

Circuit breaker size S00 for motor protection, CLASS 10 A-release 0.7...1 A N-release 13 A screw terminal Standard switching capacity Multi-unit packaging Pack = 24 units

|                                                                                                |                        |
|------------------------------------------------------------------------------------------------|------------------------|
| product brand name                                                                             | SIRIUS                 |
| product designation                                                                            | Circuit breaker        |
| design of the product                                                                          | For motor protection   |
| product type designation                                                                       | 3RV2                   |
| <b>General technical data</b>                                                                  |                        |
| Product equipment of circuit breaker for motor protection complete unit with protection device | Yes                    |
| size of the circuit-breaker                                                                    | S00                    |
| size of contactor can be combined company-specific                                             | S00, S0                |
| product function disconnecter functionality                                                    | Yes                    |
| product extension auxiliary switch                                                             | Yes                    |
| power loss [W] for rated value of the current                                                  |                        |
| • at AC in hot operating state                                                                 | 7.25 W                 |
| • at AC in hot operating state per pole                                                        | 2.4 W                  |
| type of calculation of power loss current-dependent                                            | quadratic              |
| insulation voltage with degree of pollution 3 at AC rated value                                | 690 V                  |
| surge voltage resistance rated value                                                           | 6 kV                   |
| maximum permissible voltage for protective separation                                          |                        |
| • in networks with ungrounded star point between main and auxiliary circuit                    | 400 V                  |
| • in networks with grounded star point between main and auxiliary circuit                      | 400 V                  |
| protection class IP                                                                            |                        |
| • on the front according to IEC 60529                                                          | IP20                   |
| • on the front                                                                                 | IP20                   |
| • of the terminal                                                                              | IP20                   |
| 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                      |
| continuous current rated value                                                                 | 1 A                    |
| Substance Prohibitance (day/month/year)                                                        | 10/01/2009             |
| SVHC substance name                                                                            | Lead CAS-No. 7439-92-1 |
| Net Weight                                                                                     | 0.345 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         |
| temperature compensation                                                                       | -20 ... +60 °C         |
| relative humidity during operation                                                             | 10 ... 95 %            |
| <b>Main circuit</b>                                                                            |                        |
| number of poles for main current circuit                                                       | 3                      |
| adjustable current response value current of the current-dependent overload release            | 0.7 ... 1 A            |
| type of voltage for main current circuit                                                       | AC                     |
| operating voltage                                                                              |                        |

|                                                                                                                                                                                                                                        |                                       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                                                                                        | 690 V                                 |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                                                                                        | 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>                                                                                                                                                                                                 | 1 A                                   |
| <b>operational current</b>                                                                                                                                                                                                             |                                       |
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>                                                                                                                                                       | 1 A                                   |
| <ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                                                                                                      | 1 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>  | 0.2 kW<br>0.25 kW<br>0.4 kW<br>0.6 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> | 0.2 kW<br>0.25 kW<br>0.4 kW<br>0.6 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>type of voltage for auxiliary and control circuit</b>                                                                                                                                                                               | AC/DC                                 |
| <b>number of NC contacts for auxiliary contacts</b>                                                                                                                                                                                    | 0                                     |
| <b>number of NO contacts for auxiliary contacts</b>                                                                                                                                                                                    | 0                                     |
| number of CO contacts for auxiliary contacts                                                                                                                                                                                           | 0                                     |
| <b>Protective and monitoring functions</b>                                                                                                                                                                                             |                                       |
| <b>product function</b>                                                                                                                                                                                                                |                                       |
| <ul style="list-style-type: none"> <li>• ground fault detection</li> </ul>                                                                                                                                                             | No                                    |
| <ul style="list-style-type: none"> <li>• phase failure detection</li> </ul>                                                                                                                                                            | 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                                                                                                                                                                        | 13 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>                                                                                                                                                               | 1 A                                   |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                                                                                               | 1 A                                   |
| <b>yielded mechanical performance [hp]</b>                                                                                                                                                                                             |                                       |
| <ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 575/600 V rated value</li> </ul> </li> </ul>                                                                                 | 0.5 hp                                |
| <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 for IT network for short-circuit protection of the main circuit</b>                                                                                                                                         |                                       |
| <ul style="list-style-type: none"> <li>• at 500 V</li> </ul>                                                                                                                                                                           | gL/gG 10 A                            |

|                                                                                                                                                 |                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| • at 690 V                                                                                                                                      | gL/gG 10 A                                                               |
| certificate of suitability according to ATEX directive 2014/34/EU                                                                               | DMT 02 ATEX F 001                                                        |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                                                                                | Ex II (2) GD                                                             |
| <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>Mounting method of circuit breaker for Transformer protection, Generator protection and system protection optional standard bar mounting</b> | Yes                                                                      |
| <b>height</b>                                                                                                                                   | 97 mm                                                                    |
| <b>width</b>                                                                                                                                    | 45 mm                                                                    |
| <b>depth</b>                                                                                                                                    | 97 mm                                                                    |
| <b>required spacing</b>                                                                                                                         |                                                                          |
| • with side-by-side mounting                                                                                                                    |                                                                          |
| — forwards                                                                                                                                      | 0 mm                                                                     |
| — backwards                                                                                                                                     | 0 mm                                                                     |
| — upwards                                                                                                                                       | 50 mm                                                                    |
| — downwards                                                                                                                                     | 50 mm                                                                    |
| — at the side                                                                                                                                   | 0 mm                                                                     |
| • for grounded parts                                                                                                                            |                                                                          |
| — forwards                                                                                                                                      | 0 mm                                                                     |
| — backwards                                                                                                                                     | 0 mm                                                                     |
| — upwards                                                                                                                                       | 50 mm                                                                    |
| — at the side                                                                                                                                   | 30 mm                                                                    |
| — downwards                                                                                                                                     | 50 mm                                                                    |
| • for live parts                                                                                                                                |                                                                          |
| — forwards                                                                                                                                      | 0 mm                                                                     |
| — backwards                                                                                                                                     | 0 mm                                                                     |
| — upwards                                                                                                                                       | 50 mm                                                                    |
| — downwards                                                                                                                                     | 50 mm                                                                    |
| — at the side                                                                                                                                   | 30 mm                                                                    |
| • for grounded parts at 400 V                                                                                                                   |                                                                          |
| — downwards                                                                                                                                     | 30 mm                                                                    |
| — upwards                                                                                                                                       | 30 mm                                                                    |
| — at the side                                                                                                                                   | 9 mm                                                                     |
| • for live parts at 400 V                                                                                                                       |                                                                          |
| — downwards                                                                                                                                     | 30 mm                                                                    |
| — upwards                                                                                                                                       | 30 mm                                                                    |
| — at the side                                                                                                                                   | 9 mm                                                                     |
| • for grounded parts at 500 V                                                                                                                   |                                                                          |
| — downwards                                                                                                                                     | 30 mm                                                                    |
| — upwards                                                                                                                                       | 30 mm                                                                    |
| — at the side                                                                                                                                   | 9 mm                                                                     |
| • for live parts at 500 V                                                                                                                       |                                                                          |
| — downwards                                                                                                                                     | 30 mm                                                                    |
| — upwards                                                                                                                                       | 30 mm                                                                    |
| — at the side                                                                                                                                   | 9 mm                                                                     |
| • for grounded parts at 690 V                                                                                                                   |                                                                          |
| — downwards                                                                                                                                     | 50 mm                                                                    |
| — upwards                                                                                                                                       | 50 mm                                                                    |
| — backwards                                                                                                                                     | 0 mm                                                                     |
| — at the side                                                                                                                                   | 30 mm                                                                    |
| — forwards                                                                                                                                      | 0 mm                                                                     |
| • for live parts at 690 V                                                                                                                       |                                                                          |
| — downwards                                                                                                                                     | 50 mm                                                                    |
| — upwards                                                                                                                                       | 50 mm                                                                    |
| — backwards                                                                                                                                     | 0 mm                                                                     |
| — at the side                                                                                                                                   | 30 mm                                                                    |
| — forwards                                                                                                                                      | 0 mm                                                                     |

|                                                                                                                                                                                       |                                                                                                                                                            |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Connections/ Terminals</b>                                                                                                                                                         |                                                                                                                                                            |
| <b>product component removable terminal for auxiliary and control circuit</b>                                                                                                         | No                                                                                                                                                         |
| <b>type of electrical connection</b><br>• for main current circuit                                                                                                                    | screw-type terminals                                                                                                                                       |
| <b>arrangement of electrical connectors for main current circuit</b>                                                                                                                  | Top and bottom                                                                                                                                             |
| <b>type of connectable conductor cross-sections</b><br>• for main contacts<br>— solid or stranded<br>— finely stranded with core end processing<br>• for AWG cables for main contacts | 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup><br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (18 ... 14), 2x 12 |
| <b>connectable conductor cross-section for main contacts</b><br>• solid or stranded<br>• finely stranded with core end processing                                                     | 0.75 ... 4 mm <sup>2</sup><br>0.5 ... 2.5 mm <sup>2</sup>                                                                                                  |
| <b>AWG number as coded connectable conductor cross section for main contacts</b>                                                                                                      | 18 ... 12                                                                                                                                                  |
| <b>tightening torque</b><br>• for main contacts with screw-type terminals                                                                                                             | 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><br>• for main contacts                                                                                                            | M3                                                                                                                                                         |
| <b>Safety related data</b>                                                                                                                                                            |                                                                                                                                                            |
| product function suitable for safety function                                                                                                                                         | Yes                                                                                                                                                        |
| <b>suitability for use</b><br>• safety-related switching on<br>• safety-related switching OFF                                                                                         | No<br>Yes                                                                                                                                                  |
| <b>service life maximum</b>                                                                                                                                                           | 10 a                                                                                                                                                       |
| <b>test wear-related service life necessary</b>                                                                                                                                       | Yes                                                                                                                                                        |
| <b>proportion of dangerous failures</b><br>• with low demand rate according to SN 31920<br>• with high demand rate according to SN 31920                                              | 40 %<br>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                                                                                                                                                     |
| <b>ISO 13849</b>                                                                                                                                                                      |                                                                                                                                                            |
| <b>device type according to ISO 13849-1</b>                                                                                                                                           | 3                                                                                                                                                          |
| <b>overdimensioning according to ISO 13849-2 necessary</b>                                                                                                                            | Yes                                                                                                                                                        |
| <b>IEC 61508</b>                                                                                                                                                                      |                                                                                                                                                            |
| <b>safety device type according to IEC 61508-2</b>                                                                                                                                    | Type A                                                                                                                                                     |
| <b>T1 value</b><br>• for proof test interval or service life according to IEC 61508                                                                                                   | 10 a                                                                                                                                                       |
| <b>Electrical Safety</b>                                                                                                                                                              |                                                                                                                                                            |
| <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                                                                                                           |
| <b>Display</b>                                                                                                                                                                        |                                                                                                                                                            |
| display version for switching status                                                                                                                                                  | Handle                                                                                                                                                     |
| <b>Approvals Certificates</b>                                                                                                                                                         |                                                                                                                                                            |
| <b>Environmental Product Declaration</b>                                                                                                                                              |                                                                                                                                                            |
| • global warming potential [CO <sub>2</sub> eq] / during manufacturing                                                                                                                | 1.98 kg                                                                                                                                                    |
| • global warming potential [CO <sub>2</sub> eq] / during sales                                                                                                                        | 0.134 kg                                                                                                                                                   |
| • global warming potential [CO <sub>2</sub> eq] / during operation                                                                                                                    | 72.7 kg                                                                                                                                                    |
| • global warming potential [CO <sub>2</sub> eq] / after end of life                                                                                                                   | -0.116 kg                                                                                                                                                  |
| • global warming potential [CO <sub>2</sub> eq] / total                                                                                                                               | 74.698 kg                                                                                                                                                  |
| <b>Environment</b>                                                                                                                                                                    | <b>General Product Approval</b>                                                                                                                            |

[Environmental Con-  
firmations](#)

Siemens  
EcoTech



#### General Product Approval

#### For use in hazardous locations



#### Test Certificates

#### Maritime application

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



#### Maritime application

#### other



[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)



#### Railway

[Confirmation](#)

[Special Test Certificate](#)

#### 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=3RV2011-0JA10-Z W96>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-0JA10-Z W96>

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

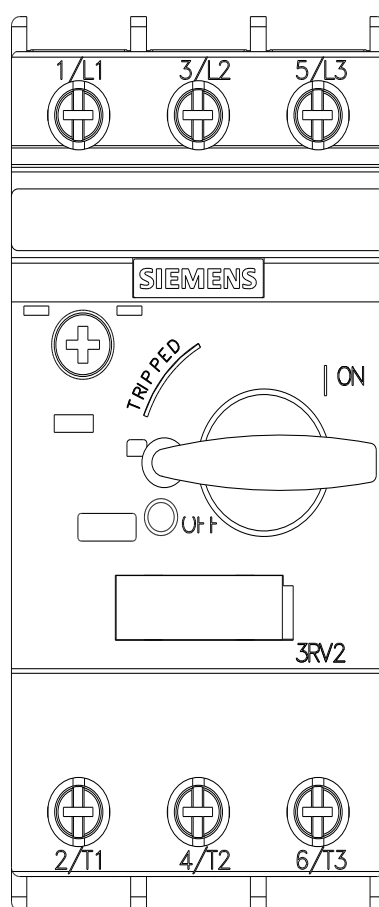
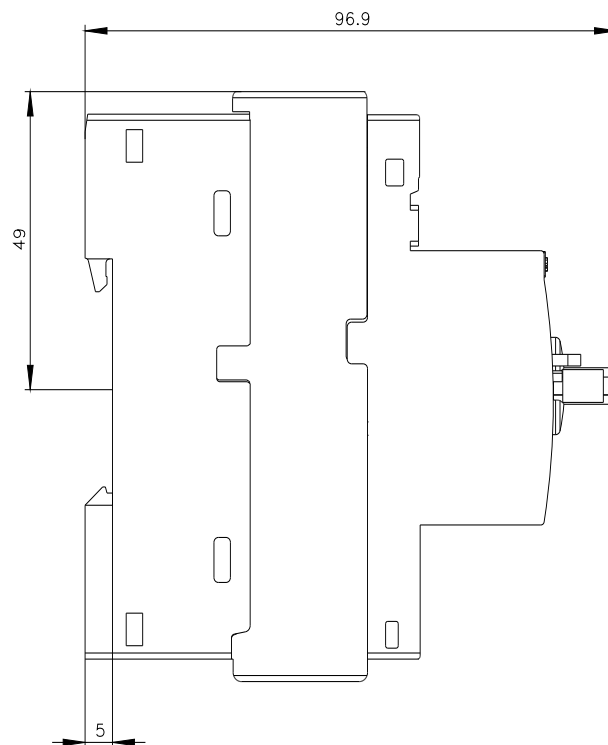
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-0JA10-Z W96&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-0JA10-Z W96&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-0JA10-Z W96>

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>)





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