



Circuit breaker size S00 for motor protection, CLASS 10 A-release 9...12 A  
N-release 156 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>  | 3RV1                 |
| <b>General technical data</b>  |                      |
| <b>size of the circuit-breaker</b>   | S00                  |
| <b>size of contactor can be combined company-specific</b>                                  | S00                  |
| 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>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 according to IEC 81346-2</b>   | Q                    |
| <b>Substance Prohibitance (Date)</b>   | 01/01/2013           |
| <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       |
| 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> | 9 ... 12.5 A         |
| <b>operating voltage</b>   |                      |
| • rated value  | 20 ... 690 V         |
| • at AC-3 rated value maximum  | 690 V                |
| • at AC-3e rated value maximum   | 690 V                |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz         |

|  |            |
|--|------------|
| <b>operational current rated value</b>   | 12 A       |
| <b>operational current</b>   |            |
| • at AC-3 at 400 V rated value   | 12 A       |
| • at AC-3e at 400 V rated value  | 12 A       |
| <b>operating power</b>   |            |
| • at AC-3  |            |
| — at 230 V rated value   | 3 kW       |
| — at 400 V rated value   | 5.5 kW     |
| — at 500 V rated value   | 5.5 kW     |
| — at 690 V rated value   | 7.5 kW     |
| • at AC-3e   |            |
| — at 230 V rated value   | 3 kW       |
| — at 400 V rated value   | 5.5 kW     |
| — at 500 V rated value   | 5.5 kW     |
| — at 690 V rated value   | 7.5 kW     |
| <b>operating frequency</b>   |            |
| • at AC-3 maximum  | 15 1/h     |
| • at AC-3e maximum   | 15 1/h     |
| <b>Auxiliary circuit</b>   |            |
| number of CO contacts for auxiliary contacts   | 0          |
| <b>Protective and monitoring functions</b>   |            |
| <b>product function</b>  |            |
| • ground fault detection   | No         |
| • phase failure detection  | Yes        |
| <b>trip class</b>  | CLASS 10   |
| <b>design of the overload release</b>  | thermal    |
| <b>breaking capacity maximum short-circuit current (Icu)</b>                                   |            |
| • at AC at 240 V rated value   | 100 kA     |
| • at AC at 400 V rated value   | 50 kA      |
| • at AC at 500 V rated value   | 3 kA       |
| • at AC at 690 V rated value   | 2 kA       |
| <b>breaking capacity operating short-circuit current (Ics) at AC</b>                           |            |
| • at 240 V rated value   | 100 kA     |
| • at 400 V rated value   | 13 kA      |
| • at 500 V rated value   | 3 kA       |
| • at 690 V rated value   | 2 kA       |
| response value current of instantaneous short-circuit trip unit                                | 156 A      |
| <b>UL/CSA ratings</b>  |            |
| <b>full-load current (FLA) for 3-phase AC motor</b>  |            |
| • at 480 V rated value   | 12 A       |
| • at 600 V rated value   | 12 A       |
| <b>yielded mechanical performance [hp]</b>   |            |
| • for single-phase AC motor  |            |
| — at 110/120 V rated value   | 0.5 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   | 3 hp       |
| — at 460/480 V rated value   | 8 hp       |
| — at 575/600 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 240 V   | gL/gG 80 A |
| • at 400 V   | gL/gG 80 A |
| • at 500 V   | gL/gG 50 A |

- at 690 V

gL/gG 50 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>  | 90 mm  |
| <b>width</b>   | 45 mm  |
| <b>depth</b>   | 75 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 20 mm</li> <li>— upwards 20 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for live parts at 400 V           <ul style="list-style-type: none"> <li>— downwards 20 mm</li> <li>— upwards 20 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for grounded parts at 500 V           <ul style="list-style-type: none"> <li>— downwards 20 mm</li> <li>— upwards 20 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for live parts at 500 V           <ul style="list-style-type: none"> <li>— downwards 20 mm</li> <li>— upwards 20 mm</li> <li>— at the side 9 mm</li> </ul> </li> <li>• for grounded parts at 690 V           <ul style="list-style-type: none"> <li>— downwards 20 mm</li> <li>— upwards 20 mm</li> <li>— backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> <li>• for live parts at 690 V           <ul style="list-style-type: none"> <li>— downwards 20 mm</li> <li>— upwards 20 mm</li> <li>— backwards 0 mm</li> <li>— at the side 9 mm</li> <li>— forwards 0 mm</li> </ul> </li> </ul> |  |

### Connections/ Terminals

|   |                      |
|---|----------------------|
| <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 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>), 2x (1 ... 4 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> </ul> </li> </ul> |                      |
| <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 2x (0,5 ... 1,5 mm<sup>2</sup>), 2x (0,75 ... 2,5 mm<sup>2</sup>)</li> </ul> </li> </ul>   |                      |
| <b>tightening torque</b>  |                      |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals 0,8 ... 1,2 N·m</li> <li>• for auxiliary contacts with screw-type terminals 0,8 ... 1,2 N·m</li> </ul>   |                      |
| <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 M3</li> </ul>  |                      |

### Safety related data

|   |  |
|---|--|
| <b>B10 value</b>  |  |
| <ul style="list-style-type: none"> <li>• with high demand rate according to SN 31920 5 000</li> </ul> |  |
| <b>proportion of dangerous failures</b>   |  |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920 50 %</li> </ul>   |  |

|  |  |
|--|--|
| • with high demand rate according to SN 31920                  | 50 %   |
| <b>failure rate [FIT]</b>                                      |  |
| • with low demand rate according to SN 31920                   | 50 FIT   |
| <b>protection class IP on the front according to IEC 60529</b> | IP20   |
| <b>touch protection on the front according to IEC 60529</b>    | finger-safe, for vertical contact from the front |
| display version for switching status                           | Rocker switch                                    |

### Certificates/ approvals

|                          |                                |
|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |
|--------------------------|--------------------------------|



[Confirmation](#)



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



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



### Marine / Shipping



### other

[Miscellaneous](#)

[Confirmation](#)



[Special Test Certificate](#)

### 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=3RV1011-1KA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1KA10>

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

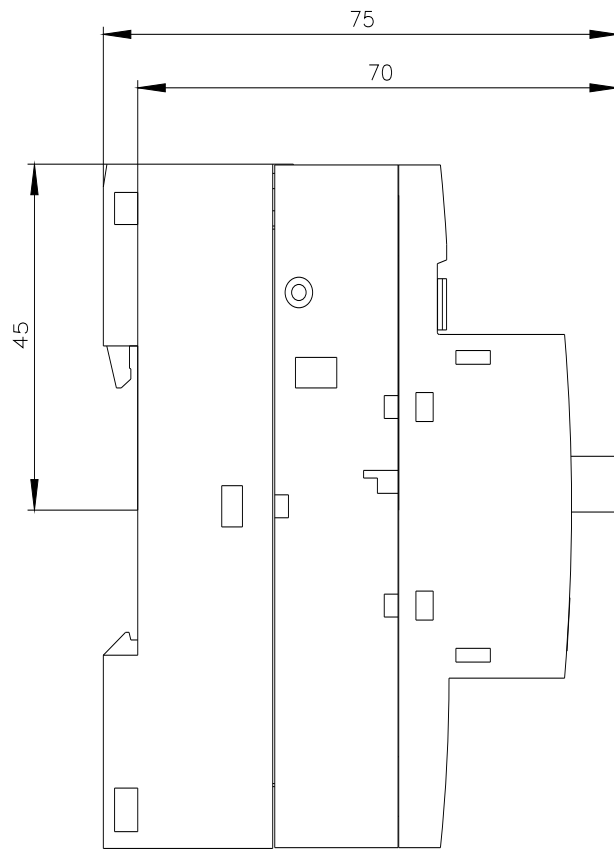
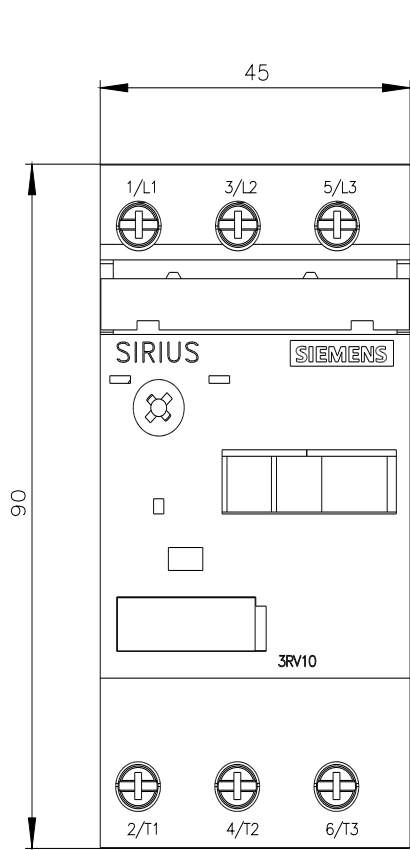
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1KA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1KA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1KA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1KA10&objecttype=14&gridview=view1>



last modified:

6/25/2022 