



Circuit breaker size S00 for motor protection, CLASS 10 A-release 1.1...1.6 A N-release 21 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC

|                          |                      |
|--------------------------|----------------------|
| product brand name       | SIRIUS               |
| product designation      | Circuit breaker      |
| design of the product    | For motor protection |
| product type designation | 3RV2                 |

### General technical data

|                                                                   |                   |
|-------------------------------------------------------------------|-------------------|
| size of the circuit-breaker                                       | S00               |
| size of contactor can be combined company-specific                | S00, S0           |
| product extension auxiliary switch                                | Yes               |
| power loss [W] for rated value of the current                     |                   |
| • at AC in hot operating state                                    | 7.25 W            |
| • at AC in hot operating state per pole                           | 2.4 W             |
| insulation voltage with degree of pollution 3 at AC rated value   | 690 V             |
| surge voltage resistance rated value                              | 6 kV              |
| shock resistance according to IEC 60068-2-27                      | 25g / 11 ms       |
| mechanical service life (operating cycles)                        |                   |
| • of the main contacts typical                                    | 100 000           |
| • of auxiliary contacts typical                                   | 100 000           |
| electrical endurance (operating cycles) typical                   | 100 000           |
| type of protection according to ATEX directive 2014/34/EU         | Ex II (2) GD      |
| certificate of suitability according to ATEX directive 2014/34/EU | DMT 02 ATEX F 001 |
| reference code according to IEC 81346-2                           | Q                 |
| Substance Prohibitance (Date)                                     | 10/01/2009        |

### Ambient conditions

|                                                         |                |
|---------------------------------------------------------|----------------|
| installation altitude at height above sea level maximum | 2 000 m        |
| ambient temperature                                     |                |
| • during operation                                      | -20 ... +60 °C |
| • during storage                                        | -50 ... +80 °C |
| • during transport                                      | -50 ... +80 °C |
| relative humidity during operation                      | 10 ... 95 %    |

### Main circuit

|                                                                                     |               |
|-------------------------------------------------------------------------------------|---------------|
| number of poles for main current circuit                                            | 3             |
| adjustable current response value current of the current-dependent overload release | 1.1 ... 1.6 A |
| operating voltage                                                                   |               |
| • rated value                                                                       | 20 ... 690 V  |
| • at AC-3 rated value maximum                                                       | 690 V         |
| • at AC-3e rated value maximum                                                      | 690 V         |
| operating frequency rated value                                                     | 50 ... 60 Hz  |
| operational current rated value                                                     | 1.6 A         |

|                                                                      |             |
|----------------------------------------------------------------------|-------------|
| <b>operational current</b>                                           |             |
| • at AC-3 at 400 V rated value                                       | 1.6 A       |
| • at AC-3e at 400 V rated value                                      | 1.6 A       |
| <b>operating power</b>                                               |             |
| • at AC-3                                                            |             |
| — at 230 V rated value                                               | 0.3 kW      |
| — at 400 V rated value                                               | 0.55 kW     |
| — at 500 V rated value                                               | 0.8 kW      |
| — at 690 V rated value                                               | 1.1 kW      |
| • at AC-3e                                                           |             |
| — at 230 V rated value                                               | 0.3 kW      |
| — at 400 V rated value                                               | 0.55 kW     |
| — at 500 V rated value                                               | 0.8 kW      |
| — at 690 V rated value                                               | 1.1 kW      |
| <b>operating frequency</b>                                           |             |
| • at AC-3 maximum                                                    | 15 1/h      |
| • at AC-3e maximum                                                   | 15 1/h      |
| <b>Auxiliary circuit</b>                                             |             |
| <b>design of the auxiliary switch</b>                                | transverse  |
| <b>number of NC contacts for auxiliary contacts</b>                  | 1           |
| <b>number of NO contacts for auxiliary contacts</b>                  | 1           |
| number of CO contacts for auxiliary contacts                         | 0           |
| <b>operational current of auxiliary contacts at AC-15</b>            |             |
| • at 24 V                                                            | 2 A         |
| • at 120 V                                                           | 0.5 A       |
| • at 125 V                                                           | 0.5 A       |
| • at 230 V                                                           | 0.5 A       |
| <b>operational current of auxiliary contacts at DC-13</b>            |             |
| • at 24 V                                                            | 1 A         |
| • at 60 V                                                            | 0.15 A      |
| <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>maximum short-circuit current breaking capacity (Icu)</b>         |             |
| • at AC at 240 V rated value                                         | 100 kA      |
| • at AC at 400 V rated value                                         | 100 kA      |
| • at AC at 500 V rated value                                         | 100 kA      |
| • at AC at 690 V rated value                                         | 100 kA      |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b> |             |
| • at 240 V rated value                                               | 100 kA      |
| • at 400 V rated value                                               | 100 kA      |
| • at 500 V rated value                                               | 100 kA      |
| • at 690 V rated value                                               | 100 kA      |
| response value current of instantaneous short-circuit trip unit      | 21 A        |
| <b>UL/CSA ratings</b>                                                |             |
| <b>full-load current (FLA) for 3-phase AC motor</b>                  |             |
| • at 480 V rated value                                               | 1.6 A       |
| • at 600 V rated value                                               | 1.6 A       |
| <b>yielded mechanical performance [hp]</b>                           |             |
| • for single-phase AC motor                                          |             |
| — at 230 V rated value                                               | 0.1 hp      |
| • for 3-phase AC motor                                               |             |
| — at 460/480 V rated value                                           | 1 hp        |
| — at 575/600 V rated value                                           | 0.8 hp      |
| <b>contact rating of auxiliary contacts according to UL</b>          | C300 / R300 |
| <b>Short-circuit protection</b>                                      |             |
| <b>product function short circuit protection</b>                     | Yes         |
| <b>design of the short-circuit trip</b>                              | magnetic    |

|                                                                                                                                                                                 |                                                                                                  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <b>design of the fuse link</b> <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400 \text{ A}$ ) |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> <ul style="list-style-type: none"> <li>• at 500 V</li> <li>• at 690 V</li> </ul> | gL/gG 20 A<br>gL/gG 16 A                                                                         |

#### Installation/ mounting/ dimensions

|                                                                                                                                                                                                                                                 |                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>mounting position</b>                                                                                                                                                                                                                        | any                                                                      |
| <b>fastening method</b>                                                                                                                                                                                                                         | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| <b>height</b>                                                                                                                                                                                                                                   | 106 mm                                                                   |
| <b>width</b>                                                                                                                                                                                                                                    | 45 mm                                                                    |
| <b>depth</b>                                                                                                                                                                                                                                    | 97 mm                                                                    |
| <b>required spacing</b>                                                                                                                                                                                                                         |                                                                          |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting at the side</li> </ul>                                                                                                                                                      | 0 mm                                                                     |
| <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> </ul>                                          | 30 mm<br>30 mm<br>9 mm                                                   |
| <ul style="list-style-type: none"> <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> </ul>                                              | 30 mm<br>30 mm<br>9 mm                                                   |
| <ul style="list-style-type: none"> <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> </ul>                                          | 30 mm<br>30 mm<br>9 mm                                                   |
| <ul style="list-style-type: none"> <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> </ul>                                              | 30 mm<br>30 mm<br>9 mm                                                   |
| <ul style="list-style-type: none"> <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> </ul> | 50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm                                  |
| <ul style="list-style-type: none"> <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>     | 50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm                                  |

#### Connections/ Terminals

|                                                                                                                                                                                                                                                                                                                            |                                                                                                                               |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| <b>type of electrical connection</b> <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> </ul>                                                                                                                                                             | spring-loaded terminals<br>spring-loaded 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> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG cables for main contacts</li> </ul>           | 2x (0,5 ... 4 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (20 ... 12)   |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                        |                                                                                                                               |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts               <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>• at AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14) |
| <b>design of screwdriver shaft</b>                                                                                                                                                                                                                                                                                         | Diameter 3 mm                                                                                                                 |
| <b>size of the screwdriver tip</b>                                                                                                                                                                                                                                                                                         | 3,0 x 0,5 mm                                                                                                                  |

## Safety related data

### B10 value

- with high demand rate according to SN 31920 5 000

### proportion of dangerous failures

- with low demand rate according to SN 31920 50 %
- with high demand rate according to SN 31920 50 %

### failure rate [FIT]

- with low demand rate according to SN 31920 50 FIT

T1 value for proof test interval or service life according to IEC 61508 10 a

protection class IP on the front according to IEC 60529 IP20

touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front  
display version for switching status Handle

## Certificates/ approvals

General Product Approval

For use in hazardous locations



[Confirmation](#)



[KC](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



## Marine / Shipping



other

Railway

[Confirmation](#)



[Confirmation](#)

[Vibration and Shock](#)

## Further information

### Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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

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

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2011-1AA25>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1AA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1AA25>

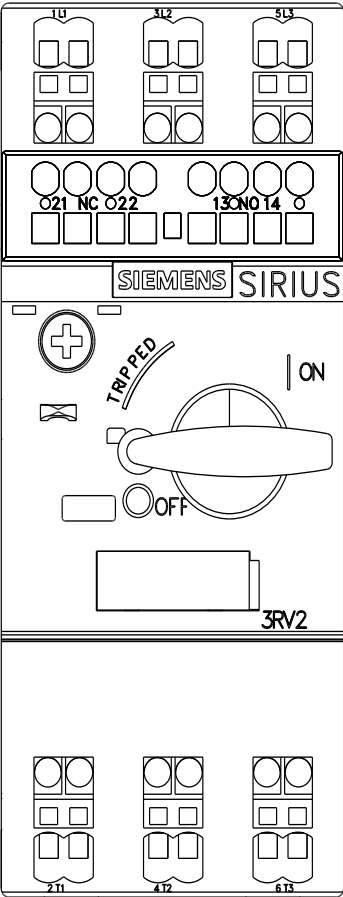
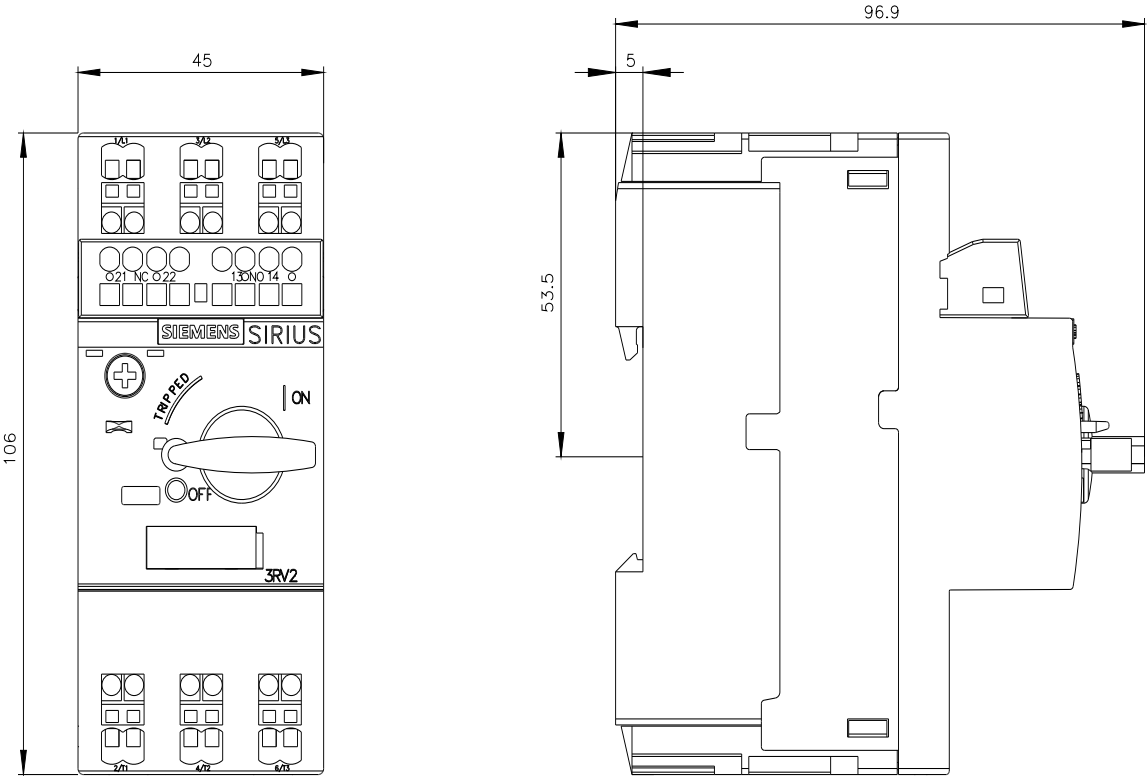
### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

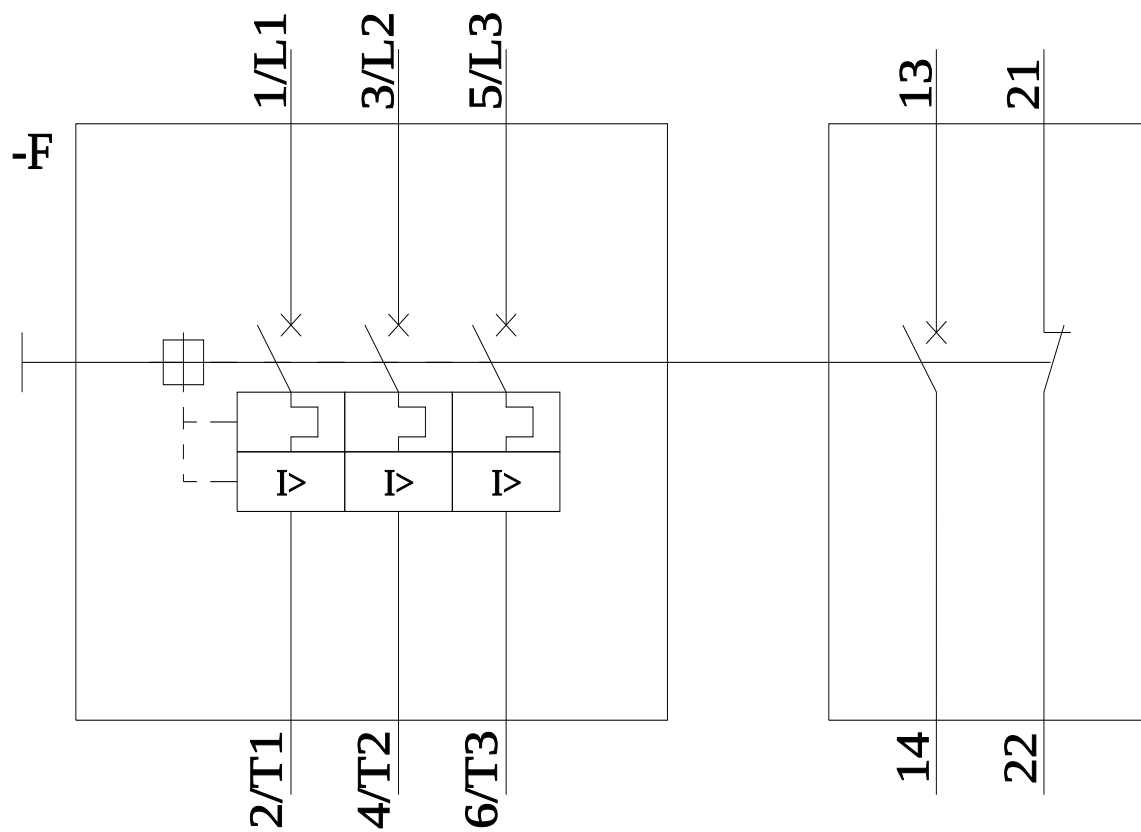
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-1AA25&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1AA25&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1AA25/char>

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





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