

Siemens  
EcoTech



Circuit breaker size S00 for motor protection, CLASS 10 A-release 9...12 A N-release 163 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC



|                                                                 |                      |
|-----------------------------------------------------------------|----------------------|
| product brand name                                              | SIRIUS               |
| product designation                                             | Circuit breaker      |
| design of the product                                           | For motor protection |
| product type designation                                        | 3RV2                 |
| <b>General technical data</b>                                   |                      |
| size of the circuit-breaker                                     | S00                  |
| size of contactor can be combined company-specific              | S00, S0              |
| product extension auxiliary switch                              | Yes                  |
| power loss [W] for rated value of the current                   |                      |
| • at AC in hot operating state                                  | 9.25 W               |
| • at AC in hot operating state per pole                         | 3.1 W                |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V                |
| surge voltage resistance rated value                            | 6 kV                 |
| shock resistance according to IEC 60068-2-27                    | 25g / 11 ms          |
| mechanical service life (operating cycles)                      |                      |
| • of the main contacts typical                                  | 100 000              |
| • of auxiliary contacts typical                                 | 100 000              |
| electrical endurance (operating cycles) typical                 | 100 000              |
| reference code according to IEC 81346-2                         | Q                    |
| Substance Prohibitance (Date)                                   | 10/01/2009           |
| Net Weight                                                      | 386 g                |
| <b>Ambient conditions</b>                                       |                      |
| installation altitude at height above sea level maximum         | 2 000 m              |
| ambient temperature                                             |                      |
| • during operation                                              | -20 ... +60 °C       |
| • during storage                                                | -50 ... +80 °C       |
| • during transport                                              | -50 ... +80 °C       |
| relative humidity during operation                              | 10 ... 95 %          |
| <b>Environmental footprint</b>                                  |                      |
| Environmental Product Declaration (EPD)                         | Yes                  |
| global warming potential [CO2 eq] total                         | 74.698 kg            |
| 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            |
| Siemens Eco Profile (SEP)                                       | Siemens EcoTech      |

| Main circuit                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                              |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------|
| number of poles for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                            | 3                                                                            |
| adjustable current response value current of the current-dependent overload release                                                                                                                                                                                                                                                                                                                                                                 | 9 ... 12.5 A                                                                 |
| type of voltage for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                            | AC                                                                           |
| operating voltage <ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> <li>• at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                                                                                    | 20 ... 690 V<br>690 V<br>690 V                                               |
| operating frequency rated value                                                                                                                                                                                                                                                                                                                                                                                                                     | 50 ... 60 Hz                                                                 |
| operational current rated value                                                                                                                                                                                                                                                                                                                                                                                                                     | 12.5 A                                                                       |
| operational current <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                       | 12.5 A<br>12.5 A                                                             |
| operating power <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> <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> | 3 kW<br>5.5 kW<br>7.5 kW<br>7.5 kW<br><br>3 kW<br>5.5 kW<br>7.5 kW<br>7.5 kW |
| operating frequency <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> <li>• at AC-3e maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                 | 15 1/h<br>15 1/h                                                             |
| Auxiliary circuit                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                              |
| design of the auxiliary switch                                                                                                                                                                                                                                                                                                                                                                                                                      | transverse                                                                   |
| type of voltage for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                   | AC/DC                                                                        |
| number of NC contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                        | 1                                                                            |
| number of NO contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                        | 1                                                                            |
| number of CO contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                        | 0                                                                            |
| operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> </ul>                                                                                                                                                                                                                                                                          | 2 A<br>0.5 A<br>0.5 A<br>0.5 A                                               |
| operational current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> </ul>                                                                                                                                                                                                                                                                                                                   | 1 A<br>0.15 A                                                                |
| Protective and monitoring functions                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                              |
| product function <ul style="list-style-type: none"> <li>• ground fault detection</li> <li>• phase failure detection</li> </ul>                                                                                                                                                                                                                                                                                                                      | No<br>Yes                                                                    |
| trip class                                                                                                                                                                                                                                                                                                                                                                                                                                          | CLASS 10                                                                     |
| design of the overload release                                                                                                                                                                                                                                                                                                                                                                                                                      | thermal                                                                      |
| maximum short-circuit current breaking capacity (I <sub>cu</sub> ) <ul style="list-style-type: none"> <li>• at AC at 240 V rated value</li> <li>• at AC at 400 V rated value</li> <li>• at AC at 500 V rated value</li> <li>• at AC at 690 V rated value</li> </ul>                                                                                                                                                                                 | 100 kA<br>100 kA<br>42 kA<br>6 kA                                            |
| operating short-circuit current breaking capacity (I <sub>cs</sub> ) at AC <ul style="list-style-type: none"> <li>• at 240 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>                                                                                                                                                                                                 | 100 kA<br>100 kA<br>42 kA<br>4 kA                                            |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                                                     | 163 A                                                                        |

| UL/CSA ratings                                                                                 |                                                                                         |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>full-load current (FLA) for 3-phase AC motor</b>                                            |                                                                                         |
| • at 480 V rated value                                                                         | 12.5 A                                                                                  |
| • at 600 V rated value                                                                         | 12.5 A                                                                                  |
| <b>yielded mechanical performance [hp]</b>                                                     |                                                                                         |
| • for single-phase AC motor                                                                    |                                                                                         |
| — at 110/120 V rated value                                                                     | 0.5 hp                                                                                  |
| — at 230 V rated value                                                                         | 2 hp                                                                                    |
| • for 3-phase AC motor                                                                         |                                                                                         |
| — at 200/208 V rated value                                                                     | 3 hp                                                                                    |
| — at 220/230 V rated value                                                                     | 3 hp                                                                                    |
| — at 460/480 V rated value                                                                     | 8 hp                                                                                    |
| — at 575/600 V rated value                                                                     | 10 hp                                                                                   |
| <b>contact rating of auxiliary contacts according to UL</b>                                    | C300 / R300                                                                             |
| <b>Category Control Number (CCN)</b>                                                           | E156943 (NKJH, NKJH7)                                                                   |
| Short-circuit protection                                                                       |                                                                                         |
| <b>product function short circuit protection</b>                                               | Yes                                                                                     |
| <b>design of the short-circuit trip</b>                                                        | magnetic                                                                                |
| <b>design of the fuse link</b>                                                                 |                                                                                         |
| • for short-circuit protection of the auxiliary switch required                                | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A) |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> |                                                                                         |
| • at 400 V                                                                                     | gL/gG 63 A                                                                              |
| • at 500 V                                                                                     | gL/gG 50 A                                                                              |
| • at 690 V                                                                                     | gL/gG 40 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>height</b>                                                                                  | 106 mm                                                                                  |
| <b>width</b>                                                                                   | 45 mm                                                                                   |
| <b>depth</b>                                                                                   | 97 mm                                                                                   |
| <b>required spacing</b>                                                                        |                                                                                         |
| • with side-by-side mounting at the side                                                       | 0 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>type of electrical connection</b>                                 |                                                  |
| • for main current circuit                                           | spring-loaded terminals                          |
| • for auxiliary and control circuit                                  | spring-loaded 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 (0,5 ... 4 mm <sup>2</sup> )                  |
| — finely stranded with core end processing                           | 2x (0,5 ... 2,5 mm <sup>2</sup> )                |
| — finely stranded without core end processing                        | 2x (0,5 ... 2,5 mm <sup>2</sup> )                |
| • for AWG cables for main contacts                                   | 2x (20 ... 12)                                   |
| <b>type of connectable conductor cross-sections</b>                  |                                                  |
| • for auxiliary contacts                                             |                                                  |
| — solid or stranded                                                  | 2x (0,5 ... 2,5 mm <sup>2</sup> )                |
| — finely stranded with core end processing                           | 2x (0,5 ... 1,5 mm <sup>2</sup> )                |
| — finely stranded without core end processing                        | 2x (0,5 ... 1,5 mm <sup>2</sup> )                |
| • for AWG cables for auxiliary contacts                              | 2x (20 ... 14)                                   |
| <b>design of screwdriver shaft</b>                                   | Diameter 3 mm                                    |
| <b>size of the screwdriver tip</b>                                   | 3,0 x 0,5 mm                                     |
| <b>Safety related data</b>                                           |                                                  |
| product function suitable for safety function                        | Yes                                              |
| <b>suitability for use</b>                                           |                                                  |
| • safety-related switching on                                        | No                                               |
| • safety-related switching OFF                                       | Yes                                              |
| <b>service life maximum</b>                                          | 10 a                                             |
| <b>test wear-related service life necessary</b>                      | Yes                                              |
| <b>proportion of dangerous failures</b>                              |                                                  |
| • with low demand rate according to SN 31920                         | 40 %                                             |
| • with high demand rate according to SN 31920                        | 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>                                                      |                                                  |
| • 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>General Product Approval</b>                                      |                                                  |



[KC](#)



General Product Approval

For use in hazardous locations

Test Certificates



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

#### Maritime application



#### other

[Miscellaneous](#)



[Confirmation](#)



[Confirmation](#)

[Special Test Certificate](#)

#### Environment



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[Environmental Confirmations](#)

#### 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=3RV2011-1KA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1KA25>

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

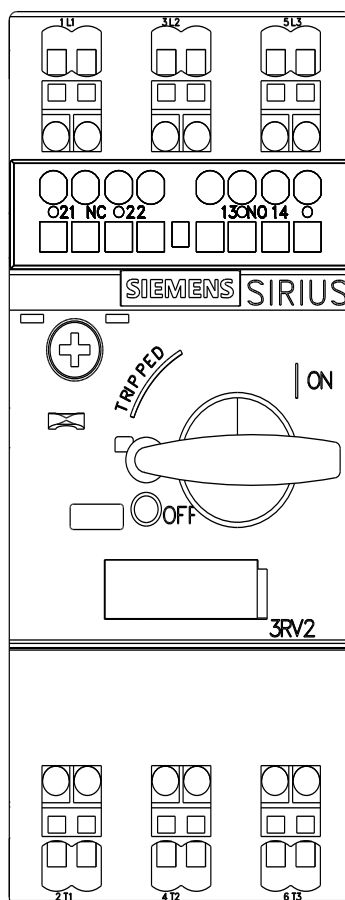
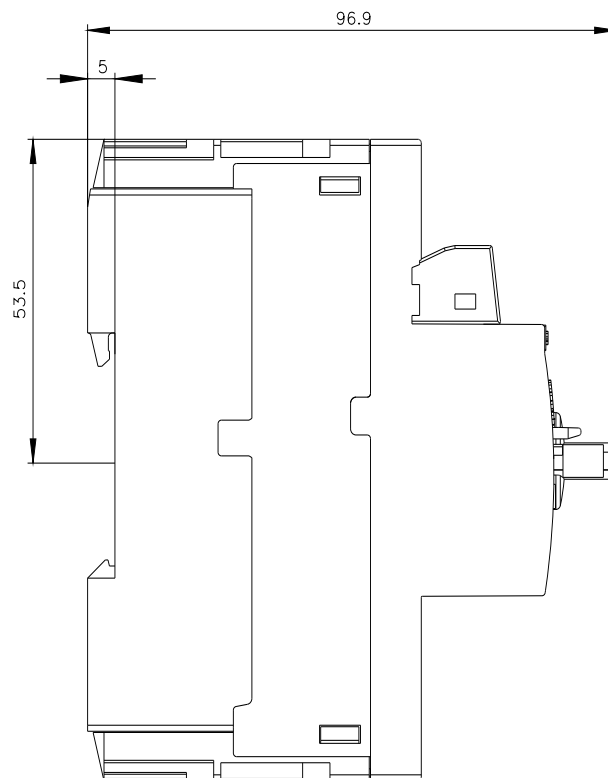
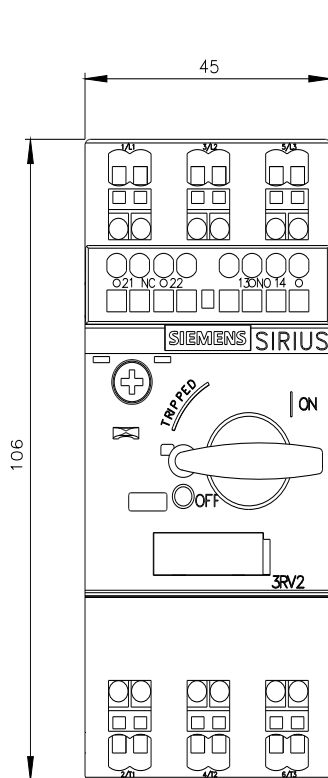
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-1KA25&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1KA25&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1KA25>

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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