



Circuit breaker size S0 for motor protection, CLASS 10 A-release  
0.45...0.63 A N-release 8.2 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                 |
| maximum permissible voltage for safe isolation in networks with grounded star point |                      |
| • between main and auxiliary circuit                                                | 400 V                |
| • between main and auxiliary circuit                                                | 400 V                |
| shock resistance acc. 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 acc. to IEC 81346-2                                                  | Q                    |
| Substance Prohibitance (Date)                                                       | 01.10.2009 00:00:00  |
| <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       |
| temperature compensation                                                            | -20 ... +60 °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>                                                                                                                                                                                                                         | 0.45 ... 0.63 A                                                                        |
| <b>operating voltage</b> <ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> </ul>                                                                                                                                                                                    | 690 V<br>690 V                                                                         |
| <b>operating frequency rated value</b>                                                                                                                                                                                                                                                                             | 50 ... 60 Hz                                                                           |
| <b>operational current rated value</b>                                                                                                                                                                                                                                                                             | 0.63 A                                                                                 |
| operational current at AC-3 at 400 V rated value                                                                                                                                                                                                                                                                   | 0.63 A                                                                                 |
| operating power 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>                                                                                                                   | 0.09 kW<br>0.18 kW<br>0.18 kW<br>0.25 kW                                               |
| operating frequency at AC-3 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> <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 operating short-circuit current (Ics) 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>100 kA<br>100 kA                                                   |
| <b>breaking capacity maximum short-circuit current (Icu)</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>100 kA<br>100 kA                                                   |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                    | 8.2 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>                                                                                                                                                       | 0.63 A<br>0.63 A                                                                       |
| <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 |
| <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</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> </ul> </li> </ul> | 30 mm<br>30 mm<br>9 mm<br><br>30 mm                                                    |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                         |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— upwards</li> <li>— at the side</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>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> </ul> | 30 mm<br>9 mm<br><br>30 mm<br>30 mm<br>9 mm<br><br>30 mm<br>30 mm<br>9 mm<br><br>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm<br><br>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                         |
| product component removable terminal for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No                                                                                                                                                                      |
| <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 <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</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>            |
| • at AWG cables for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 2x (16 ... 12), 2x (14 ... 8)                                                                                                                                           |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                         |
| • for main contacts with screw-type terminals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2 ... 2.5 N·m                                                                                                                                                           |
| <b>design of screwdriver shaft</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Diameter 5 to 6 mm                                                                                                                                                      |
| <b>size of the screwdriver tip</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Pozidriv 2                                                                                                                                                              |
| <b>design of the thread of the connection screw</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                         |
| • for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | M4                                                                                                                                                                      |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                         |
| <b>B10 value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                         |
| • with high demand rate acc. to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5 000                                                                                                                                                                   |
| <b>proportion of dangerous failures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                         |
| • with low demand rate acc. to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 50 %                                                                                                                                                                    |
| • with high demand rate acc. to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 50 %                                                                                                                                                                    |
| <b>failure rate [FIT]</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                         |
| • with low demand rate acc. to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 50 FIT                                                                                                                                                                  |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 10 y                                                                                                                                                                    |
| <b>protection class IP on the front acc. to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | IP20                                                                                                                                                                    |
| <b>touch protection on the front acc. to IEC 60529</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | finger-safe, for vertical contact from the front                                                                                                                        |
| display version for switching status                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Handle                                                                                                                                                                  |
| <b>Certificates/ approvals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                         |
| <b>General Product Approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <b>For use in hazardous locations</b>                                                                                                                                   |



[KC](#)



IECEX

For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



ATEX



EG-Konf.

[UK Declaration of Conformity](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

Marine / Shipping



BUREAU  
VERITAS



LRS



PRS



RINA



RMRS



DNV GL

other

Railway

[Confirmation](#)



VDE

[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=3RV2021-0GA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-0GA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0GA10>

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

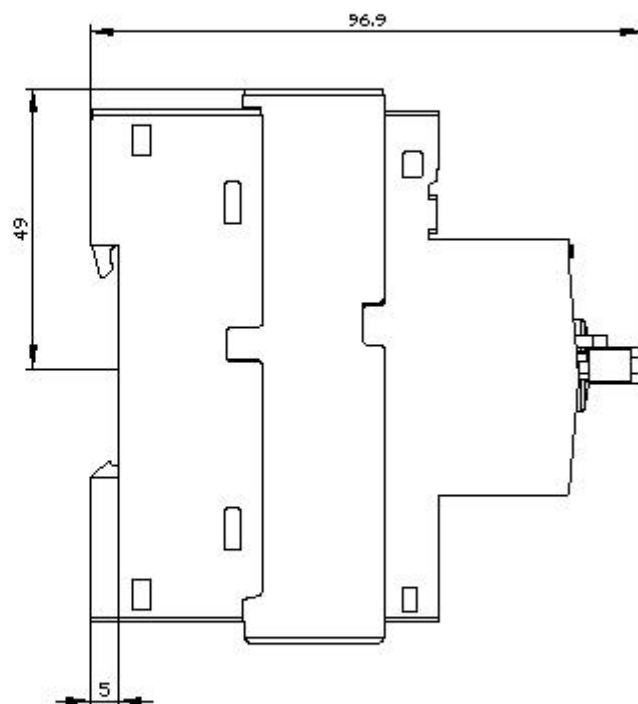
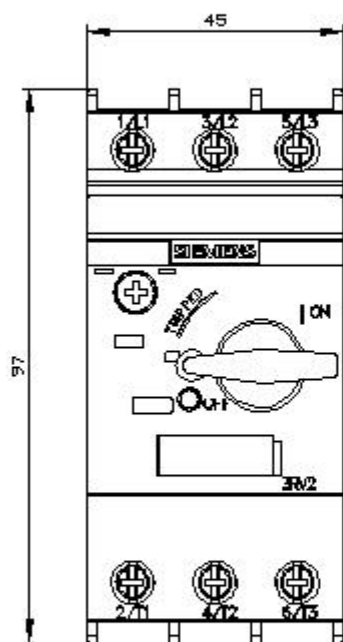
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-0GA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0GA10&lang=en)

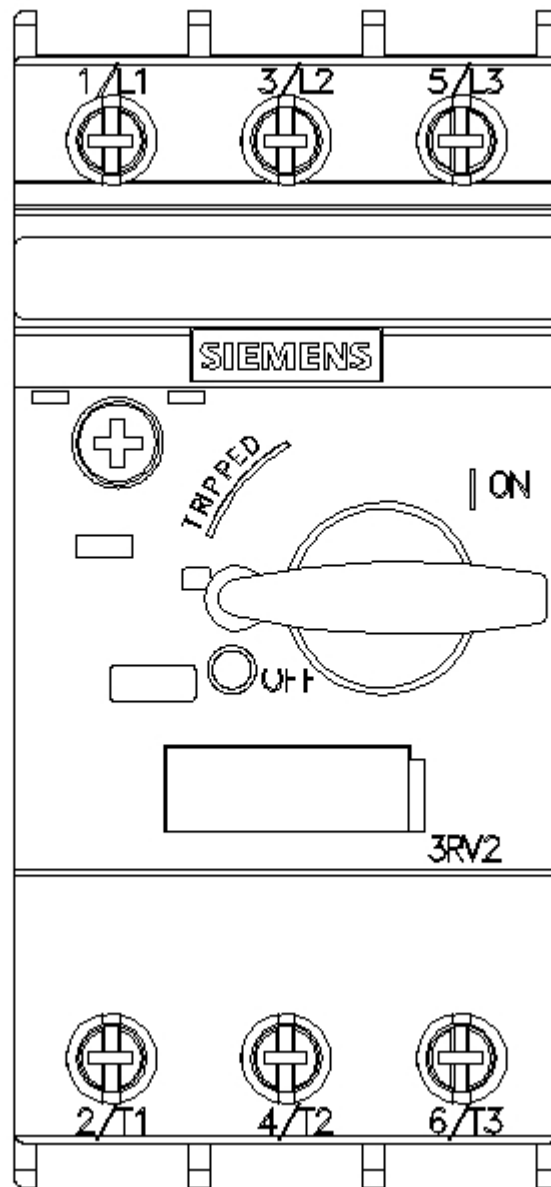
Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

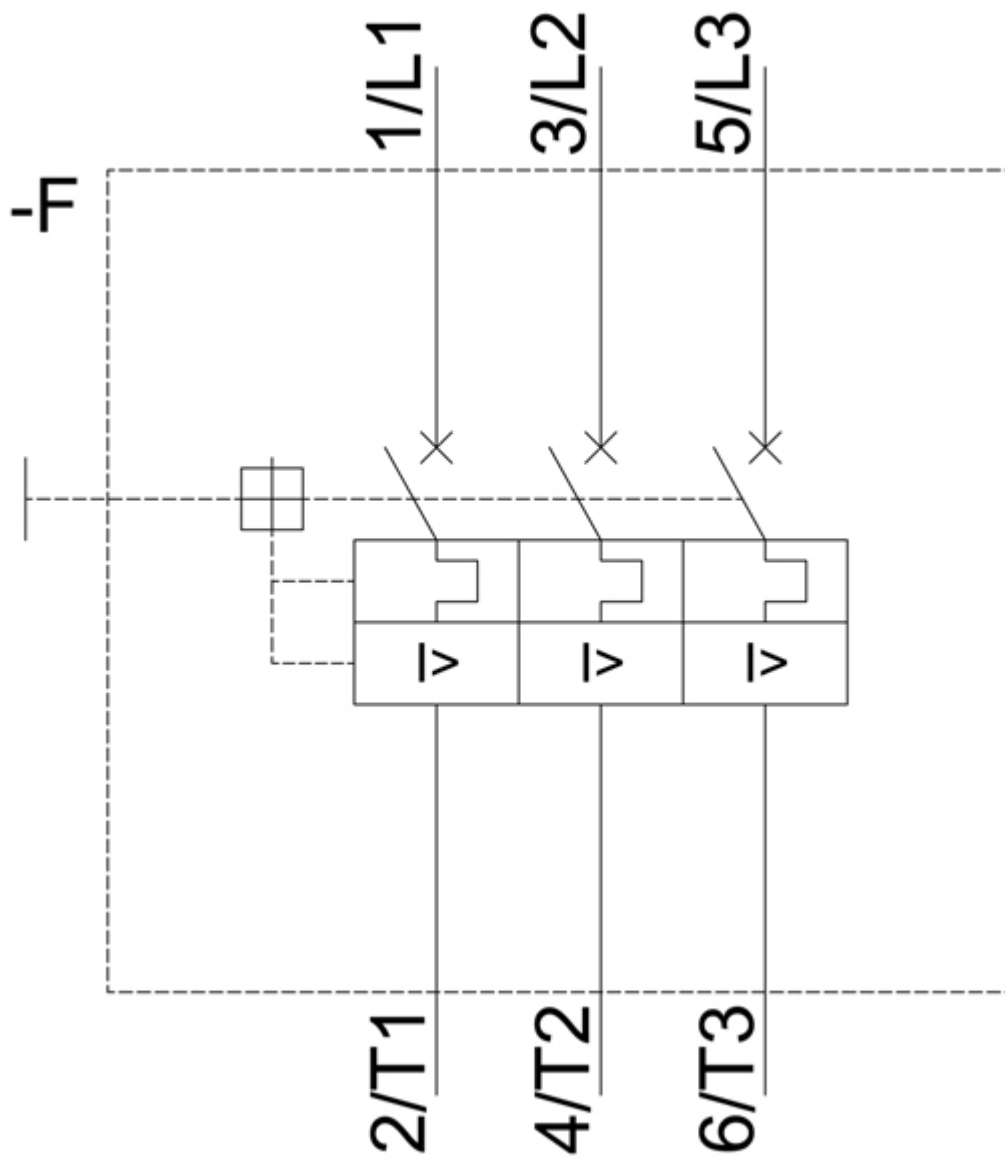
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0GA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-0GA10&objecttype=14&gridview=view1>







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