

Circuit breaker size S00 for motor protection, CLASS 10 A-release  
7...10 A N release 130 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                 |
| 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] total typical                                              | 7 W                  |
| Power loss [W] for rated value of the current                             |                      |
| • at AC in hot operating state per pole                                   | 3.1 W                |
| Insulation voltage with degree of pollution 3 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                |

|                                                                                                                             |                   |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------|
| <ul style="list-style-type: none"> <li>• in networks with grounded star point between main and auxiliary circuit</li> </ul> | 400 V             |
| <b>Protection class IP</b>                                                                                                  |                   |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                                                            | IP20              |
| <ul style="list-style-type: none"> <li>• of the terminal</li> </ul>                                                         | IP20              |
| <b>Shock resistance</b>                                                                                                     |                   |
| <ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>                                                  | 25g / 11 ms       |
| <b>Mechanical service life (switching cycles)</b>                                                                           |                   |
| <ul style="list-style-type: none"> <li>• of the main contacts typical</li> </ul>                                            | 100 000           |
| <ul style="list-style-type: none"> <li>• of auxiliary contacts typical</li> </ul>                                           | 100 000           |
| <b>Electrical endurance (switching cycles)</b>                                                                              |                   |
| <ul style="list-style-type: none"> <li>• typical</li> </ul>                                                                 | 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>Protection against electrical shock</b>                                                                                  | finger-safe       |
| <b>Reference code acc. to DIN EN 81346-2</b>                                                                                | Q                 |

#### Ambient conditions

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b>               |                |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>          | 2 000 m        |
| <b>Ambient temperature</b>                                           |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | -20 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | -50 ... +80 °C |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul> | -50 ... +80 °C |
| <b>Temperature compensation</b>                                      | -20 ... +60 °C |
| Relative humidity during operation                                   | 10 ... 95 %    |

#### Main circuit

|                                                                                   |              |
|-----------------------------------------------------------------------------------|--------------|
| <b>Number of poles for main current circuit</b>                                   | 3            |
| <b>Adjustable pick-up value current of the current-dependent overload release</b> | 7 ... 10 A   |
| <b>Operating voltage</b>                                                          |              |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                   | 690 V        |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>   | 690 V        |
| <b>Operating frequency rated value</b>                                            | 50 ... 60 Hz |
| <b>Operating current rated value</b>                                              | 10 A         |
| <b>Operating current</b>                                                          |              |
| <ul style="list-style-type: none"> <li>• at AC-3</li> </ul>                       |              |
| <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul>          | 10 A         |
| <b>Operating power</b>                                                            |              |
| <ul style="list-style-type: none"> <li>• at AC-3</li> </ul>                       |              |
| <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul>          | 2 200 W      |

|                                                                        |          |
|------------------------------------------------------------------------|----------|
| — at 400 V rated value                                                 | 4 000 W  |
| — at 500 V rated value                                                 | 5 500 W  |
| — at 690 V rated value                                                 | 7 500 W  |
| <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        |
| <b>Number of CO contacts</b>                                           |          |
| • 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>Operational 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                                                 | 42 kA    |
| • at 690 V rated value                                                 | 4 kA     |
| <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                                           | 42 kA    |
| • at AC at 690 V rated value                                           | 6 kA     |
| <b>Breaking capacity short-circuit current (Icn)</b>                   |          |
| • at 1 current path at DC at 150 V rated value                         | 10 kA    |
| • with 2 current paths in series at DC at 300 V rated value            | 10 kA    |
| • with 3 current paths in series at DC at 450 V rated value            | 10 kA    |
| <b>Response value current</b>                                          |          |
| • of instantaneous short-circuit trip unit                             | 130 A    |
| <b>UL/CSA ratings</b>                                                  |          |
| <b>Full-load current (FLA) for three-phase AC motor</b>                |          |
| • at 480 V rated value                                                 | 10 A     |
| • at 600 V rated value                                                 | 10 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     | 1.5 hp |
| • for three-phase AC motor |        |
| — at 200/208 V rated value | 2 hp   |
| — at 220/230 V rated value | 3 hp   |
| — at 460/480 V rated value | 5 hp   |
| — at 575/600 V rated value | 7.5 hp |

## Short-circuit protection

|                                                                                                |            |
|------------------------------------------------------------------------------------------------|------------|
| <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 50 A |
| • at 500 V                                                                                     | gL/gG 40 A |
| • at 690 V                                                                                     | gL/gG 40 A |

## Installation/ mounting/ dimensions

|                              |                                                                                        |
|------------------------------|----------------------------------------------------------------------------------------|
| <b>Mounting position</b>     | any                                                                                    |
| <b>Mounting type</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>      |                                                                                        |
| • with side-by-side mounting |                                                                                        |
| — forwards                   | 0 mm                                                                                   |
| — Backwards                  | 0 mm                                                                                   |
| — upwards                    | 50 mm                                                                                  |
| — downwards                  | 50 mm                                                                                  |
| — at the side                | 0 mm                                                                                   |
| • for grounded parts         |                                                                                        |
| — forwards                   | 0 mm                                                                                   |
| — Backwards                  | 0 mm                                                                                   |
| — upwards                    | 50 mm                                                                                  |
| — at the side                | 30 mm                                                                                  |
| — downwards                  | 50 mm                                                                                  |
| • for live parts             |                                                                                        |
| — forwards                   | 0 mm                                                                                   |
| — Backwards                  | 0 mm                                                                                   |
| — upwards                    | 50 mm                                                                                  |
| — downwards                  | 50 mm                                                                                  |
| — at the side                | 30 mm                                                                                  |

## Connections/ Terminals

|                                                                                                                                                                                                                                                                                                    |                                                                                                                                                            |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product function</b> <ul style="list-style-type: none"> <li>removable terminal for auxiliary and control circuit</li> </ul>                                                                                                                                                                     | 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>single or multi-stranded</li> <li>finely stranded with core end processing</li> </ul> </li> <li>at AWG conductors for main contacts</li> </ul> | 2x (0,75 ... 2,5 mm <sup>2</sup> ), 2x 4 mm <sup>2</sup><br>2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )<br>2x (18 ... 14), 2x 12 |
| <b>Tightening torque</b> <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>                                                                                                                                                                             | 0.8 ... 1.2 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> <ul style="list-style-type: none"> <li>for main contacts</li> </ul>                                                                                                                                                                            | M3                                                                                                                                                         |

## 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 % |
| <b>Failure rate [FIT]</b> <ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> </ul>                                                               | 50 FIT       |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                                                                       | 10 y         |
| <b>Display version</b> <ul style="list-style-type: none"> <li>for switching status</li> </ul>                                                                                   | Handle       |

## Certificates/ approvals

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



[KC](#)



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



IECEX



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[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS

## Marine / Shipping



|       |         |
|-------|---------|
| other | Railway |
|-------|---------|

[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

## Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2011-1JA10>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2011-1JA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1JA10>

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

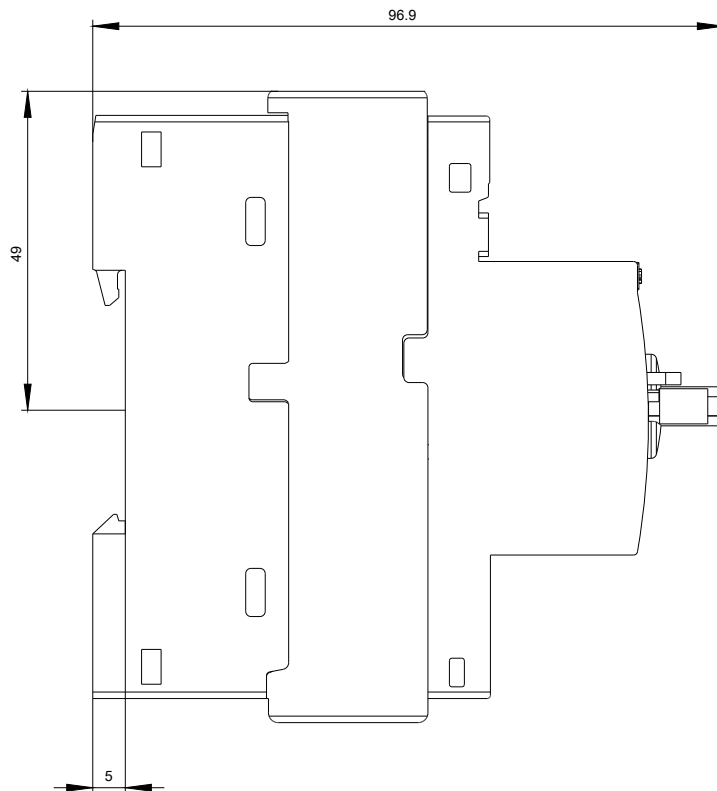
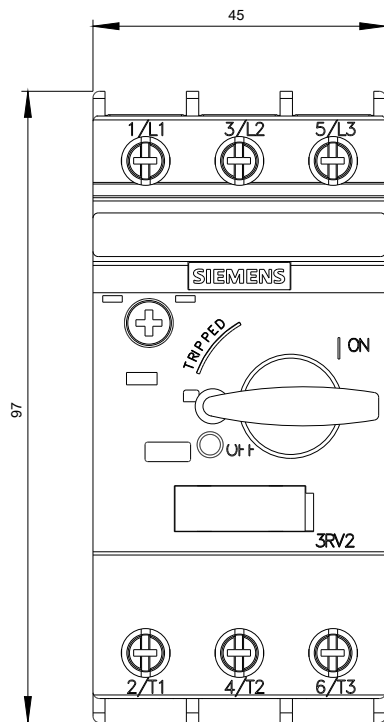
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2011-1JA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2011-1JA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2011-1JA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2011-1JA10&objecttype=14&gridview=view1>







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