



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.1...1.6 A N-release 21 A screw terminal Standard switching capacity

|                                 |                      |
|---------------------------------|----------------------|
| <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                 |

### General technical data

|                                                                   |                   |
|-------------------------------------------------------------------|-------------------|
| <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                                    | 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             |
| <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 (switching cycles)</b>                 |                   |
| • of the main contacts typical                                    | 100 000           |
| • of auxiliary contacts typical                                   | 100 000           |
| electrical endurance (switching cycles) typical                   | 100 000           |
| <b>type of protection according to ATEX directive 2014/34/EU</b>  | Ex II (2) GD      |
| certificate of suitability according to ATEX directive 2014/34/EU | DMT 02 ATEX F 001 |
| <b>reference code according to IEC 81346-2</b>                    | Q                 |
| <b>Substance Prohibitance (Date)</b>                              | 10/01/2009        |

### Ambient conditions

|                                                         |                |
|---------------------------------------------------------|----------------|
| 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 %    |

### Main circuit

|                                                                                            |               |
|--------------------------------------------------------------------------------------------|---------------|
| <b>number of poles for main current circuit</b>                                            | 3             |
| <b>adjustable current response value current of the current-dependent overload release</b> | 1.1 ... 1.6 A |
| <b>operating voltage</b>                                                                   |               |
| • rated value                                                                              | 20 ... 690 V  |
| • at AC-3 rated value maximum                                                              | 690 V         |
| • at AC-3e rated value maximum                                                             | 690 V         |
| <b>operating frequency rated value</b>                                                     | 50 ... 60 Hz  |
| <b>operational current rated value</b>                                                     | 1.6 A         |

|                                                                                                |                                                                          |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>operational current</b>                                                                     |                                                                          |
| • at AC-3 at 400 V rated value                                                                 | 1.6 A                                                                    |
| • at AC-3e at 400 V rated value                                                                | 1.6 A                                                                    |
| <b>operating power</b>                                                                         |                                                                          |
| • at AC-3                                                                                      |                                                                          |
| — at 230 V rated value                                                                         | 0.3 kW                                                                   |
| — at 400 V rated value                                                                         | 0.55 kW                                                                  |
| — at 500 V rated value                                                                         | 0.8 kW                                                                   |
| — at 690 V rated value                                                                         | 1.1 kW                                                                   |
| • at AC-3e                                                                                     |                                                                          |
| — at 230 V rated value                                                                         | 0.3 kW                                                                   |
| — at 400 V rated value                                                                         | 0.55 kW                                                                  |
| — at 500 V rated value                                                                         | 0.8 kW                                                                   |
| — at 690 V rated value                                                                         | 1.1 kW                                                                   |
| <b>operating frequency</b>                                                                     |                                                                          |
| • at AC-3 maximum                                                                              | 15 1/h                                                                   |
| • at AC-3e maximum                                                                             | 15 1/h                                                                   |
| <b>Auxiliary circuit</b>                                                                       |                                                                          |
| number of NC contacts for auxiliary contacts                                                   | 0                                                                        |
| number of NO contacts for auxiliary contacts                                                   | 0                                                                        |
| number of CO contacts for auxiliary contacts                                                   | 0                                                                        |
| <b>Protective and monitoring functions</b>                                                     |                                                                          |
| <b>product function</b>                                                                        |                                                                          |
| • ground fault detection                                                                       | No                                                                       |
| • phase failure detection                                                                      | Yes                                                                      |
| <b>trip class</b>                                                                              | CLASS 10                                                                 |
| <b>design of the overload release</b>                                                          | thermal                                                                  |
| <b>breaking capacity maximum short-circuit current (I<sub>cu</sub>)</b>                        |                                                                          |
| • at AC at 240 V rated value                                                                   | 100 kA                                                                   |
| • at AC at 400 V rated value                                                                   | 100 kA                                                                   |
| • at AC at 500 V rated value                                                                   | 100 kA                                                                   |
| • at AC at 690 V rated value                                                                   | 100 kA                                                                   |
| <b>breaking capacity operating short-circuit current (I<sub>cs</sub>) at AC</b>                |                                                                          |
| • at 240 V rated value                                                                         | 100 kA                                                                   |
| • at 400 V rated value                                                                         | 100 kA                                                                   |
| • at 500 V rated value                                                                         | 100 kA                                                                   |
| • at 690 V rated value                                                                         | 100 kA                                                                   |
| response value current of instantaneous short-circuit trip unit                                | 21 A                                                                     |
| <b>UL/CSA ratings</b>                                                                          |                                                                          |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                            |                                                                          |
| • at 480 V rated value                                                                         | 1.6 A                                                                    |
| • at 600 V rated value                                                                         | 1.6 A                                                                    |
| <b>yielded mechanical performance [hp]</b>                                                     |                                                                          |
| • for single-phase AC motor                                                                    |                                                                          |
| — at 230 V rated value                                                                         | 0.1 hp                                                                   |
| • for 3-phase AC motor                                                                         |                                                                          |
| — at 460/480 V rated value                                                                     | 1 hp                                                                     |
| — at 575/600 V rated value                                                                     | 0.8 hp                                                                   |
| <b>Short-circuit protection</b>                                                                |                                                                          |
| <b>product function short circuit protection</b>                                               |                                                                          |
| <b>design of the short-circuit trip</b>                                                        | magnetic                                                                 |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> |                                                                          |
| • at 500 V                                                                                     | gL/gG 20 A                                                               |
| • at 690 V                                                                                     | gL/gG 16 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>                                                                                  | 97 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> </ul>                                                                                                                                        | 0 mm                                                                                                                              |
| <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> </ul>                                          | 30 mm<br>30 mm<br>9 mm                                                                                                            |
| <ul style="list-style-type: none"> <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> </ul>                                              | 30 mm<br>30 mm<br>9 mm                                                                                                            |
| <ul style="list-style-type: none"> <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> </ul>                                          | 30 mm<br>30 mm<br>9 mm                                                                                                            |
| <ul style="list-style-type: none"> <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> </ul>                                              | 30 mm<br>30 mm<br>9 mm                                                                                                            |
| <ul style="list-style-type: none"> <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> </ul> | 50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm                                                                                           |
| <ul style="list-style-type: none"> <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>     | 50 mm<br>50 mm<br>0 mm<br>30 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 (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup><br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>• at AWG cables for main contacts</li> </ul>                                                                                                                                               | 2x (18 ... 14), 2x 12                                                                                                             |
| <b>tightening torque</b>                                                                                                                                                                                                          |                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>                                                                                                                                   | 0.8 ... 1.2 N·m                                                                                                                   |
| <b>design of screwdriver shaft</b>                                                                                                                                                                                                | Diameter 5 to 6 mm                                                                                                                |
| <b>size of the screwdriver tip</b>                                                                                                                                                                                                | Pozidriv size 2                                                                                                                   |
| <b>design of the thread of the connection screw</b>                                                                                                                                                                               |                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• for main contacts</li> </ul>                                                                                                                                                             | M3                                                                                                                                |
| <b>Safety related data</b>                                                                                                                                                                                                        |                                                                                                                                   |
| <b>B10 value</b>                                                                                                                                                                                                                  |                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• with high demand rate according to SN 31920</li> </ul>                                                                                                                                   | 5 000                                                                                                                             |
| <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>failure rate [FIT]</b>                                                                                                                                                                                                         |                                                                                                                                   |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> </ul>                                                                                                                                    | 50 FIT                                                                                                                            |
| T1 value for proof test interval or service life according to IEC 61508                                                                                                                                                           | 10 y                                                                                                                              |
| <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                                                                                                                                                                                              | Handle                                                                                                                            |
| <b>Certificates/ approvals</b>                                                                                                                                                                                                    |                                                                                                                                   |
| <b>General Product Approval</b>                                                                                                                                                                                                   |                                                                                                                                   |



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Further information

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=3RV2011-1AA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1AA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1AA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-1AA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1AA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1AA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-1AA10&objecttype=14&gridview=view1>



