

Siemens  
EcoTech



Circuit breaker size S2 for motor protection, Class 20 A-release 9.5...14 A N-release 208 A screw terminal Standard switching capacity



|   |                      |
|---|----------------------|
| product brand name  | SIRIUS               |
| product designation   | Circuit breaker      |
| design of the product   | For motor protection |
| 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  | 12.5 W               |
| • at AC in hot operating state per pole   | 4.2 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                    |
| adjustable current response value current of the current-dependent overload release | 9.5 ... 14 A         |
| 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         |

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| <b>operational current rated value</b>   | 14 A   |
| <b>operational current</b>   |  |
| • at AC-3 at 400 V rated value   | 14 A   |
| • at AC-3e at 400 V rated value  | 14 A   |
| <b>operating power</b>   |  |
| • at AC-3  |  |
| — at 230 V rated value   | 3 kW   |
| — at 400 V rated value   | 5.5 kW   |
| — at 500 V rated value   | 7.5 kW   |
| — at 690 V rated value   | 11 kW  |
| • at AC-3e   |  |
| — at 230 V rated value   | 3 kW   |
| — at 400 V rated value   | 5.5 kW   |
| — at 500 V rated value   | 7.5 kW   |
| — at 690 V rated value   | 11 kW  |
| <b>operating frequency</b>   |  |
| • at AC-3 maximum  | 15 1/h   |
| • at AC-3e maximum   | 15 1/h   |
| <b>Protective and monitoring functions</b>   |  |
| <b>product function</b>  |  |
| • ground fault detection   | No   |
| • phase failure detection  | Yes  |
| <b>trip class</b>  | CLASS 20   |
| <b>design of the overload release</b>  | thermal  |
| <b>maximum short-circuit current breaking capacity (Icu)</b>                                   |  |
| • at AC at 240 V rated value   | 100 kA   |
| • at AC at 400 V rated value   | 65 kA  |
| • at AC at 500 V rated value   | 12 kA  |
| • at AC at 690 V rated value   | 5 kA   |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b>                           |  |
| • at 240 V rated value   | 100 kA   |
| • at 400 V rated value   | 30 kA  |
| • at 500 V rated value   | 6 kA   |
| • at 690 V rated value   | 3 kA   |
| response value current of instantaneous short-circuit trip unit                                | 208 A  |
| <b>UL/CSA ratings</b>  |  |
| <b>full-load current (FLA) for 3-phase AC motor</b>  |  |
| • at 480 V rated value   | 14 A   |
| • at 600 V rated value   | 14 A   |
| <b>yielded mechanical performance [hp]</b>   |  |
| • for single-phase AC motor  |  |
| — at 110/120 V rated value   | 1.5 hp   |
| — at 230 V rated value   | 3 hp   |
| • for 3-phase AC motor   |  |
| — at 200/208 V rated value   | 5 hp   |
| — at 220/230 V rated value   | 5 hp   |
| — at 460/480 V rated value   | 10 hp  |
| — at 575/600 V rated value   | 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> |  |
| • at 240 V   | none required  |
| • at 400 V   | 100  |
| • at 500 V   | 80   |
| • at 690 V   | 63   |
| <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>  |  |
| • with side-by-side mounting at the side                             | 0 mm   |
| • for grounded parts at 400 V  |  |
| — downwards  | 50 mm  |
| — upwards  | 50 mm  |
| — at the side  | 10 mm  |
| • for live parts at 400 V  |  |
| — downwards  | 50 mm  |
| — upwards  | 50 mm  |
| — at the side  | 10 mm  |
| • for grounded parts at 500 V  |  |
| — downwards  | 50 mm  |
| — upwards  | 50 mm  |
| — at the side  | 10 mm  |
| • for live parts at 500 V  |  |
| — downwards  | 50 mm  |
| — upwards  | 50 mm  |
| — at the side  | 10 mm  |
| • for grounded parts at 690 V  |  |
| — downwards  | 50 mm  |
| — upwards  | 50 mm  |
| — at the side  | 10 mm  |
| • for live parts at 690 V  |  |
| — downwards  | 50 mm  |
| — upwards  | 50 mm  |
| — at the side  | 10 mm  |
| <b>Connections/ Terminals</b>  |  |
| <b>type of electrical connection</b>                                 |  |
| • for main current circuit   | screw-type terminals   |
| <b>arrangement of electrical connectors for main current circuit</b> | Top and bottom   |
| <b>type of connectable conductor cross-sections</b>                  |  |
| • for main contacts  |  |
| — solid or stranded  | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> ) |
| — finely stranded with core end processing                           | 2x (1 ... 16 mm <sup>2</sup> ), 1x (1 ... 25 mm <sup>2</sup> ) |
| • for AWG cables for main contacts                                   | 2x (18 ... 3), 1x (18 ... 2)                                   |
| <b>tightening torque</b>   |  |
| • for main contacts with screw-type terminals                        | 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>                  |  |
| • for main contacts  | M6   |
| <b>Safety related data</b>   |  |
| product function suitable for safety function                        | Yes  |
| <b>suitability for use</b>   |  |
| • safety-related switching on  | No   |
| • safety-related switching OFF                                       | Yes  |
| <b>service life maximum</b>  | 10 a   |
| <b>test wear-related service life necessary</b>                      | Yes  |
| <b>proportion of dangerous failures</b>                              |  |
| • with low demand rate according to SN 31920                         | 40 %   |
| • with high demand rate according to SN 31920                        | 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   |
| <b>ISO 13849</b>   |  |
| <b>device type according to ISO 13849-1</b>                          | 3  |
| <b>overdimensioning according to ISO 13849-2 necessary</b>           | Yes  |
| <b>IEC 61508</b>   |  |

|   |  |
|---|--|
| 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 |
|--------------------------|-------------------|-------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Miscellaneous](#)

[Confirmation](#)



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

[Special Test Certificate](#)

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[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=3RV2031-4SB10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4SB10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4SB10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2031-4SB10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4SB10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4SB10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4SB10&objecttype=14&gridview=view1>



