

Siemens  
EcoTech



Circuit breaker size S00 for motor protection, CLASS 10 A-release 0.11...0.16 A N-release 2.1 A Spring-type 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 motor 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                 |
| 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 Prohibition (Date)                                                        | 10/01/2009           |
| SVHC substance name                                                                 | Lead - 7439-92-1     |
| Net Weight                                                                          | 0.31 kg              |
| <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 | 0.11 ... 0.16 A      |
| type of voltage for main current circuit                                            | AC                   |
| operating voltage                                                                   |                      |
| • rated value                                                                       | 20 ... 690 V         |

|                                                                                                                                                                                                                                        |                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>                                                                                                                                                        | 690 V                               |
| <ul style="list-style-type: none"> <li>• at AC-3e rated value maximum</li> </ul>                                                                                                                                                       | 690 V                               |
| <b>operating frequency rated value</b>                                                                                                                                                                                                 | 50 ... 60 Hz                        |
| <b>operational current rated value</b>                                                                                                                                                                                                 | 0.16 A                              |
| <b>operational current</b>                                                                                                                                                                                                             |                                     |
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>                                                                                                                                                       | 0.16 A                              |
| <ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                                                                                                      | 0.16 A                              |
| <b>operating power</b>                                                                                                                                                                                                                 |                                     |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>  | 0 kW<br>0.04 kW<br>0.1 kW<br>0.1 kW |
| <ul style="list-style-type: none"> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul> | 0 kW<br>0.04 kW<br>0.1 kW<br>0.1 kW |
| <b>operating frequency</b>                                                                                                                                                                                                             |                                     |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                                                                                                                                    | 15 1/h                              |
| <ul style="list-style-type: none"> <li>• at AC-3e maximum</li> </ul>                                                                                                                                                                   | 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>                                                                                                                                                                              |                                     |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>                                                                                                                                                                            | 2 A                                 |
| <ul style="list-style-type: none"> <li>• at 120 V</li> </ul>                                                                                                                                                                           | 0.5 A                               |
| <ul style="list-style-type: none"> <li>• at 125 V</li> </ul>                                                                                                                                                                           | 0.5 A                               |
| <ul style="list-style-type: none"> <li>• at 230 V</li> </ul>                                                                                                                                                                           | 0.5 A                               |
| <b>operational current of auxiliary contacts at DC-13</b>                                                                                                                                                                              |                                     |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>                                                                                                                                                                            | 1 A                                 |
| <ul style="list-style-type: none"> <li>• at 60 V</li> </ul>                                                                                                                                                                            | 0.15 A                              |
| <b>Protective and monitoring functions</b>                                                                                                                                                                                             |                                     |
| <b>product function</b>                                                                                                                                                                                                                |                                     |
| <ul style="list-style-type: none"> <li>• ground fault detection</li> </ul>                                                                                                                                                             | No                                  |
| <ul style="list-style-type: none"> <li>• phase failure detection</li> </ul>                                                                                                                                                            | Yes                                 |
| <b>trip class</b>                                                                                                                                                                                                                      | CLASS 10                            |
| <b>design of the overload release</b>                                                                                                                                                                                                  | thermal                             |
| <b>maximum short-circuit current breaking capacity (Icu)</b>                                                                                                                                                                           |                                     |
| <ul style="list-style-type: none"> <li>• at AC at 240 V rated value</li> </ul>                                                                                                                                                         | 100 kA                              |
| <ul style="list-style-type: none"> <li>• at AC at 400 V rated value</li> </ul>                                                                                                                                                         | 100 kA                              |
| <ul style="list-style-type: none"> <li>• at AC at 500 V rated value</li> </ul>                                                                                                                                                         | 100 kA                              |
| <ul style="list-style-type: none"> <li>• at AC at 690 V rated value</li> </ul>                                                                                                                                                         | 100 kA                              |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b>                                                                                                                                                                   |                                     |
| <ul style="list-style-type: none"> <li>• at 240 V rated value</li> </ul>                                                                                                                                                               | 100 kA                              |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>                                                                                                                                                               | 100 kA                              |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>                                                                                                                                                               | 100 kA                              |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>                                                                                                                                                               | 100 kA                              |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                        | 2.1 A                               |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                  |                                     |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                                                                                                                                                                    |                                     |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>                                                                                                                                                               | 0.16 A                              |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                                                               | 0.16 A                              |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                            | C300 / R300                         |
| <b>Category Control Number (CCN)</b>                                                                                                                                                                                                   | E156943 (NKJH, NKJH7)               |
| <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>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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 106 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>30 mm<br>30 mm<br>9 mm<br>30 mm<br>30 mm<br>9 mm<br>30 mm<br>30 mm<br>9 mm<br>30 mm<br>30 mm<br>9 mm<br>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm<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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | spring-loaded terminals<br>spring-loaded 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> <li>finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2x (0.5 ... 4 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 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> <li>finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for auxiliary contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14)                                                                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| design of screwdriver shaft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Diameter 3 mm                                    |
| size of the screwdriver tip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3,0 x 0,5 mm                                     |
| Safety related data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |
| product function suitable for safety function                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Yes                                              |
| suitability for use                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                  |
| • safety-related switching on                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                                               |
| • safety-related switching OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Yes                                              |
| service life maximum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10 a                                             |
| test wear-related service life necessary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Yes                                              |
| proportion of dangerous failures                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                  |
| • with low demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 40 %                                             |
| • with high demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50 %                                             |
| B10 value with high demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5 000                                            |
| failure rate [FIT] with low demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50 FIT                                           |
| ISO 13849                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                  |
| device type according to ISO 13849-1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 3                                                |
| overdimensioning according to ISO 13849-2 necessary                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                                              |
| IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                  |
| safety device type according to IEC 61508-2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Type A                                           |
| T1 value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |
| • for proof test interval or service life according to IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 10 a                                             |
| Electrical Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                  |
| protection class IP on the front according to IEC 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | IP20                                             |
| touch protection on the front according to IEC 60529                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | finger-safe, for vertical contact from the front |
| Display                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                  |
| display version for switching status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Handle                                           |
| Approvals Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                  |
| Environmental Product Declaration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                  |
| • global warming potential [CO2 eq] / during manufacturing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1.98 kg                                          |
| • global warming potential [CO2 eq] / during sales                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0.134 kg                                         |
| • global warming potential [CO2 eq] / during operation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 72.7 kg                                          |
| • global warming potential [CO2 eq] / after end of life                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -0.116 kg                                        |
| • global warming potential [CO2 eq] / total                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 74.698 kg                                        |
| Environment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                  |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |
| <div><div><a href="#">Environmental Conformations</a></div></div> |                                                  |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                  |
| For use in hazardous locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                  |
| <div><div></div></div>                                           |                                                  |
| For use in hazardous locations                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Test Certificates                                |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                  |
| <div><div><a href="#">Type Test Certificates/Test Report</a><a href="#">Special Test Certificate</a></div></div>                                                                                                                        |                                                  |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | other                                            |



Miscellaneous



Confirmation

other

Railway



[Special Test Certificate](#)

[Confirmation](#)

#### 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=3RV2011-0AA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-0AA25>

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

[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-0AA25&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-0AA25&lang=en)

##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-0AA25>

##### 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>)



