



Circuit breaker size S0 for motor protection, CLASS 10 A-release 10...16 A  
N-release 208 A screw terminal Standard switching capacity

|                                                                                            |                      |
|--------------------------------------------------------------------------------------------|----------------------|
| <b>product brand name</b>                                                                  | SIRIUS               |
| <b>product designation</b>                                                                 | Circuit breaker      |
| <b>design of the product</b>                                                               | For motor protection |
| <b>product type designation</b>                                                            | 3RV2                 |
| <b>General technical data</b>                                                              |                      |
| <b>size of the circuit-breaker</b>                                                         | S0                   |
| <b>size of contactor can be combined company-specific</b>                                  | S00, S0              |
| product extension auxiliary switch                                                         | Yes                  |
| <b>power loss [W] for rated value of the current</b>                                       |                      |
| • at AC in hot operating state                                                             | 9.25 W               |
| • at AC in hot operating state per pole                                                    | 3.1 W                |
| insulation voltage with degree of pollution 3 at AC rated value                            | 690 V                |
| <b>surge voltage resistance rated value</b>                                                | 6 kV                 |
| <b>maximum permissible voltage for safe isolation in networks with grounded star point</b> |                      |
| • 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          |
| <b>mechanical service life (switching cycles)</b>                                          |                      |
| • of the main contacts typical                                                             | 100 000              |
| • of auxiliary contacts typical                                                            | 100 000              |
| electrical endurance (switching cycles) typical                                            | 100 000              |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                           | Ex II (2) GD         |
| certificate of suitability according to ATEX directive 2014/34/EU                          | DMT 02 ATEX F 001    |
| <b>reference code acc. to IEC 81346-2</b>                                                  | Q                    |
| <b>Substance Prohibitation (Date)</b>                                                      | 01.10.2009           |
| <b>Ambient conditions</b>                                                                  |                      |
| installation altitude at height above sea level maximum                                    | 2 000 m              |
| <b>ambient temperature</b>                                                                 |                      |
| • during operation                                                                         | -20 ... +60 °C       |
| • during storage                                                                           | -50 ... +80 °C       |
| • during transport                                                                         | -50 ... +80 °C       |
| <b>temperature compensation</b>                                                            | -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</b>                                    | 10 ... 16 A          |

|                                                                                                |              |
|------------------------------------------------------------------------------------------------|--------------|
| <b>current-dependent overload release</b>                                                      |              |
| <b>operating voltage</b>                                                                       |              |
| • rated value                                                                                  | 690 V        |
| • rated value                                                                                  | 20 ... 690 V |
| • at AC-3 rated value maximum                                                                  | 690 V        |
| <b>operating frequency rated value</b>                                                         | 50 ... 60 Hz |
| <b>operational current rated value</b>                                                         | 16 A         |
| <b>operational current</b>                                                                     |              |
| • at AC-3 at 400 V rated value                                                                 | 16 A         |
| <b>operating power</b>                                                                         |              |
| • at AC-3                                                                                      |              |
| — at 230 V rated value                                                                         | 4 kW         |
| — at 400 V rated value                                                                         | 7.5 kW       |
| — at 500 V rated value                                                                         | 7.5 kW       |
| — at 690 V rated value                                                                         | 11 kW        |
| <b>operating frequency</b>                                                                     |              |
| • at AC-3 maximum                                                                              | 15 1/h       |
| <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 operating short-circuit current (Ics) at AC</b>                           |              |
| • at 240 V rated value                                                                         | 100 kA       |
| • at 400 V rated value                                                                         | 25 kA        |
| • at 500 V rated value                                                                         | 5 kA         |
| • at 690 V rated value                                                                         | 2 kA         |
| <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                                                                   | 55 kA        |
| • at AC at 500 V rated value                                                                   | 10 kA        |
| • at AC at 690 V rated value                                                                   | 4 kA         |
| response value current of instantaneous short-circuit trip unit                                | 208 A        |
| <b>UL/CSA ratings</b>                                                                          |              |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                            |              |
| • at 480 V rated value                                                                         | 16 A         |
| • at 600 V rated value                                                                         | 16 A         |
| <b>yielded mechanical performance [hp]</b>                                                     |              |
| • for single-phase AC motor                                                                    |              |
| — at 110/120 V rated value                                                                     | 1 hp         |
| — at 230 V rated value                                                                         | 2 hp         |
| • for 3-phase AC motor                                                                         |              |
| — at 200/208 V rated value                                                                     | 3 hp         |
| — at 220/230 V rated value                                                                     | 5 hp         |
| — at 460/480 V rated value                                                                     | 10 hp        |
| <b>Short-circuit protection</b>                                                                |              |
| <b>product function short circuit protection</b>                                               | Yes          |
| <b>design of the short-circuit trip</b>                                                        | magnetic     |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> |              |
| • at 400 V                                                                                     | gL/gG 63 A   |
| • at 500 V                                                                                     | gL/gG 50 A   |
| • at 690 V                                                                                     | gL/gG 40 A   |

| Installation/ mounting/ dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <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> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— 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>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>30 mm<br>30 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              |
| Connections/ Terminals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                               |
| <b>product component removable terminal for auxiliary and control circuit</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | No                                                                                                                                                                                            |
| <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                                                                                                                                                                                            |
| Safety related data                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                               |
| <b>B10 value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• with high demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5 000                                                                                                                                                                                         |
| <b>proportion of dangerous failures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                               |
| <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> <li>• with high demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 50 %<br>50 %                                                                                                                                                                                  |

|                                                    |                                                  |
|----------------------------------------------------|--------------------------------------------------|
| failure rate [FIT]                                 | 50 FIT                                           |
| • with low demand rate acc. to SN 31920            |                                                  |
| protection class IP on the front acc. to IEC 60529 | IP20                                             |
| touch protection on the front acc. to IEC 60529    | finger-safe, for vertical contact from the front |
| display version for switching status               | Handle                                           |

#### Certificates/ approvals

##### General Product Approval



[Confirmation](#)



[KC](#)



| For use in hazardous locations | Declaration of Conformity | Test Certificates |
|--------------------------------|---------------------------|-------------------|
|--------------------------------|---------------------------|-------------------|



[UK Declaration of Conformity](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

#### Marine / Shipping



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



[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

#### Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-4AA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4AA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4AA10>

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

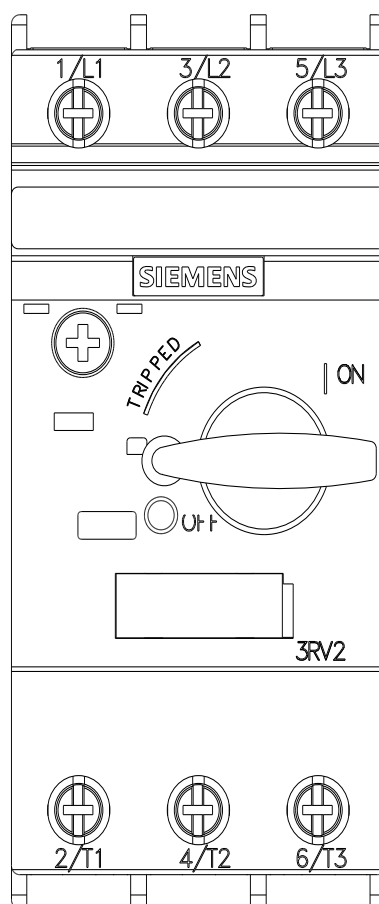
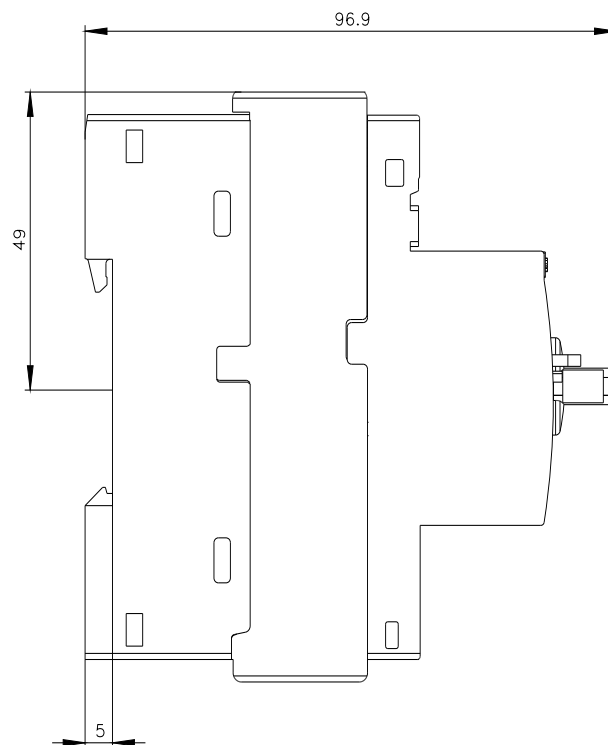
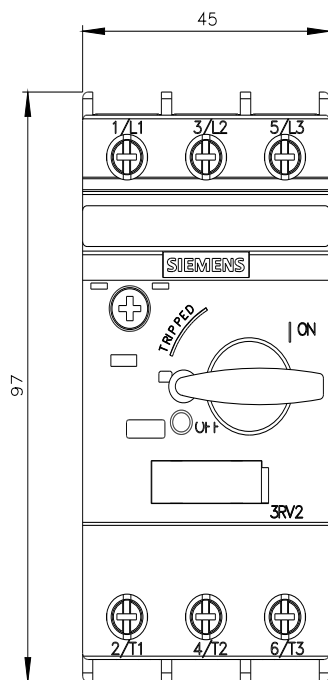
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4AA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4AA10&lang=en)

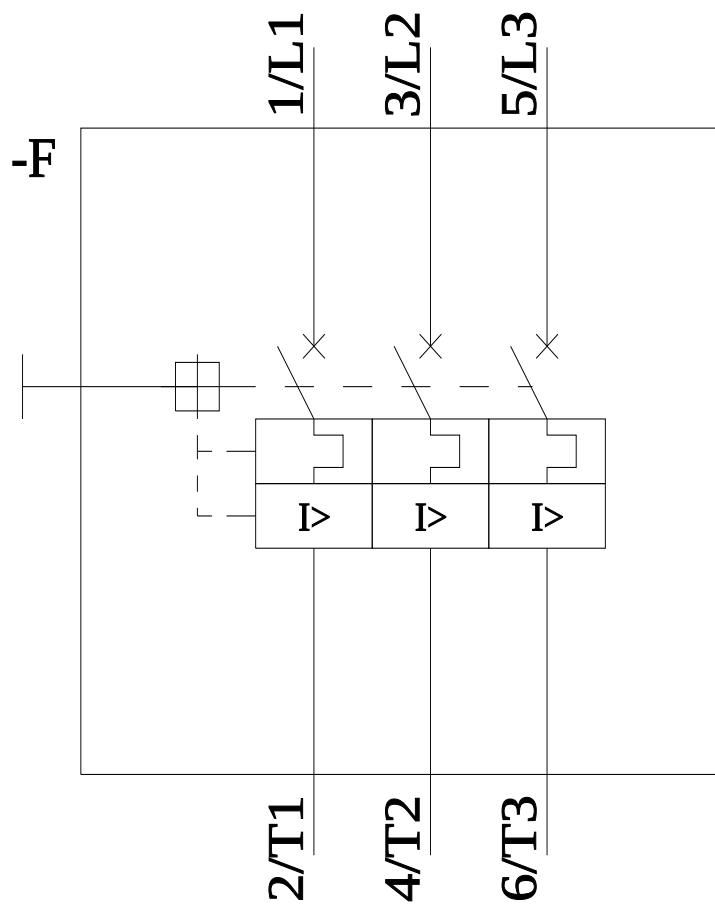
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4AA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4AA10&objecttype=14&gridview=view1>





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