



Circuit breaker size S0 for motor protection, CLASS 10 A-release 34...40 A  
N-release 480 A screw terminal Standard switching capacity with  
transverse auxiliary switches 1 NO+1 NC

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

### General technical data

|                                                                   |                   |
|-------------------------------------------------------------------|-------------------|
| size of the circuit-breaker                                       | 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                                    | 16.25 W           |
| • at AC in hot operating state per pole                           | 5.4 W             |
| insulation voltage with degree of pollution 3 at AC rated value   | 690 V             |
| surge voltage resistance rated value                              | 6 kV              |
| shock resistance according to IEC 60068-2-27                      | 25g / 11 ms       |
| mechanical service life (operating cycles)                        |                   |
| • of the main contacts typical                                    | 100 000           |
| • of auxiliary contacts typical                                   | 100 000           |
| electrical endurance (operating cycles) typical                   | 100 000           |
| type of protection according to ATEX directive 2014/34/EU         | Ex II (2) GD      |
| certificate of suitability according to ATEX directive 2014/34/EU | DMT 02 ATEX F 001 |
| reference code according to IEC 81346-2                           | Q                 |
| Substance Prohibitance (Date)                                     | 10/01/2009        |

### Ambient conditions

|                                                         |                |
|---------------------------------------------------------|----------------|
| installation altitude at height above sea level maximum | 2 000 m        |
| ambient temperature                                     |                |
| • during operation                                      | -20 ... +40 °C |
| • during storage                                        | -50 ... +80 °C |
| • during transport                                      | -50 ... +80 °C |
| relative humidity during operation                      | 10 ... 95 %    |

### Main circuit

|                                                                                     |              |
|-------------------------------------------------------------------------------------|--------------|
| number of poles for main current circuit                                            | 3            |
| adjustable current response value current of the current-dependent overload release | 34 ... 40 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                                                     | 40 A         |
| operational current                                                                 |              |

|                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                  | 40 A                                                                                             |
| <b>operating power</b>                                                                                                                                                                                                                                                                                                                                                            |                                                                                                  |
| <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>                                                                                                                                             | 11 kW<br>18.5 kW<br>22 kW<br>39 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>design of the auxiliary switch</b>                                                                                                                                                                                                                                                                                                                                             | transverse                                                                                       |
| <b>number of NC contacts for auxiliary contacts</b>                                                                                                                                                                                                                                                                                                                               | 1                                                                                                |
| <b>number of NO contacts for auxiliary contacts</b>                                                                                                                                                                                                                                                                                                                               | 1                                                                                                |
| number of CO contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                      | 0                                                                                                |
| <b>operational current of auxiliary contacts at AC-15</b>                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> </ul>                                                                                                                                                                                                                                                           | 2 A<br>0.5 A<br>0.5 A<br>0.5 A                                                                   |
| <b>operational current of auxiliary contacts at DC-13</b>                                                                                                                                                                                                                                                                                                                         |                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> </ul>                                                                                                                                                                                                                                                                                                    | 1 A<br>0.15 A                                                                                    |
| <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>                                                                                                                                                                                  | 100 kA<br>20 kA<br>6 kA<br>3 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>                                                                                                                                                                                                          | 100 kA<br>10 kA<br>3 kA<br>2 kA                                                                  |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                   | 480 A                                                                                            |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                                                                                                                             |                                                                                                  |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                                                                                                                                                                                                                                                                                                               |                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                                                                          | 40 A<br>40 A                                                                                     |
| <b>yielded mechanical performance [hp]</b>                                                                                                                                                                                                                                                                                                                                        |                                                                                                  |
| <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul> </li> </ul> | 3 hp<br>7.5 hp<br><br>10 hp<br>10 hp<br>30 hp                                                    |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                                                                                                                                       | C300 / R300                                                                                      |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                                                                                                                                   |                                                                                                  |
| <b>product function short circuit protection</b>                                                                                                                                                                                                                                                                                                                                  | Yes                                                                                              |
| <b>design of the short-circuit trip</b>                                                                                                                                                                                                                                                                                                                                           | magnetic                                                                                         |
| <b>design of the fuse link</b>                                                                                                                                                                                                                                                                                                                                                    |                                                                                                  |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                                                                                                                                                                                                                                                 | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A) |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b>                                                                                                                                                                                                                                                                                    |                                                                                                  |
| <ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> </ul>                                                                                                                                                                                                                                                                                                  | gG 63 A<br>gG 63 A                                                                               |

- at 690 V

gG 63 A

## Installation/ mounting/ dimensions

|                                                                                                                                                |                                                                          |
|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>mounting position</b>                                                                                                                       | any                                                                      |
| <b>fastening method</b>                                                                                                                        | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| <b>height</b>                                                                                                                                  | 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> </ul>                                                     | 9 mm                                                                     |
| <ul style="list-style-type: none"> <li>• for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul> | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                            | 9 mm                                                                     |
| <ul style="list-style-type: none"> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>     | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                            | 9 mm                                                                     |
| <ul style="list-style-type: none"> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul> | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                            | 9 mm                                                                     |
| <ul style="list-style-type: none"> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>     | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                            | 9 mm                                                                     |
| <ul style="list-style-type: none"> <li>• for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul> | 70 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                | 70 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— backwards</li> </ul> </li> </ul>                              | 0 mm                                                                     |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                            | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>                               | 0 mm                                                                     |
| <ul style="list-style-type: none"> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> </ul> </li> </ul>     | 70 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                | 70 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— backwards</li> </ul> </li> </ul>                              | 0 mm                                                                     |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                            | 30 mm                                                                    |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>                               | 0 mm                                                                     |

## Connections/ Terminals

|                                                                                                                                                   |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>type of electrical connection</b>                                                                                                              |                                                                                         |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>                                                                      | screw-type terminals                                                                    |
| <ul style="list-style-type: none"> <li>• for auxiliary and control 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</li> </ul> </li> </ul>      | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 10 mm <sup>2</sup> )                       |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> </ul>  | 2x (1 ... 2.5 mm <sup>2</sup> ), 2x (2.5 ... 6 mm <sup>2</sup> ), 1x 10 mm <sup>2</sup> |
| <ul style="list-style-type: none"> <li>• at AWG cables for main contacts</li> </ul>                                                               | 2x (16 ... 12), 2x (14 ... 8)                                                           |
| <b>type of connectable conductor cross-sections</b>                                                                                               |                                                                                         |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> </ul> </li> </ul> | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul> </li> </ul>  | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> )                   |
| <ul style="list-style-type: none"> <li>• at AWG cables for auxiliary contacts</li> </ul>                                                          | 2x (20 ... 16), 2x (18 ... 14)                                                          |
| <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                                                                           |
| <ul style="list-style-type: none"> <li>• for auxiliary 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 size 2                                                                         |
| <b>design of the thread of the connection screw</b>                                                                                               |                                                                                         |
| <ul style="list-style-type: none"> <li>• for main contacts</li> </ul>                                                                             | M4                                                                                      |
| <ul style="list-style-type: none"> <li>• of the auxiliary and control contacts</li> </ul>                                                         | M3                                                                                      |

## Safety related data

**B10 value**

- with high demand rate according to SN 31920
- proportion of dangerous failures**
- with low demand rate according to SN 31920
  - with high demand rate according to SN 31920
- failure rate [FIT]**
- with low demand rate according to SN 31920
- T1 value for proof test interval or service life according to IEC 61508
- protection class IP on the front according to IEC 60529**
- touch protection on the front according to IEC 60529**
- display version for switching status

5 000

50 %

50 %

50 FIT

10 a

IP20

finger-safe, for vertical contact from the front

Handle

#### Certificates/ approvals

General Product Approval

For use in hazardous locations



[Confirmation](#)



[KC](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates

Marine / Shipping



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



#### Marine / Shipping



other

Railway

[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

#### 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=3RV2021-4FA15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4FA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA15>

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

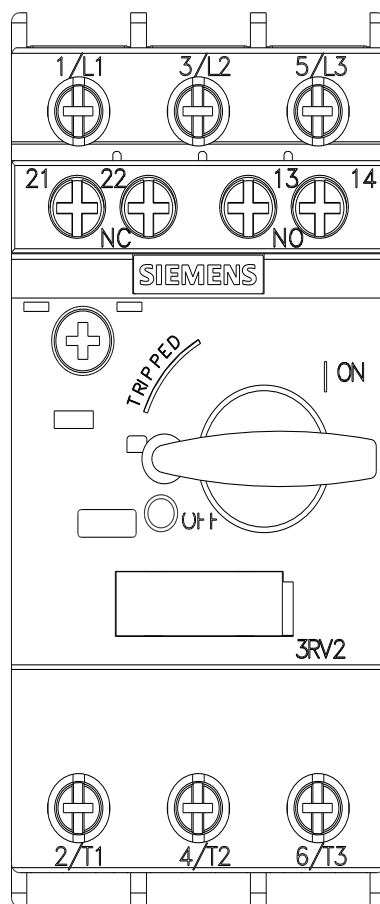
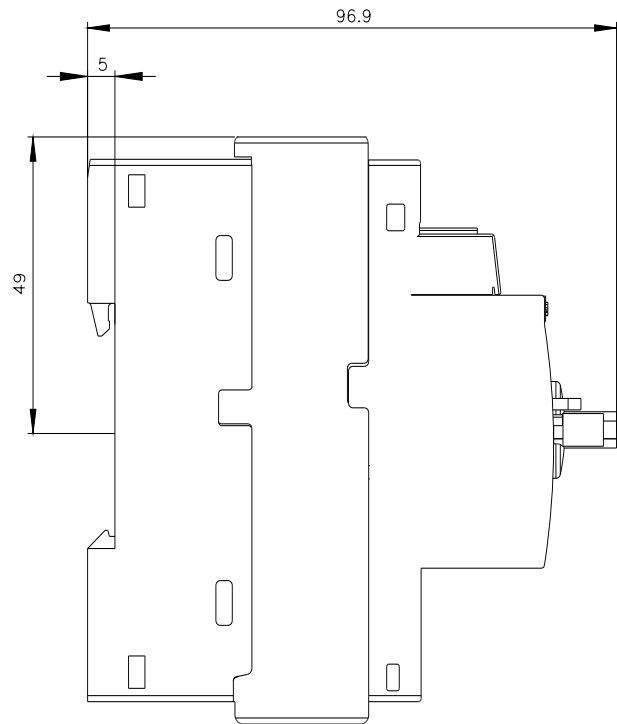
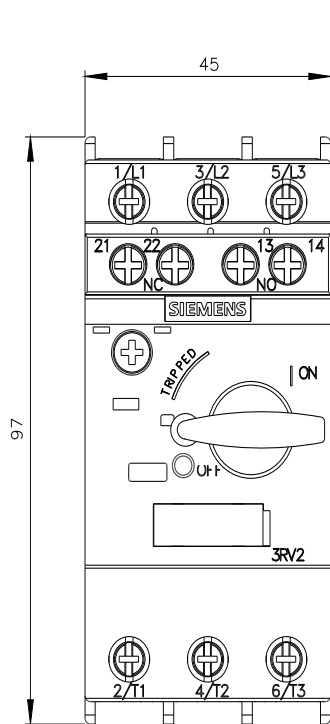
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4FA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4FA15&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4FA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4FA15&objecttype=14&gridview=view1>





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