



Circuit breaker size S00 for motor protection, CLASS 10 with overload relay function A-release 7...10 A N release 130 A screw terminal Standard switching capacity

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|--|---|
| <b>product brand name</b>  | SIRIUS  |
| <b>product designation</b>   | Circuit breaker                                   |
| <b>design of the product</b>   | For motor protection with overload relay function |
| <b>product type designation</b>  | 3RV2  |
| <b>General technical data</b>  |   |
| <b>size of the circuit-breaker</b>   | S00   |
| <b>size of contactor can be combined company-specific</b>                                  | S00, S0   |
| product extension auxiliary switch   | Yes   |
| <b>power loss [W] for rated value of the current</b>                                       |   |
| • at AC in hot operating state   | 9.25 W  |
| • at AC in hot operating state per pole  | 3.1 W   |
| insulation voltage with degree of pollution 3 at AC rated value                            | 690 V   |
| <b>surge voltage resistance rated value</b>  | 6 kV  |
| 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>adjustable current response value current of the current-dependent overload release</b> | 7 ... 10 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>   | 10 A  |
| <b>operational current</b>   |   |
| • at AC-3 at 400 V rated value   | 10 A  |

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| <ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>   | 10 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> | 2.2 kW<br>4 kW<br>5.5 kW<br>7.5 kW<br><br>2.2 kW<br>4 kW<br>5.5 kW<br>7.5 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>  |  |
| <b>design of the auxiliary switch</b>   | laterally  |
| <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>operational current of auxiliary contacts at AC-15</b>   |  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 230 V</li> </ul>   | 1.5 A<br>1.5 A   |
| <b>operational current of auxiliary contacts at DC-13</b>   |  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>   | 1 A  |
| <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>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>  | 100 kA<br>100 kA<br>42 kA<br>6 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>  | 100 kA<br>100 kA<br>42 kA<br>4 kA  |
| response value current of instantaneous short-circuit trip unit   | 130 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>  | 10 A<br>10 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>               | 0.5 hp<br>1.5 hp<br><br>2 hp<br>3 hp<br>5 hp<br>10 hp                        |
| <b>contact rating of auxiliary contacts according to UL</b>   | C600 / R300  |
| <b>Short-circuit protection</b>   |  |
| <b>product function short circuit protection</b>  | Yes  |

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| <b>design of the short-circuit trip</b>   | magnetic   |
| <b>design of the fuse link</b><br><ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>   | fuse gL/gG: 6 A, quick: 10 A   |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b><br><ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>  | gL/gG 50 A<br>gL/gG 40 A<br>gL/gG 40 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  |
| <b>width</b>  | 65 mm  |
| <b>depth</b>  | 97 mm  |
| <b>required spacing</b><br><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> |  |
| <b>Connections/ Terminals</b>   |  |
| <b>type of electrical connection</b><br><ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> </ul>   | screw-type terminals<br>screw-type terminals   |
| <b>arrangement of electrical connectors for main current circuit</b>  | Top and bottom   |
| <b>type of connectable conductor cross-sections</b><br><ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid or stranded 2x (0,75 ... 2,5 mm<sup>2</sup>), 2x 4 mm<sup>2</sup></li> <li>— finely stranded with core end processing 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> </ul> </li> <li>• at AWG cables for main contacts 2x (18 ... 14), 2x 12</li> </ul>  |  |
| <b>type of connectable conductor cross-sections</b><br><ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> </ul> </li> <li>• at AWG cables for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14)</li> </ul>   |  |

|   |                                    |
|---|------------------------------------|
| <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>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> <li>of the auxiliary and control contacts</li> </ul>                                      | M3<br>M3                           |

**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 |
| display version for switching status  | Handle   |

**Certificates/ approvals**

**General Product Approval**



[Confirmation](#)



[KC](#)



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EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



BUREAU VERITAS

**Marine / Shipping      other**



DNV



LRS



PRS



RINA



RMRS

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**other      Railway**



VDE

[Vibration and Shock](#)

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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?mfb=3RV2111-1JA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mfb=3RV2111-1JA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-1JA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2111-1JA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2111-1JA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2111-1JA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2111-1JA10&objecttype=14&gridview=view1>

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