



Circuit breaker size S0 for motor protection, CLASS 10 A-release 2.8...4 A  
N release 52 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                 |
| <b>General technical data</b>                                                       |                      |
| size of the circuit-breaker                                                         | S0                   |
| size of contactor can be combined company-specific                                  | S00, S0              |
| product extension auxiliary switch                                                  | Yes                  |
| power loss [W] for rated value of the current                                       |                      |
| • at AC in hot operating state                                                      | 7.25 W               |
| • at AC in hot operating state per pole                                             | 2.4 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          |
| mechanical service life (switching cycles)                                          |                      |
| • of the main contacts typical                                                      | 100 000              |
| • of auxiliary contacts typical                                                     | 100 000              |
| electrical endurance (switching cycles) typical                                     | 100 000              |
| type of protection according to ATEX directive 2014/34/EU                           | Ex II (2) GD         |
| certificate of suitability according to ATEX directive 2014/34/EU                   | DMT 02 ATEX F 001    |
| reference code according to IEC 81346-2                                             | Q                    |
| Substance Prohibitance (Date)                                                       | 10/01/2009           |
| <b>Ambient conditions</b>                                                           |                      |
| 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 %          |
| <b>Main circuit</b>                                                                 |                      |
| number of poles for main current circuit                                            | 3                    |
| adjustable current response value current of the current-dependent overload release | 2.8 ... 4 A          |
| operating voltage                                                                   |                      |
| • 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>                               | 4 A                                                                                    |
| operational current at AC-3 at 400 V rated value                     | 4 A                                                                                    |
| <b>operating power</b>                                               |                                                                                        |
| • at AC-3                                                            |                                                                                        |
| — at 230 V rated value                                               | 0.8 kW                                                                                 |
| — at 400 V rated value                                               | 1.5 kW                                                                                 |
| — at 500 V rated value                                               | 2.2 kW                                                                                 |
| — at 690 V rated value                                               | 3 kW                                                                                   |
| • at AC-3e                                                           |                                                                                        |
| — at 230 V rated value                                               | 0.8 kW                                                                                 |
| — at 400 V rated value                                               | 1.5 kW                                                                                 |
| — at 500 V rated value                                               | 2.2 kW                                                                                 |
| — at 690 V rated value                                               | 3 kW                                                                                   |
| <b>operating frequency</b>                                           |                                                                                        |
| • at AC-3 maximum                                                    | 15 1/h                                                                                 |
| • at AC-3e maximum                                                   | 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                                                                                      |
| number of CO contacts for auxiliary contacts                         | 0                                                                                      |
| <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 (Icu)</b>         |                                                                                        |
| • at AC at 240 V rated value                                         | 100 kA                                                                                 |
| • at AC at 400 V rated value                                         | 100 kA                                                                                 |
| • at AC at 500 V rated value                                         | 100 kA                                                                                 |
| • at AC at 690 V rated value                                         | 6 kA                                                                                   |
| <b>breaking capacity operating short-circuit current (Ics) at AC</b> |                                                                                        |
| • at 240 V rated value                                               | 100 kA                                                                                 |
| • at 400 V rated value                                               | 100 kA                                                                                 |
| • at 500 V rated value                                               | 100 kA                                                                                 |
| • at 690 V rated value                                               | 4 kA                                                                                   |
| response value current of instantaneous short-circuit trip unit      | 52 A                                                                                   |
| <b>UL/CSA ratings</b>                                                |                                                                                        |
| <b>full-load current (FLA) for 3-phase AC motor</b>                  |                                                                                        |
| • at 480 V rated value                                               | 4 A                                                                                    |
| • at 600 V rated value                                               | 4 A                                                                                    |
| <b>yielded mechanical performance [hp]</b>                           |                                                                                        |
| • for single-phase AC motor                                          |                                                                                        |
| — at 110/120 V rated value                                           | 0.13 hp                                                                                |
| — at 230 V rated value                                               | 0.33 hp                                                                                |
| • for 3-phase AC motor                                               |                                                                                        |
| — at 200/208 V rated value                                           | 0.8 hp                                                                                 |
| — at 220/230 V rated value                                           | 0.75 hp                                                                                |
| — at 460/480 V rated value                                           | 2 hp                                                                                   |
| — at 575/600 V rated value                                           | 3 hp                                                                                   |
| <b>Short-circuit protection</b>                                      |                                                                                        |
| <b>product function short circuit protection</b>                     | Yes                                                                                    |
| <b>design of the short-circuit trip</b>                              | magnetic                                                                               |
| <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 |

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| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 97 mm                                                                                                                                                                                         |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 45 mm                                                                                                                                                                                         |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 97 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 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                                                                               |
| <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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG cables for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )<br>2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup><br>2x (16 ... 12), 2x (14 ... 8) |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2 ... 2.5 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | M4                                                                                                                                                                                            |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                               |
| <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                                                                                                                                              |

## Certificates/ approvals

## General Product Approval


[Confirmation](#)

[KC](#)


## For use in hazardous locations

## Declaration of Conformity

## Test Certificates


[Type Test Certificates/Test Report](#)
[Special Test Certificate](#)

## Marine / Shipping



## Marine / Shipping

## other

## Railway


[Confirmation](#)

[Confirmation](#)
[Vibration and Shock](#)

## 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=3RV2021-1EA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1EA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1EA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-1EA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1EA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1EA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-1EA10&objecttype=14&gridview=view1>

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