



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.8...2.5 A N-release 33 A Screw terminal Standard switching capacity

|                                                                                     |                      |
|-------------------------------------------------------------------------------------|----------------------|
| product brand name                                                                  | SIRIUS               |
| product designation                                                                 | Circuit breaker      |
| design of the product                                                               | For motor protection |
| product type designation                                                            | 3RV1                 |
| <b>General technical data</b>                                                       |                      |
| size of the circuit-breaker                                                         | S00                  |
| size of contactor can be combined company-specific                                  | S00                  |
| 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                |
| insulation voltage with degree of pollution 3 at AC rated value                     | 690 V                |
| surge voltage resistance rated value                                                | 6 kV                 |
| 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)                                                       | 01/01/2013           |
| SVHC substance name                                                                 | Lead - 7439-92-1     |
| <b>Ambient conditions</b>                                                           |                      |
| installation altitude at height above sea level maximum                             | 2 000 m              |
| ambient temperature                                                                 |                      |
| • during operation                                                                  | -20 ... +60 °C       |
| • during storage                                                                    | -50 ... +80 °C       |
| • during transport                                                                  | -50 ... +80 °C       |
| relative humidity during operation                                                  | 10 ... 95 %          |
| <b>Main circuit</b>                                                                 |                      |
| number of poles for main current circuit                                            | 3                    |
| adjustable current response value current of the current-dependent overload release | 1.8 ... 2.5 A        |
| operating voltage                                                                   |                      |
| • rated value                                                                       | 20 ... 690 V         |
| • at AC-3 rated value maximum                                                       | 690 V                |
| • at AC-3e rated value maximum                                                      | 690 V                |
| operating frequency rated value                                                     | 50 ... 60 Hz         |
| operational current rated value                                                     | 2.5 A                |
| operational current                                                                 |                      |
| • at AC-3 at 400 V rated value                                                      | 2.5 A                |
| • at AC-3e at 400 V rated value                                                     | 2.5 A                |

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|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| <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> | 0.4 kW<br>0.75 kW<br>1.1 kW<br>1.5 kW<br><br>0.4 kW<br>0.75 kW<br>1.1 kW<br>1.5 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                                                                   |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                    |
| 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>100 kA<br>10 kA<br>2 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>100 kA<br>100 kA<br>2 kA                                                 |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                 | 33 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>                                                                                                                                                                                                                                                                                                            | 2.5 A<br>2.5 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 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> <li>at 575/600 V rated value</li> </ul> </li> </ul>                                             | 0.17 hp<br><br>0.5 hp<br>0.5 hp<br>1 hp<br>1.5 hp                                  |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                    |
| <b>product function short circuit protection</b>                                                                                                                                                                                                                                                                                                                                                                | Yes                                                                                |
| <b>design of the short-circuit trip</b>                                                                                                                                                                                                                                                                                                                                                                         | magnetic                                                                           |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>                                                                                                                                                                                                                                                                                                                  |                                                                                    |
| <ul style="list-style-type: none"> <li>at 240 V</li> <li>at 400 V</li> <li>at 500 V</li> <li>at 690 V</li> </ul>                                                                                                                                                                                                                                                                                                | none required<br>gL/gG 35 A<br>gL/gG 25 A<br>gL/gG 25 A                            |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                       |                                                                                    |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                        | any                                                                                |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                         | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715           |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                   | 90 mm                                                                              |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                    | 45 mm                                                                              |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                    | 75 mm                                                                              |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                    |

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| <ul style="list-style-type: none"> <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> | 20 mm<br>20 mm<br>9 mm<br><br>20 mm<br>20 mm<br>9 mm<br><br>20 mm<br>20 mm<br>9 mm<br><br>20 mm<br>20 mm<br>0 mm<br>9 mm<br>0 mm<br><br>20 mm<br>20 mm<br>0 mm<br>9 mm<br>0 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | screw-type 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> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x (1 ... 4 mm <sup>2</sup> )<br>2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )  |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> )                                                                                                          |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> <li>• for auxiliary contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0,8 ... 1,2 N·m<br>0,8 ... 1,2 N·m                                                                                                                                             |
| <b>size of the screwdriver tip</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Pozidriv size 2                                                                                                                                                                |
| <b>design of the thread of the connection screw</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | M3                                                                                                                                                                             |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                |
| <b>proportion of dangerous failures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> <li>• with high demand rate according to SN 31920</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 50 %<br>50 %                                                                                                                                                                   |
| <b>B10 value with high demand rate according to SN 31920</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 5 000                                                                                                                                                                          |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 50 FIT                                                                                                                                                                         |
| <b>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                                                                                                                               |
| display version for switching status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Rocker switch                                                                                                                                                                  |
| <b>Approvals Certificates</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                |
| <b>General Product Approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                |



[Confirmation](#)



For use in hazardous locations

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Miscellaneous](#)

other

Railway

Environment

[Confirmation](#)



[Special Test Certificate](#)

[Environmental Confirmations](#)

#### Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RV1011-1CA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1CA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1CA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1CA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1CA10&lang=en)

Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1CA10/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1CA10&objecttype=14&gridview=view1>



