

Circuit breaker size S0 for motor protection, CLASS 10 A-release 0.9...1.25 A N-release 16 A screw terminal Standard switching capacity



Figure similar

|                          |                      |
|--------------------------|----------------------|
| 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                                               | S0      |
| Size of contactor can be combined company-specific                        | S00, S0 |
| Product extension                                                         |         |
| • Auxiliary switch                                                        | Yes     |
| Power loss [W] total typical                                              | 6 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   |
| • in networks with grounded star point between main and auxiliary circuit | 400 V   |

|                                                   |                  |
|---------------------------------------------------|------------------|
| <b>Protection class IP</b>                        |                  |
| • on the front                                    | IP20             |
| • of the terminal                                 | IP20             |
| <b>Shock resistance</b>                           |                  |
| • 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          |
| <b>Electrical endurance (switching cycles)</b>    |                  |
| • typical                                         | 100 000          |
| <b>Type of protection</b>                         | Increased safety |
| Certificate of suitability ATEX                   | Yes              |
| <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> |                |
| • 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 %    |

#### 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> | 0.9 ... 1.25 A |
| <b>Operating voltage</b>                                                          |                |
| • rated value                                                                     | 690 V          |
| • at AC-3 rated value maximum                                                     | 690 V          |
| <b>Operating frequency rated value</b>                                            | 50 ... 60 Hz   |
| <b>Operating current rated value</b>                                              | 1.25 A         |
| <b>Operating current</b>                                                          |                |
| • at AC-3                                                                         |                |
| — at 400 V rated value                                                            | 1.25 A         |
| <b>Operating power</b>                                                            |                |
| • at AC-3                                                                         |                |
| — at 230 V rated value                                                            | 180 W          |
| — at 400 V rated value                                                            | 370 W          |
| — at 500 V rated value                                                            | 370 W          |
| — at 690 V rated value                                                            | 750 W          |
| <b>Operating frequency</b>                                                        |                |

- at AC-3 maximum

15 1/h

#### Auxiliary circuit

|                                              |   |
|----------------------------------------------|---|
| Number of NC contacts for auxiliary contacts | 0 |
| Number of NO contacts for auxiliary contacts | 0 |
| Number of CO contacts                        |   |
| • for auxiliary contacts                     | 0 |

#### Protective and monitoring functions

|                                                                 |          |
|-----------------------------------------------------------------|----------|
| Product function                                                |          |
| • Ground fault detection                                        | No       |
| • Phase failure detection                                       | Yes      |
| Trip class                                                      | CLASS 10 |
| Design of the overload release                                  | thermal  |
| Operational short-circuit current breaking capacity (Ics) at AC |          |
| • 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   |
| Maximum short-circuit current breaking capacity (Icu)           |          |
| • 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   |
| Breaking capacity short-circuit current (Icn)                   |          |
| • 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    |
| Response value current                                          |          |
| • of instantaneous short-circuit trip unit                      | 16 A     |

#### UL/CSA ratings

|                                                  |        |
|--------------------------------------------------|--------|
| Full-load current (FLA) for three-phase AC motor |        |
| • at 480 V rated value                           | 1.25 A |
| • at 600 V rated value                           | 1.25 A |
| Yielded mechanical performance [hp]              |        |
| • for three-phase AC motor                       |        |
| — at 460/480 V rated value                       | 0.5 hp |
| — at 575/600 V rated value                       | 0.5 hp |

#### Short-circuit protection

|                                           |     |
|-------------------------------------------|-----|
| Product function Short circuit protection | Yes |
|-------------------------------------------|-----|

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                        |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <b>Design of the short-circuit trip</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | magnetic                                                                               |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                        |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                        |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 50 mm</li> <li>— downwards 50 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 50 mm</li> <li>— at the side 30 mm</li> <li>— downwards 50 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 50 mm</li> <li>— downwards 50 mm</li> <li>— at the side 30 mm</li> </ul> </li> </ul> |                                                                                        |
| <b>Connections/Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                        |
| <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 2x (1 ... 2,5 mm<sup>2</sup>), 2x (2,5 ... 10 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (1 ... 2.5 mm<sup>2</sup>), 2x (2.5 ... 6 mm<sup>2</sup>), 1x 10 mm<sup>2</sup></li> </ul> </li> <li>• at AWG conductors for main contacts 2x (16 ... 12), 2x (14 ... 8)</li> </ul>                                                                                                                                                                                                                                           |                                                                                        |
| <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 2         |
| <b>Design of the thread of the connection screw</b><br>• for main contacts | M4                 |

#### Safety related data

|                                                                                                                                |              |
|--------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>B10 value</b><br>• with high demand rate acc. to SN 31920                                                                   | 5 000        |
| <b>Proportion of dangerous failures</b><br>• with low demand rate acc. to SN 31920<br>• with high demand rate acc. to SN 31920 | 50 %<br>50 % |
| <b>Failure rate [FIT]</b><br>• with low demand rate acc. to SN 31920                                                           | 50 FIT       |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                      | 10 y         |
| <b>Display version</b><br>• for switching status                                                                               | Handle       |

#### Certificates/approvals

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



CCC



CSA



UL

[KC](#)



ATEX

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



IECEX



EG-Konf.

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



ABS



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



LRS



PRS



RINA



RMRS



DNVGL.COM/AF

[Confirmation](#)

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



VDE

[Vibration and Shock](#)

## Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2021-0KA10>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-0KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0KA10>

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

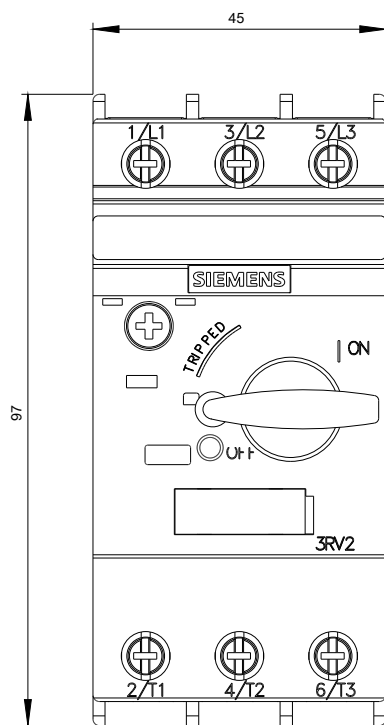
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-0KA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0KA10&lang=en)

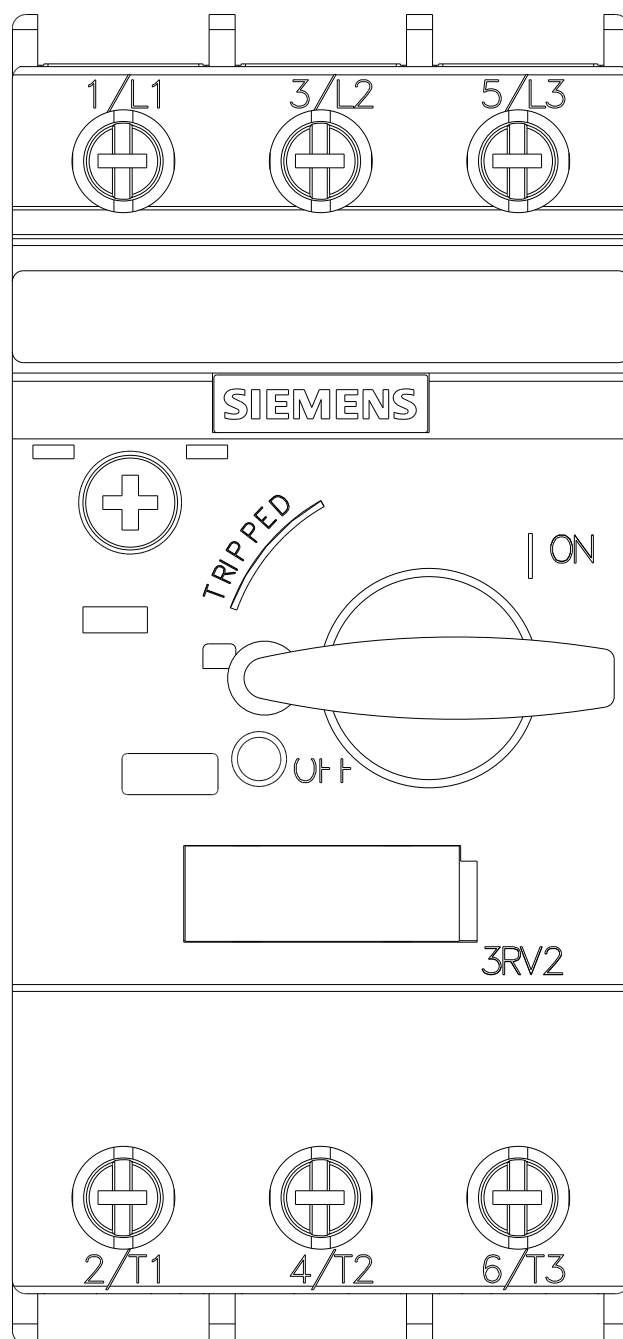
### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0KA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-0KA10&objecttype=14&gridview=view1>







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