

Siemens  
EcoTech



Circuit breaker size S2 for starter combination Rated current 40 A N-release 585 A screw terminal Standard switching capacity



|   |                          |
|---|--------------------------|
| product brand name  | SIRIUS                   |
| product designation   | Circuit breaker          |
| design of the product   | For starter combinations |
| product type designation  | 3RV2                     |
| General technical data  |                          |
| size of the circuit-breaker                                     | S2                       |
| size of contactor can be combined company-specific              | S2                       |
| product extension auxiliary switch                              | Yes                      |
| power loss [W] for rated value of the current                   |                          |
| • at AC in hot operating state                                  | 20 W                     |
| • at AC in hot operating state per pole                         | 6.7 W                    |
| insulation voltage with degree of pollution 3 at AC rated value | 690 V                    |
| surge voltage resistance rated value                            | 6 kV                     |
| shock resistance according to IEC 60068-2-27                    | 25g / 11 ms Sinus        |
| mechanical service life (operating cycles)                      |                          |
| • of the main contacts typical                                  | 50 000                   |
| • of auxiliary contacts typical                                 | 50 000                   |
| electrical endurance (operating cycles) typical                 | 50 000                   |
| reference code according to IEC 81346-2                         | Q                        |
| Substance Prohibitance (Date)                                   | 10/15/2014               |
| SVHC substance name   | Lead - 7439-92-1         |
| Ambient conditions  |                          |
| 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 %              |
| Main circuit  |                          |
| number of poles for main current circuit                        | 3                        |
| 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                                 | 40 A                     |
| operational current   |                          |

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|--|--|
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> <li>• at AC-3e at 400 V rated value</li> </ul>  | 40 A<br>40 A   |
| <b>operating power</b> <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>       | 11 kW<br>18.5 kW<br>22 kW<br>37 kW<br><br>11 kW<br>18.5 kW<br>22 kW<br>37 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>   |  |
| <b>number of NC contacts for auxiliary contacts</b>  | 0  |
| <b>number of NO contacts for auxiliary contacts</b>  | 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>No   |
| <b>trip class</b>  | CLASS 10   |
| <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>65 kA<br>10 kA<br>4 kA   |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b> <ul style="list-style-type: none"> <li>• at 240 V rated value</li> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>  | 100 kA<br>30 kA<br>5 kA<br>2 kA  |
| response value current of instantaneous short-circuit trip unit  | 585 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>   | 40 A<br>40 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> <li>— at 575/600 V rated value</li> </ul> </li> </ul> | 3 hp<br>7.5 hp<br><br>15 hp<br>15 hp<br>30 hp<br>40 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>125<br>100<br>80  |
| <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>  | 140 mm   |

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| <b>width</b>   | 55 mm  |
| <b>depth</b>   | 149 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> </ul> </li> </ul>   | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                  | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                              | 10 mm  |
| <ul style="list-style-type: none"> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>       | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                  | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                              | 10 mm  |
| <ul style="list-style-type: none"> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>   | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                  | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                              | 10 mm  |
| <ul style="list-style-type: none"> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>       | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                  | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                              | 10 mm  |
| <ul style="list-style-type: none"> <li>• for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>   | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                  | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— backwards</li> </ul> </li> </ul>                                | 0 mm   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                              | 10 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>                                 | 0 mm   |
| <ul style="list-style-type: none"> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>       | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                  | 50 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— backwards</li> </ul> </li> </ul>                                | 0 mm   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                              | 10 mm  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>                                 | 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> </ul> </li> </ul>     | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> </ul> | 2x (1 ... 16 mm <sup>2</sup> ), 1x (1 ... 25 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>• for AWG cables for main contacts</li> </ul>   | 2x (18 ... 3), 1x (18 ... 2)                                   |
| <b>tightening torque</b>   |  |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>  | 3 ... 4.5 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>  | M6   |
| <b>Safety related data</b>   |  |
| product function suitable for safety function  | Yes  |
| <b>suitability for use</b>   |  |
| <ul style="list-style-type: none"> <li>• safety-related switching on</li> </ul>  | No   |
| <ul style="list-style-type: none"> <li>• safety-related switching OFF</li> </ul>   | Yes  |
| <b>service life maximum</b>  | 10 a   |
| <b>test wear-related service life necessary</b>  | Yes  |
| <b>proportion of dangerous failures</b>  |  |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> </ul>   | 40 %   |
| <ul style="list-style-type: none"> <li>• with high demand rate according to SN 31920</li> </ul>  | 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   |

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| ISO 13849   |  |
| device type according to ISO 13849-1  | 3  |
| overdimensioning according to ISO 13849-2 necessary   | Yes  |
| IEC 61508   |  |
| safety device type according to IEC 61508-2   | Type A   |
| T1 value <ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul> | 10 a   |
| Electrical Safety   |  |
| protection class IP on the front according to IEC 60529   | IP20   |
| touch protection on the front according to IEC 60529  | finger-safe, for vertical contact from the front |
| Display   |  |
| display version for switching status  | Handle   |
| Approvals Certificates  |  |
| General Product Approval  |  |



[Confirmation](#)



[KC](#)

|                          |                   |                   |
|--------------------------|-------------------|-------------------|
| General Product Approval | Test Certificates | Marine / Shipping |
|--------------------------|-------------------|-------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                   |       |
|-------------------|-------|
| Marine / Shipping | other |
|-------------------|-------|



[Miscellaneous](#)

[Confirmation](#)



|         |             |
|---------|-------------|
| Railway | Environment |
|---------|-------------|

[Special Test Certificate](#)

[Confirmation](#)



Siemens EcoTech



[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=3RV2331-4UC10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2331-4UC10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2331-4UC10>

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

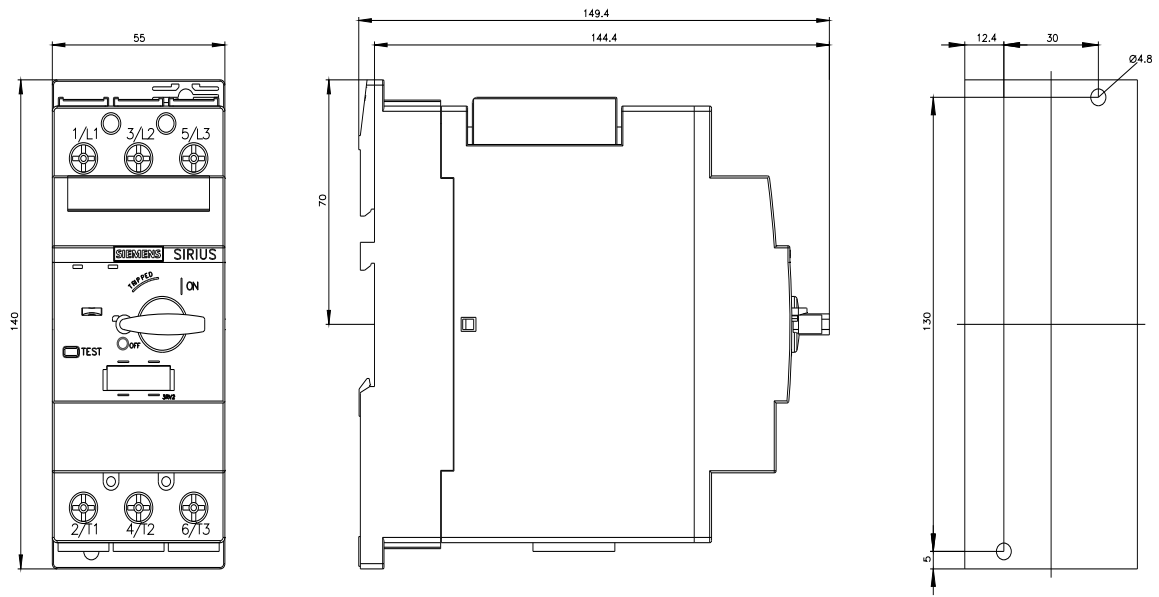
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2331-4UC10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2331-4UC10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2331-4UC10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2331-4UC10&objecttype=14&gridview=view1>



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