|                                                            |     |
|------------------------------------------------------------|-----|
| <b>device type according to ISO 13849-1</b>                | 3   |
| <b>overdimensioning according to ISO 13849-2 necessary</b> | Yes |

#### IEC 61508

|                                                                                                                  |        |
|------------------------------------------------------------------------------------------------------------------|--------|
| <b>safety device type according to IEC 61508-2</b>                                                               | Type A |
| <b>T1 value</b>                                                                                                  |        |
| <ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul> | 10 a   |

#### Electrical Safety

|                                                                |                                                  |
|----------------------------------------------------------------|--------------------------------------------------|
| <b>protection class IP on the front according to IEC 60529</b> | IP20                                             |
| <b>touch protection on the front according to IEC 60529</b>    | finger-safe, for vertical contact from the front |

#### Display

|                                      |        |
|--------------------------------------|--------|
| display version for switching status | Handle |
|--------------------------------------|--------|

#### Approvals Certificates

##### Environmental Product Declaration

|                                                                                                            |           |
|------------------------------------------------------------------------------------------------------------|-----------|
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / during manufacturing</li> </ul> | 1.98 kg   |
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / during sales</li> </ul>         | 0.134 kg  |
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / during operation</li> </ul>     | 72.7 kg   |
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / after end of life</li> </ul>    | -0.116 kg |
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / total</li> </ul>                | 74.698 kg |

#### Environment

#### General Product Approval

[Environmental Confirmations](#)



Siemens  
EcoTech



#### General Product Approval

#### Maritime application



Maritime application

other



[Confirmation](#)



[Miscellaneous](#)

#### Further information

##### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

##### Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

##### 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=3RV2411-1HA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2411-1HA15>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2411-1HA15&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2411-1HA15&lang=en)

##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2411-1HA15>

##### Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)



