



Circuit breaker size S2 for motor protection class 20 A-release 12...17 A N-release 260 A screw terminal Standard switching capacity with transverse auxiliary switch 1 NO+1 NC

|  |                      |
|--|----------------------|
| <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                 |
| <b>General technical data</b>  |                      |
| <b>size of the circuit-breaker</b>   | S2                   |
| <b>size of contactor can be combined company-specific</b>                                  | S2                   |
| product extension auxiliary switch   | Yes                  |
| <b>power loss [W] for rated value of the current</b>                                       |                      |
| • at AC in hot operating state   | 14.5 W               |
| • at AC in hot operating state per pole  | 4.8 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 Sinus    |
| <b>mechanical service life (switching cycles)</b>  |                      |
| • of the main contacts typical   | 50 000               |
| • of auxiliary contacts typical  | 50 000               |
| electrical endurance (switching cycles) typical  | 50 000               |
| <b>reference code according to IEC 81346-2</b>   | Q                    |
| <b>Substance Prohibition (Date)</b>  | 10/15/2014           |
| <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> | 12 ... 17 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>   | 17 A                 |
| <b>operational current</b>   |                      |
| • at AC-3 at 400 V rated value   | 17 A                 |

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|---|--|
| <ul style="list-style-type: none"> <li>● at AC-3e at 400 V rated value</li> </ul>   | 17 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> | 4 kW<br>7.5 kW<br>7.5 kW<br>15 kW<br><br>4 kW<br>7.5 kW<br>7.5 kW<br>15 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>   | transverse   |
| <b>number of NC contacts for auxiliary contacts</b>   | 1  |
| <b>number of NO contacts for auxiliary contacts</b>   | 1  |
| <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>   | 2 A<br>0.5 A   |
| <b>operational current of auxiliary contacts at DC-13</b>   |  |
| <ul style="list-style-type: none"> <li>● at 24 V</li> <li>● at 60 V</li> <li>● at 110 V</li> <li>● at 125 V</li> <li>● at 220 V</li> </ul>  | 1 A<br>0.15 A<br>0 A<br>0 A<br>0 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 20   |
| <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>65 kA<br>12 kA<br>5 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>30 kA<br>6 kA<br>3 kA  |
| response value current of instantaneous short-circuit trip unit   | 260 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>  | 17 A<br>17 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>               | 1.5 hp<br>3 hp<br><br>5 hp<br>7.5 hp<br>15 hp<br>15 hp                     |

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|---|--|--|
| <b>contact rating of auxiliary contacts according to UL</b>   | C300 / R300  |  |
| <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</b>  | fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A)  |  |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>   |  |  |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>  | none required<br>100<br>80<br>63   |  |
| <ul style="list-style-type: none"> <li>at 240 V</li> </ul>  |  |  |
| <ul style="list-style-type: none"> <li>at 400 V</li> </ul>  |  |  |
| <ul style="list-style-type: none"> <li>at 500 V</li> <li>at 690 V</li> </ul>  |  |  |
| <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>   | 140 mm   |  |
| <b>width</b>  | 55 mm  |  |
| <b>depth</b>  | 149 mm   |  |
| <b>required spacing</b>   | 50 mm<br>50 mm<br>10 mm<br>50 mm<br>50 mm<br>10 mm<br>50 mm<br>50 mm<br>10 mm<br>50 mm<br>50 mm<br>10 mm<br>50 mm<br>50 mm<br>10 mm<br>50 mm<br>50 mm<br>10 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>                |  |  |
| <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>                    |  |  |
| <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>                |  |  |
| <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>                    |  |  |
| <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>at the side</li> </ul> </li> </ul>                |  |  |
| <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>at the side</li> </ul> </li> </ul>                    |  |  |
| <b>Connections/ Terminals</b>   |  |  |
| <b>type of electrical connection</b>  |  | screw-type terminals   |
| <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>   |  |  |
| <b>arrangement of electrical connectors for main current circuit</b>  |  | Top and bottom   |
| <b>type of connectable conductor cross-sections</b>   |  | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )<br>2x (1 ... 16 mm <sup>2</sup> ), 1x (1 ... 25 mm <sup>2</sup> )<br>2x (18 ... 3), 1x (18 ... 2)                 |
| <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>      |  |  |
| <ul style="list-style-type: none"> <li>at AWG cables for main contacts</li> </ul>   |  |  |
| <b>type of connectable conductor cross-sections</b>   |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 16), 2x (18 ... 14) |
| <ul style="list-style-type: none"> <li>for auxiliary contacts               <ul style="list-style-type: none"> <li>solid or stranded</li> <li>finely stranded with core end processing</li> </ul> </li> </ul> |  |  |
| <ul style="list-style-type: none"> <li>at AWG cables for auxiliary contacts</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> | 3 ... 4.5 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>                                      | M6<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](#)



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**Declaration of Conformity      Test Certificates      Marine / Shipping**



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



**Marine / Shipping      other**



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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=3RV2031-4TB15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4TB15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4TB15>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2031-4TB15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4TB15&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4TB15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4TB15&objecttype=14&gridview=view1>

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