



Special type Circuit breaker size S0 for motor protection, CLASS 10 A-release 18...25 A N-release 325 A Screw terminal Standard switching capacity Ambient temperature -50 °C 500 switching cycles

|                                                                                     |                      |
|-------------------------------------------------------------------------------------|----------------------|
| product brand name                                                                  | SIRIUS               |
| product designation                                                                 | Circuit breaker      |
| design of the product                                                               | For motor protection |
| product type designation                                                            | 3RV2                 |
| <b>General technical data</b>                                                       |                      |
| size of the circuit-breaker                                                         | S0                   |
| 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                                                      | 10.5 W               |
| • at AC in hot operating state per pole                                             | 3.5 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                                                      | 500                  |
| • of auxiliary contacts typical                                                     | 500                  |
| electrical endurance (operating cycles) typical                                     | 500                  |
| reference code according to IEC 81346-2                                             | Q                    |
| Substance Prohibitance (Date)                                                       | 10/01/2009           |
| SVHC substance name                                                                 | Lead - 7439-92-1     |
| <b>Ambient conditions</b>                                                           |                      |
| installation altitude at height above sea level maximum                             | 2 000 m              |
| ambient temperature                                                                 |                      |
| • during operation                                                                  | -50 ... +60 °C       |
| • during storage                                                                    | -50 ... +80 °C       |
| • during transport                                                                  | -50 ... +80 °C       |
| relative humidity during operation                                                  | 10 ... 95 %          |
| <b>Main circuit</b>                                                                 |                      |
| number of poles for main current circuit                                            | 3                    |
| adjustable current response value current of the current-dependent overload release | 18 ... 25 A          |
| operating voltage                                                                   |                      |
| • rated value                                                                       | 20 ... 690 V         |
| • at AC-3 rated value maximum                                                       | 690 V                |
| operating frequency rated value                                                     | 50 ... 60 Hz         |
| operational current rated value                                                     | 25 A                 |
| operational current                                                                 |                      |
| • at AC-3 at 400 V rated value                                                      | 25 A                 |
| operating power                                                                     |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                              |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 5.5 kW<br>11 kW<br>15 kW<br>22 kW                                                                            |
| <b>operating frequency</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                              |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                              |
| <ul style="list-style-type: none"> <li>• ground fault detection</li> <li>• phase failure detection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>Yes                                                                                                    |
| <b>trip class</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | CLASS 10                                                                                                     |
| <b>design of the overload release</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | thermal                                                                                                      |
| <b>maximum short-circuit current breaking capacity (Icu)</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                              |
| <ul style="list-style-type: none"> <li>• at AC at 240 V rated value</li> <li>• at AC at 400 V rated value</li> <li>• at AC at 500 V rated value</li> <li>• at AC at 690 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 50 kA<br>50 kA<br>10 kA<br>4 kA                                                                              |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 240 V rated value</li> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 25 kA<br>25 kA<br>5 kA<br>2 kA                                                                               |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 325 A                                                                                                        |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                              |
| <ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | gG 63 A<br>gG 50 A<br>gG 50 A                                                                                |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                              |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 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 at the side</li> <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</li> </ul> | 0 mm<br>30 mm<br>30 mm<br>9 mm<br>30 mm<br>30 mm<br>9 mm<br>30 mm<br>30 mm<br>9 mm<br>30 mm<br>30 mm<br>9 mm |

- downwards 50 mm
- upwards 50 mm
- backwards 0 mm
- at the side 30 mm
- forwards 0 mm
- for live parts at 690 V
  - downwards 50 mm
  - upwards 50 mm
  - backwards 0 mm
  - at the side 30 mm
  - forwards 0 mm

## Connections/ Terminals

|                                                                      |                                                                                         |
|----------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>type of electrical connection</b>                                 |                                                                                         |
| • for main current circuit                                           | screw-type terminals                                                                    |
| <b>arrangement of electrical connectors for main current circuit</b> | Top and bottom                                                                          |
| <b>type of connectable conductor cross-sections</b>                  |                                                                                         |
| • for main contacts                                                  |                                                                                         |
| — solid or stranded                                                  | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )                       |
| — 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> |
| <b>tightening torque</b>                                             |                                                                                         |
| • for main contacts with screw-type terminals                        | 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>                  |                                                                                         |
| • for main contacts                                                  | M4                                                                                      |

## IEC 61508

|                                                                  |      |
|------------------------------------------------------------------|------|
| <b>T1 value</b>                                                  |      |
| • for proof test interval or service life according to IEC 61508 | 10 a |

## Electrical Safety

|                                                                |                                                  |
|----------------------------------------------------------------|--------------------------------------------------|
| <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                           | Handle                                           |

## Approvals Certificates

| General Product Approval | Test Certificates |
|--------------------------|-------------------|
|--------------------------|-------------------|



[Confirmation](#)

[KC](#)



[Special Test Certificate](#)

## Test Certificates

|                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <a href="#">Type Test Certificates/Test Report</a> |  |  |  |  |  |
|----------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|

## Marine / Shipping

|                                                                                     |                               |                              |                                                                                     |                                          |                              |
|-------------------------------------------------------------------------------------|-------------------------------|------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|------------------------------|
|  | <a href="#">Miscellaneous</a> | <a href="#">Confirmation</a> |  | <a href="#">Special Test Certificate</a> | <a href="#">Confirmation</a> |
|-------------------------------------------------------------------------------------|-------------------------------|------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|------------------------------|

## Environment



#### 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=3RV2021-4DA10-0BA0>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4DA10-0BA0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4DA10-0BA0>

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

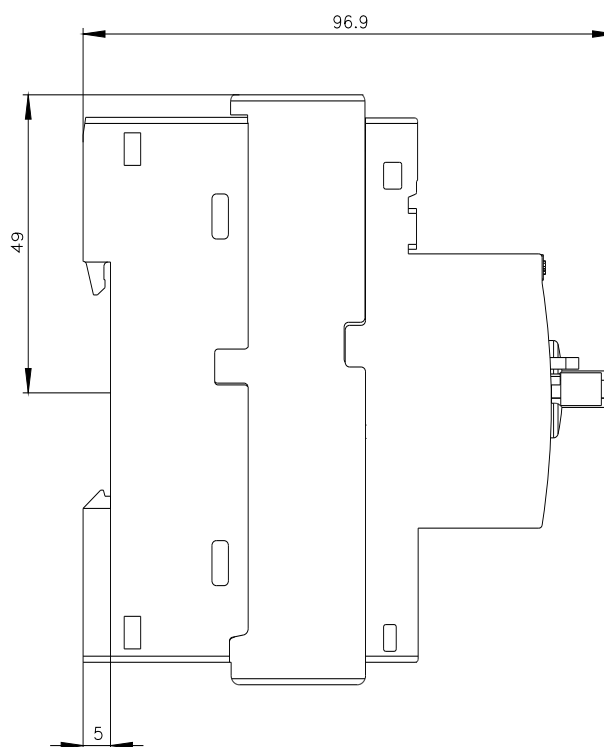
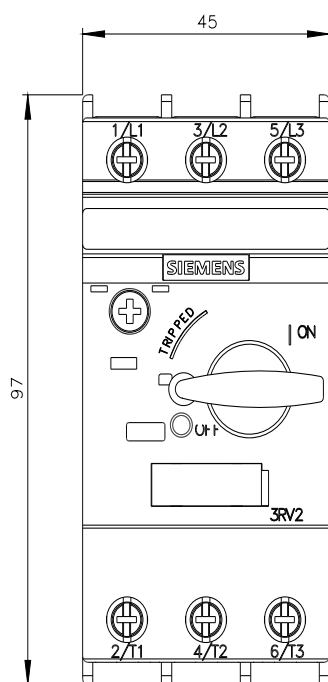
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4DA10-0BA0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4DA10-0BA0&lang=en)

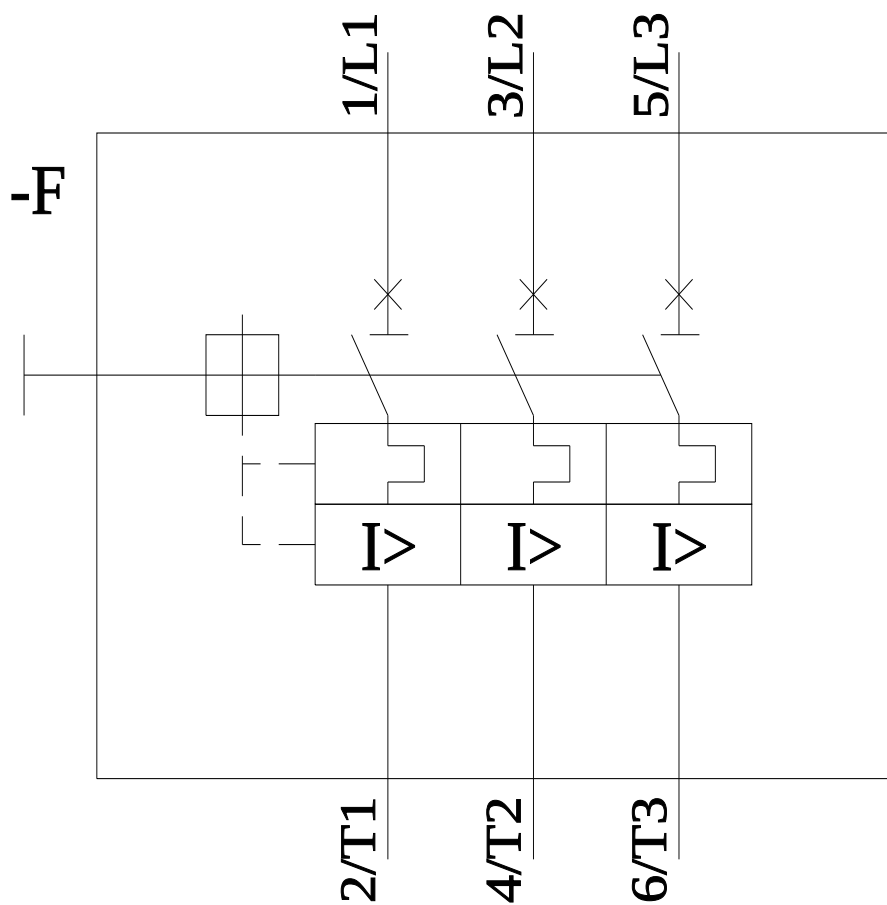
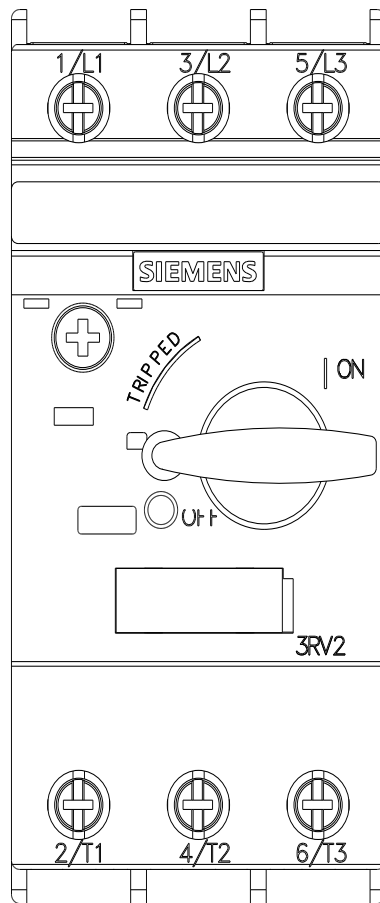
##### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4DA10-0BA0/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4DA10-0BA0&objecttype=14&gridview=view1>





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