



Circuit breaker size S00 for motor protection, CLASS 10 A-release 10...16 A N-release 208 A Spring-type terminal Standard switching capacity

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| <b>product brand name</b>  | SIRIUS               |
| <b>product designation</b>   | Circuit breaker      |
| <b>design of the product</b>   | For motor protection |
| <b>product type designation</b>  | 3RV2                 |
| <b>General technical data</b>  |                      |
| <b>size of the circuit-breaker</b>   | S00                  |
| <b>size of contactor can be combined company-specific</b>                                  | S00, S0              |
| product extension auxiliary switch   | Yes                  |
| <b>power loss [W] for rated value of the current</b>                                       |                      |
| • 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                |
| <b>surge voltage resistance rated value</b>  | 6 kV                 |
| <b>shock resistance according to IEC 60068-2-27</b>  | 25g / 11 ms          |
| <b>mechanical service life (operating cycles)</b>  |                      |
| • of the main contacts typical   | 100 000              |
| • of auxiliary contacts typical  | 100 000              |
| electrical endurance (operating cycles) typical  | 100 000              |
| <b>reference code according to IEC 81346-2</b>   | Q                    |
| <b>Substance Prohibition (Date)</b>  | 10/01/2009           |
| <b>Net Weight</b>  | 379 g                |
| <b>Ambient conditions</b>  |                      |
| installation altitude at height above sea level maximum                                    | 2 000 m              |
| <b>ambient temperature</b>   |                      |
| • during operation   | -20 ... +60 °C       |
| • during storage   | -50 ... +80 °C       |
| • during transport   | -50 ... +80 °C       |
| relative humidity during operation   | 10 ... 95 %          |
| <b>Main circuit</b>  |                      |
| <b>number of poles for main current circuit</b>  | 3                    |
| <b>adjustable current response value current of the current-dependent overload release</b> | 10 ... 16 A          |
| <b>type of voltage for main current circuit</b>  | AC                   |
| <b>operating voltage</b>   |                      |
| • rated value  | 20 ... 690 V         |
| • at AC-3 rated value maximum  | 690 V                |

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| <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>  | 16 A   |
| <b>operational current</b>  |  |
| <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>   | 16 A<br>16 A   |
| <b>operating power</b>  |  |
| <ul style="list-style-type: none"> <li>● at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> <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> | 4 kW<br>7.5 kW<br>7.5 kW<br>11 kW<br>4 kW<br>7.5 kW<br>7.5 kW<br>11 kW |
| <b>operating frequency</b>  |  |
| <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   |

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| <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> <li>● phase failure detection</li> </ul>  | No<br>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> <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>55 kA<br>10 kA<br>4 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> <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>30 kA<br>5 kA<br>2 kA  |
| response value current of instantaneous short-circuit trip unit  | 208 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> <li>● at 600 V rated value</li> </ul>  | 16 A<br>16 A                                |
| <b>yielded mechanical performance [hp]</b>  |   |
| <ul style="list-style-type: none"> <li>● for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> <li>● for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul> </li> </ul> | 1 hp<br>2 hp<br>3 hp<br>5 hp<br>10 hp       |
| <b>UL File Number (CCN)</b>   | E47705 (NLRV, NLRV7), E156943 (NKJH, NKJH7) |

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|---|----------|
| <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</b> |          |

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|--|--|
| <b>protection of the main circuit</b>  |  |
| <ul style="list-style-type: none"> <li>● at 240 V</li> <li>● at 400 V</li> <li>● at 500 V</li> <li>● at 690 V</li> </ul>   | <ul style="list-style-type: none"> <li>gL/gG 80 A</li> <li>gL/gG 63 A</li> <li>gL/gG 50 A</li> <li>gL/gG 40 A</li> </ul>   |
| <b>Installation/ mounting/ dimensions</b>  |  |
| <b>mounting position</b>   | any  |
| <b>fastening method</b>  | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715   |
| <b>height</b>  | 106 mm   |
| <b>width</b>   | 45 mm  |
| <b>depth</b>   | 97 mm  |
| <b>required spacing</b>  |  |
| <ul style="list-style-type: none"> <li>● with side-by-side mounting at the side</li> <li>● for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>● for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>● for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> </ul> | <ul style="list-style-type: none"> <li>0 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>30 mm</li> <li>30 mm</li> <li>9 mm</li> <li>50 mm</li> <li>50 mm</li> <li>0 mm</li> <li>30 mm</li> <li>0 mm</li> <li>50 mm</li> <li>50 mm</li> <li>0 mm</li> <li>30 mm</li> <li>0 mm</li> </ul> |
| <b>Connections/ Terminals</b>  |  |
| <b>type of electrical connection</b>   |  |
| <ul style="list-style-type: none"> <li>● for main current circuit</li> </ul>   | spring-loaded terminals  |
| <b>arrangement of electrical connectors for main current circuit</b>   | Top and bottom   |
| <b>type of connectable conductor cross-sections</b>  |  |
| <ul style="list-style-type: none"> <li>● for main contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>● for AWG cables for main contacts</li> </ul>  | <ul style="list-style-type: none"> <li>2x (0,5 ... 4 mm<sup>2</sup>)</li> <li>2x (0,5 ... 2.5 mm<sup>2</sup>)</li> <li>2x (0,5 ... 2.5 mm<sup>2</sup>)</li> <li>2x (20 ... 12)</li> </ul>  |
| <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>   |  |
| <ul style="list-style-type: none"> <li>● safety-related switching on</li> <li>● safety-related switching OFF</li> </ul>  | <ul style="list-style-type: none"> <li>No</li> <li>Yes</li> </ul>  |

|  |        |
|--|--------|
| service life maximum   | 10 a   |
| test wear-related service life necessary                             | Yes    |
| proportion of dangerous failures                                     |        |
| • with low demand rate according to SN 31920                         | 40 %   |
| • with high demand rate according to SN 31920                        | 50 %   |
| <b>B10 value with high demand rate according to SN 31920</b>         | 5 000  |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b> | 50 FIT |

|  |        |
|--|--------|
| ISO 13849  |        |
| device type according to ISO 13849-1                             | 3      |
| overdimensioning according to ISO 13849-2 necessary              | Yes    |
| IEC 61508  |        |
| safety device type according to IEC 61508-2                      | Type A |
| T1 value   |        |
| • for proof test interval or service life according to IEC 61508 | 10 a   |

|   |  |
|---|--|
| Electrical Safety                                       |  |
| protection class IP on the front according to IEC 60529 | IP20   |
| touch protection on the front according to IEC 60529    | finger-safe, for vertical contact from the front |

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

### Approvals Certificates

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

### Environment General Product Approval

[Environmental Confirmations](#)







### General Product Approval For use in hazardous locations Maritime application








### Maritime application other








### other

[Confirmation](#)      [Miscellaneous](#)

### Further information

Information on the packaging  
<https://support.industry.siemens.com/cs/ww/en/view/109813875>  
 Information for data generation and storage  
<https://support.industry.siemens.com/cs/ww/en/view/109995012>

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mfb=3RV2011-4AA20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-4AA20>

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

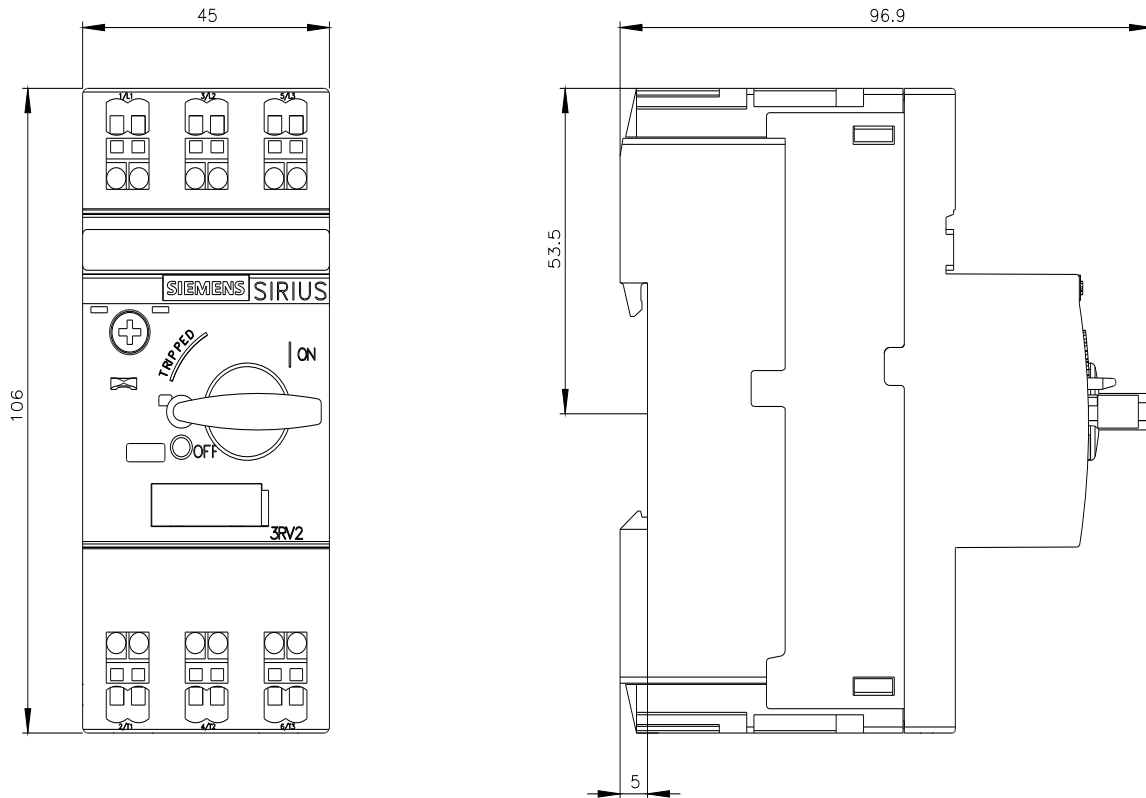
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mfb=3RV2011-4AA20&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mfb=3RV2011-4AA20&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV2011-4AA20>

Characteristic curves

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





last modified:

3/8/2026 ↻