



Circuit breaker size S0 for starter combination Rated current 22 A N-release 286 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 starter combinations |
| <b>product type designation</b>                                 | 3RV2                     |
| <b>General technical data</b>                                   |                          |
| <b>size of the circuit-breaker</b>                              | S0                       |
| <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                                  | 10.5 W                   |
| • at AC in hot operating state per pole                         | 3.5 W                    |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V                    |
| <b>surge voltage resistance rated value</b>                     | 6 kV                     |
| shock resistance according to IEC 60068-2-27                    | 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>reference code according to IEC 81346-2</b>                  | Q                        |
| <b>Substance Prohibitive (Date)</b>                             | 10/01/2009               |
| <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>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>                          | 22 A                     |
| <b>operational current</b>                                      |                          |
| • at AC-3 at 400 V rated value                                  | 22 A                     |
| • at AC-3e at 400 V rated value                                 | 22 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> | <br>5.5 kW<br>11 kW<br>11 kW<br>18.5 kW<br><br>5.5 kW<br>11 kW<br>11 kW<br>18.5 kW     |
| <b>operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                        |
| <ul style="list-style-type: none"> <li>● at AC-3 maximum</li> <li>● at AC-3e maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                     | <br>15 1/h<br>15 1/h                                                                   |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                        |
| <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>                                                                                                                                                                                                                                                                                                                       | <br>No<br>No                                                                           |
| <b>breaking capacity maximum short-circuit current (I<sub>cu</sub>)</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>                                                                                                                                                                                                                                    | <br>100 kA<br>55 kA<br>10 kA<br>4 kA                                                   |
| <b>breaking capacity operating short-circuit current (I<sub>cs</sub>) 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>                                                                                                                                                                                                                                                            | <br>100 kA<br>25 kA<br>5 kA<br>2 kA                                                    |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                                     | 286 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>                                                                                                                                                                                                                                                                                                                            | <br>22 A<br>22 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>                                                   | <br>1.5 hp<br>3 hp<br><br>7.5 hp<br>7.5 hp<br>15 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 400 V</li> <li>● at 500 V</li> <li>● at 690 V</li> </ul>                                                                                                                                                                                                                                                                                                                                | <br>gL/gG 63 A<br>gL/gG 50 A<br>gL/gG 50 A                                             |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                        |
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                            | any                                                                                    |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                                             | screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                       | 97 mm                                                                                  |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |       |
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| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 45 mm |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 97 mm |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |       |
| <ul style="list-style-type: none"> <li>● for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>● for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>● for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>● for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards 30 mm</li> <li>— upwards 30 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>● for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards 50 mm</li> <li>— upwards 50 mm</li> <li>— backwards 0 mm</li> <li>— at the side 30 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>● for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards 50 mm</li> <li>— upwards 50 mm</li> <li>— backwards 0 mm</li> <li>— at the side 30 mm</li> <li>— forwards 0 mm</li> </ul> </li> </ul> |       |

### Connections/ Terminals

|                                                                                                                                                                                                                                                                                                                                                                                                                            |                      |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <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 2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 10 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></li> </ul> </li> <li>● at AWG cables for main contacts 2x (16 ... 12), 2x (14 ... 8)</li> </ul> |                      |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                                                                                                                                                   |                      |
| <ul style="list-style-type: none"> <li>● for main contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                            | 2 ... 2.5 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>                                                                                                                                                                                                                                                                                                                                                      | M4                   |

### Safety related data

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

## Certificates/ approvals

## General Product Approval


[Confirmation](#)

[KC](#)


## Declaration of Conformity

## Test Certificates

## Marine / Shipping


[Type Test Certificates/Test Report](#)
[Special Test Certificate](#)


## Marine / Shipping

## other


[Confirmation](#)

## other

## Railway


[Vibration and Shock](#)
[Confirmation](#)

## 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=3RV2321-4CC10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2321-4CC10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-4CC10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2321-4CC10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2321-4CC10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-4CC10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2321-4CC10&objecttype=14&gridview=view1>

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