

Siemens  
EcoTech



Special type Circuit breaker size S00 for motor protection, CLASS 10 A-release 2.8...4 A N release 52 A screw terminal Standard switching capacity Ambient temperature -50 °C 500 switching cycles

|                                                                                                |                        |
|------------------------------------------------------------------------------------------------|------------------------|
| 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                                                                 | 500                    |
| • of auxiliary contacts typical                                                                | 500                    |
| electrical endurance (operating cycles) typical                                                | 500                    |
| reference code according to IEC 81346-2                                                        | Q                      |
| continuous current rated value                                                                 | 4 A                    |
| Substance Prohibitance (day/month/year)                                                        | 10/01/2009             |
| SVHC substance name                                                                            | Lead CAS-No. 7439-92-1 |
| Net Weight                                                                                     | 340 g                  |
| <b>Ambient conditions</b>                                                                      |                        |

|                                                                                                |                |
|------------------------------------------------------------------------------------------------|----------------|
| installation altitude at height above sea level maximum                                        | 2 000 m        |
| <b>ambient temperature</b>                                                                     |                |
| • during operation                                                                             | -50 ... +60 °C |
| • during storage                                                                               | -50 ... +80 °C |
| • during transport                                                                             | -50 ... +80 °C |
| <b>temperature compensation</b>                                                                | -20 ... +60 °C |
| relative humidity during operation                                                             | 10 ... 95 %    |
| <b>Main circuit</b>                                                                            |                |
| <b>number of poles for main current circuit</b>                                                | 3              |
| <b>adjustable current response value current of the current-dependent overload release</b>     | 2.8 ... 4 A    |
| <b>type of voltage for main current circuit</b>                                                | AC             |
| <b>operating voltage</b>                                                                       |                |
| • rated value                                                                                  | 690 V          |
| • rated value                                                                                  | 20 ... 690 V   |
| • at AC-3 rated value maximum                                                                  | 690 V          |
| <b>operating frequency rated value</b>                                                         | 50 ... 60 Hz   |
| <b>operational current rated value</b>                                                         | 4 A            |
| <b>operational current</b>                                                                     |                |
| • at AC-3 at 400 V rated value                                                                 | 4 A            |
| <b>operating power</b>                                                                         |                |
| • at AC-3                                                                                      |                |
| — at 230 V rated value                                                                         | 0.8 kW         |
| — at 400 V rated value                                                                         | 1.5 kW         |
| — at 500 V rated value                                                                         | 2.2 kW         |
| — at 690 V rated value                                                                         | 3 kW           |
| <b>operating frequency</b>                                                                     |                |
| • at AC-3 maximum                                                                              | 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              |
| <b>number of CO contacts for auxiliary contacts</b>                                            | 0              |
| <b>Protective and monitoring functions</b>                                                     |                |
| <b>product function</b>                                                                        |                |
| • ground fault detection                                                                       | No             |
| • phase failure detection                                                                      | Yes            |
| <b>trip class</b>                                                                              | CLASS 10       |
| <b>design of the overload release</b>                                                          | thermal        |
| <b>protection function thermal overload protection (ANSI 49)</b>                               | Yes            |
| <b>maximum short-circuit current breaking capacity (Icu)</b>                                   |                |
| • at AC at 240 V rated value                                                                   | 100 kA         |
| • at AC at 400 V rated value                                                                   | 100 kA         |
| • at AC at 500 V rated value                                                                   | 100 kA         |
| • at AC at 690 V rated value                                                                   | 6 kA           |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b>                           |                |
| • at 240 V rated value                                                                         | 100 kA         |
| • at 400 V rated value                                                                         | 100 kA         |
| • at 500 V rated value                                                                         | 100 kA         |
| • at 690 V rated value                                                                         | 4 kA           |
| response value current of instantaneous short-circuit trip unit                                | 52 A           |
| <b>Short-circuit protection</b>                                                                |                |
| <b>product function short circuit protection</b>                                               | Yes            |
| <b>design of the short-circuit trip</b>                                                        | magnetic       |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> |                |
| • at 400 V                                                                                     | gG 32 A        |
| • at 500 V                                                                                     | gG 32 A        |
| • at 690 V                                                                                     | gG 25 A        |

**Installation/ mounting/ dimensions**

|                                                                                                                                                 |                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <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>                                                                                                            |                                                                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------|
| • 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |
| • for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |
| — solid or stranded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup>                                    |
| — finely stranded with core end processing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                       |
| <b>connectable conductor cross-section for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                             |
| • solid or stranded                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0.75 ... 4 mm <sup>2</sup>                                                                  |
| • finely stranded with core end processing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.5 ... 2.5 mm <sup>2</sup>                                                                 |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                             |
| • 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                             |
| • for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | M3                                                                                          |
| IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                             |
| <b>T1 value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                             |
| • for proof test interval or service life according to IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 10 a                                                                                        |
| Electrical Safety                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                             |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              | IP20                                                                                        |
| <b>touch protection on the front according to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | finger-safe, for vertical contact from the front                                            |
| Display                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                             |
| display version for switching status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Handle                                                                                      |
| Approvals Certificates                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                             |
| Environmental Product Declaration                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                             |
| • 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                                                                    |
| <a href="#">Environmental Confirmations</a>                                              |                                                                                             |
| General Product Approval                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Test Certificates                                                                           |
|                                                                                                                                                                                 | <a href="#">Special Test Certificate</a> <a href="#">Type Test Certificates/Test Report</a> |
| Maritime application                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                             |
|       |                                                                                             |
| other                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Railway                                                                                     |
| <a href="#">Confirmation</a> <a href="#">Miscellaneous</a> <a href="#">Confirmation</a> <a href="#">Miscellaneous</a>                                                                                                                                                                                                                                                                                                                  | <a href="#">Confirmation</a>                                                                |

[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=3RV2011-1EA10-0BA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1EA10-0BA0>

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

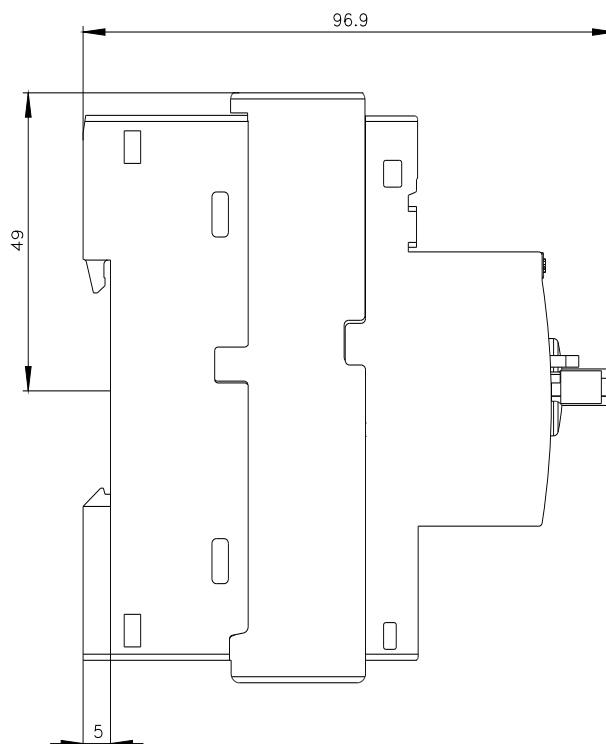
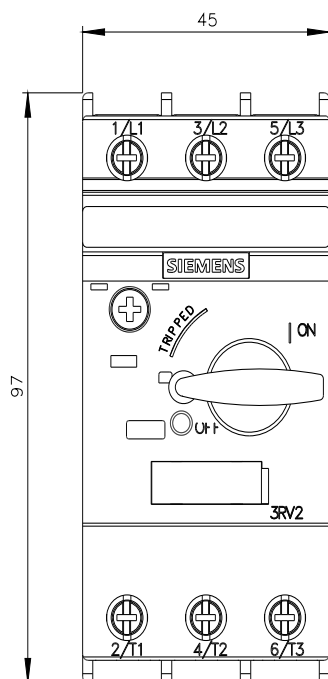
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-1EA10-0BA0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1EA10-0BA0&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1EA10-0BA0>

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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