



Circuit breaker size S2 for motor protection, CLASS 10 A-release 62...73 A N-release 949 A screw terminal Standard switching capacity with transverse auxiliary switches 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   | 29.5 W               |
| • at AC in hot operating state per pole  | 9.8 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   | 20 000               |
| • of auxiliary contacts typical  | 20 000               |
| electrical endurance (switching cycles) typical  | 20 000               |
| <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>   | 04/10/2015           |
| <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> | 62 ... 73 A          |
| <b>operating voltage</b>   |                      |
| • rated value  | 20 ... 690 V         |
| • at AC-3 rated value maximum  | 690 V                |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz         |

|   |   |
|---|---|
| <b>operational current rated value</b>  | 73 A  |
| <b>operational current</b>  |   |
| • at AC-3 at 400 V rated value  | 73 A  |
| <b>operating power</b>  |   |
| • at AC-3   |   |
| — at 230 V rated value  | 22 kW   |
| — at 400 V rated value  | 37 kW   |
| — at 500 V rated value  | 45 kW   |
| — at 690 V rated value  | 55 kW   |
| <b>operating frequency</b>  |   |
| • at AC-3 maximum   | 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>                       |   |
| • at 24 V   | 2 A   |
| • at 230 V  | 0.5 A   |
| <b>operational current of auxiliary contacts at DC-13</b>                       |   |
| • at 24 V   | 1 A   |
| • at 60 V   | 0.15 A  |
| • at 110 V  | 0 A   |
| • at 125 V  | 0 A   |
| • at 220 V  | 0 A   |
| <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  | 65 kA   |
| • at AC at 400 V rated value  | 65 kA   |
| • at AC at 500 V rated value  | 8 kA  |
| • at AC at 690 V rated value  | 4 kA  |
| <b>breaking capacity operating short-circuit current (I<sub>cs</sub>) at AC</b> |   |
| • at 240 V rated value  | 65 kA   |
| • at 400 V rated value  | 30 kA   |
| • at 500 V rated value  | 5 kA  |
| • at 690 V rated value  | 2 kA  |
| response value current of instantaneous short-circuit trip unit                 | 949 A   |
| <b>UL/CSA ratings</b>   |   |
| <b>full-load current (FLA) for 3-phase AC motor</b>                             |   |
| • at 480 V rated value  | 65 A  |
| • at 600 V rated value  | 62 A  |
| <b>yielded mechanical performance [hp]</b>                                      |   |
| • for 3-phase AC motor  |   |
| — at 200/208 V rated value  | 20 hp   |
| — at 220/230 V rated value  | 25 hp   |
| — at 460/480 V rated value  | 50 hp   |
| — at 575/600 V rated value  | 60 hp   |
| <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>  |   |
| • for short-circuit protection of the auxiliary switch required                 | fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A) |

|  |                                    |
|--|------------------------------------|
| <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>160<br>125<br>100 |

|   |  |
|---|--|
| <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>  |   |
| <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> <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> <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> <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> <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> <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> | 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 |

|                               |  |
|-------------------------------|--|
| <b>Connections/ Terminals</b> |  |
|-------------------------------|--|

|   |  |
|---|--|
| <b>type of electrical connection</b>  |  |
| <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>   |  |
| <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> <li>• at AWG cables for main contacts</li> </ul>           | 2x (1 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> )<br>2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )<br>2x (18 ... 2), 1x (18 ... 1)                 |
| <b>type of connectable conductor cross-sections</b>   |  |
| <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> <li>• at AWG cables for auxiliary contacts</li> </ul> | 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) |
| <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> </ul>   | M6   |

- of the auxiliary and control contacts

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](#)



#### For use in hazardous locations



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

### Marine / Shipping



#### Marine / Shipping

other

#### Railway



[Confirmation](#)



[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=3RV2031-4KA15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4KA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4KA15>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2031-4KA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4KA15&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4KA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4KA15&objecttype=14&gridview=view1>

last modified:

6/25/2022 