



circuit breaker frame size S0 for motor protection, Class 10 thermal release 0.9...1.25 A short-circuit release 16 A spring-loaded terminal standard switching capacity with transverse auxiliary switch 1 NO+1 NC

|  |                        |
|--|------------------------|
| <b>product brand name</b>  | SIRIUS                 |
| <b>product designation</b>   | Circuit breaker        |
| <b>design of the product</b>   | For motor protection   |
| <b>product type designation</b>  | 3RV2                   |
| <b>General technical data</b>  |                        |
| <b>size of the circuit-breaker</b>   | S0                     |
| <b>size of contactor can be combined company-specific</b>                                  | S00, S0                |
| product extension auxiliary switch   | Yes                    |
| <b>power loss [W] for rated value of the current</b>                                       |                        |
| • at AC in hot operating state   | 7.25 W                 |
| • at AC in hot operating state per pole  | 2.4 W                  |
| insulation voltage with degree of pollution 3 at AC rated value                            | 690 V                  |
| <b>surge voltage resistance rated value</b>  | 6 kV                   |
| <b>shock resistance according to IEC 60068-2-27</b>  | 25g / 11 ms            |
| <b>mechanical service life (operating cycles)</b>  |                        |
| • of the main contacts typical   | 100 000                |
| • of auxiliary contacts typical  | 100 000                |
| electrical endurance (operating cycles) typical  | 100 000                |
| <b>reference code according to IEC 81346-2</b>   | Q                      |
| <b>Substance Prohibition (Date)</b>  | 10/01/2009             |
| <b>SVHC substance name</b>   | Lead CAS-No. 7439-92-1 |
| <b>Net Weight</b>  | 0.4 kg                 |
| <b>Ambient conditions</b>  |                        |
| installation altitude at height above sea level maximum                                    | 2 000 m                |
| <b>ambient temperature</b>   |                        |
| • during operation   | -20 ... +60 °C         |
| • during storage   | -50 ... +80 °C         |
| • during transport   | -50 ... +80 °C         |
| relative humidity during operation   | 10 ... 95 %            |
| <b>Main circuit</b>  |                        |
| <b>number of poles for main current circuit</b>  | 3                      |
| <b>adjustable current response value current of the current-dependent overload release</b> | 0.9 ... 1.25 A         |
| <b>type of voltage for main current circuit</b>  | AC                     |
| <b>operating voltage</b>   |                        |
| • rated value  | 20 ... 690 V           |

|  |                                      |
|--|--------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>  | 690 V                                |
| <ul style="list-style-type: none"> <li>• at AC-3e rated value maximum</li> </ul>   | 690 V                                |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz                         |
| <b>operational current rated value</b>   | 1.25 A                               |
| <b>operational current</b>   |                                      |
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>   | 1.25 A                               |
| <ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>  | 1.25 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>  | 0.2 kW<br>0.4 kW<br>0.4 kW<br>0.8 kW |
| <ul style="list-style-type: none"> <li>• at AC-3e <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> | 0.2 kW<br>0.4 kW<br>0.4 kW<br>0.8 kW |
| <b>operating frequency</b>   |                                      |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>  | 15 1/h                               |
| <ul style="list-style-type: none"> <li>• at AC-3e maximum</li> </ul>   | 15 1/h                               |
| <b>Auxiliary circuit</b>   |                                      |
| <b>design of the auxiliary switch</b>  | transverse                           |
| <b>type of voltage for auxiliary and control circuit</b>   | AC/DC                                |
| <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> </ul>  | 2 A                                  |
| <ul style="list-style-type: none"> <li>• at 120 V</li> </ul>   | 0.5 A                                |
| <ul style="list-style-type: none"> <li>• at 125 V</li> </ul>   | 0.5 A                                |
| <ul style="list-style-type: none"> <li>• at 230 V</li> </ul>   | 0.5 A                                |
| <b>operational current of auxiliary contacts at DC-13</b>  |                                      |
| <ul style="list-style-type: none"> <li>• at 24 V</li> </ul>  | 1 A                                  |
| <ul style="list-style-type: none"> <li>• at 60 V</li> </ul>  | 0.15 A                               |
| <b>Protective and monitoring functions</b>   |                                      |
| <b>product function</b>  |                                      |
| <ul style="list-style-type: none"> <li>• ground fault detection</li> </ul>   | No                                   |
| <ul style="list-style-type: none"> <li>• phase failure detection</li> </ul>  | 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> </ul>   | 100 kA                               |
| <ul style="list-style-type: none"> <li>• at AC at 400 V rated value</li> </ul>   | 100 kA                               |
| <ul style="list-style-type: none"> <li>• at AC at 500 V rated value</li> </ul>   | 100 kA                               |
| <ul style="list-style-type: none"> <li>• at AC at 690 V rated value</li> </ul>   | 100 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> </ul>   | 100 kA                               |
| <ul style="list-style-type: none"> <li>• at 400 V rated value</li> </ul>   | 100 kA                               |
| <ul style="list-style-type: none"> <li>• at 500 V rated value</li> </ul>   | 100 kA                               |
| <ul style="list-style-type: none"> <li>• at 690 V rated value</li> </ul>   | 100 kA                               |
| response value current of instantaneous short-circuit trip unit  | 16 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> </ul>   | 1.25 A                               |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>   | 1.25 A                               |
| <b>yielded mechanical performance [hp]</b>   |                                      |
| <ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul> </li> </ul>   | 1 hp                                 |

|   |  |
|---|--|
| — at 575/600 V rated value  | 0.5 hp   |
| <b>contact rating of auxiliary contacts according to UL</b>   | C300 / R300  |
| <b>UL File Number (CCN)</b>   | E47705 (NLRV, NLRV7), E156943 (NKJH, NKJH7)  |
| <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>  | Fuse gL/gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A)   |
| <ul style="list-style-type: none"> <li>for short-circuit protection of the auxiliary switch required</li> </ul>       |  |
| <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>   | 119 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 <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> </ul> |
| 0 mm  |  |
| 30 mm   |  |
| 30 mm   |  |
| 9 mm  |  |
| 30 mm   |  |
| 30 mm   |  |
| 9 mm  |  |
| 30 mm   |  |
| 30 mm   |  |
| 9 mm  |  |
| 30 mm   |  |
| 30 mm   |  |
| 9 mm  |  |
| 50 mm   |  |
| 50 mm   |  |
| 0 mm  |  |
| 30 mm   |  |
| 0 mm  |  |
| 50 mm   |  |
| 50 mm   |  |
| 0 mm  |  |
| 30 mm   |  |
| 0 mm  |  |
| <b>Connections/ Terminals</b>   |  |
| <b>type of electrical connection</b>  | spring-loaded terminals  |
| <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul> |  |
| <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> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>for AWG cables for main contacts</li> </ul>  |
| 2x (1 ... 10 mm <sup>2</sup> )  |  |
| 2x (1 ... 6 mm <sup>2</sup> )   |  |
| 2x (1 ... 6 mm <sup>2</sup> )   |  |
| 2x (18 ... 8)   |  |
| <b>type of connectable conductor cross-sections</b>   |  |
| <ul style="list-style-type: none"> <li>for auxiliary contacts</li> </ul>  |  |

|   |                                   |
|---|-----------------------------------|
| — solid or stranded                           | 2x (0.5 ... 2.5 mm <sup>2</sup> ) |
| — finely stranded with core end processing    | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| — finely stranded without core end processing | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| • for AWG cables for auxiliary contacts       | 2x (20 ... 14)                    |
| <b>design of screwdriver shaft</b>            | Diameter 3 mm                     |
| <b>size of the screwdriver tip</b>            | 3,0 x 0,5 mm                      |

### Safety related data

|  |        |
|--|--------|
| product function suitable for safety function                        | Yes    |
| <b>suitability for use</b>   |        |
| • safety-related switching on  | No     |
| • safety-related switching OFF                                       | Yes    |
| <b>service life maximum</b>  | 10 a   |
| <b>test wear-related service life necessary</b>                      | Yes    |
| <b>proportion of dangerous failures</b>                              |        |
| • with low demand rate according to SN 31920                         | 40 %   |
| • with high demand rate according to SN 31920                        | 50 %   |
| <b>B10 value with high demand rate according to SN 31920</b>         | 5 000  |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b> | 50 FIT |

### ISO 13849

|  |     |
|--|-----|
| <b>device type according to ISO 13849-1</b>                | 3   |
| <b>overdimensioning according to ISO 13849-2 necessary</b> | Yes |

### IEC 61508

|  |        |
|--|--------|
| <b>safety device type according to IEC 61508-2</b>               | Type A |
| <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

|                                      |        |
|--------------------------------------|--------|
| display version for switching status | Handle |
|--------------------------------------|--------|

### Approvals Certificates

|  |           |
|--|-----------|
| <b>Environmental Product Declaration</b>                   |           |
| • global warming potential [CO2 eq] / during manufacturing | 2.68 kg   |
| • global warming potential [CO2 eq] / during sales         | 0.143 kg  |
| • global warming potential [CO2 eq] / during operation     | 72.7 kg   |
| • global warming potential [CO2 eq] / after end of life    | -0.445 kg |
| • global warming potential [CO2 eq] / total                | 75.078 kg |

### Environment General Product Approval

[Environmental Conformations](#)



### General Product Approval For use in hazardous locations Maritime application



### Maritime application other



Further information

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RV2021-0KA25>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-0KA25>

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

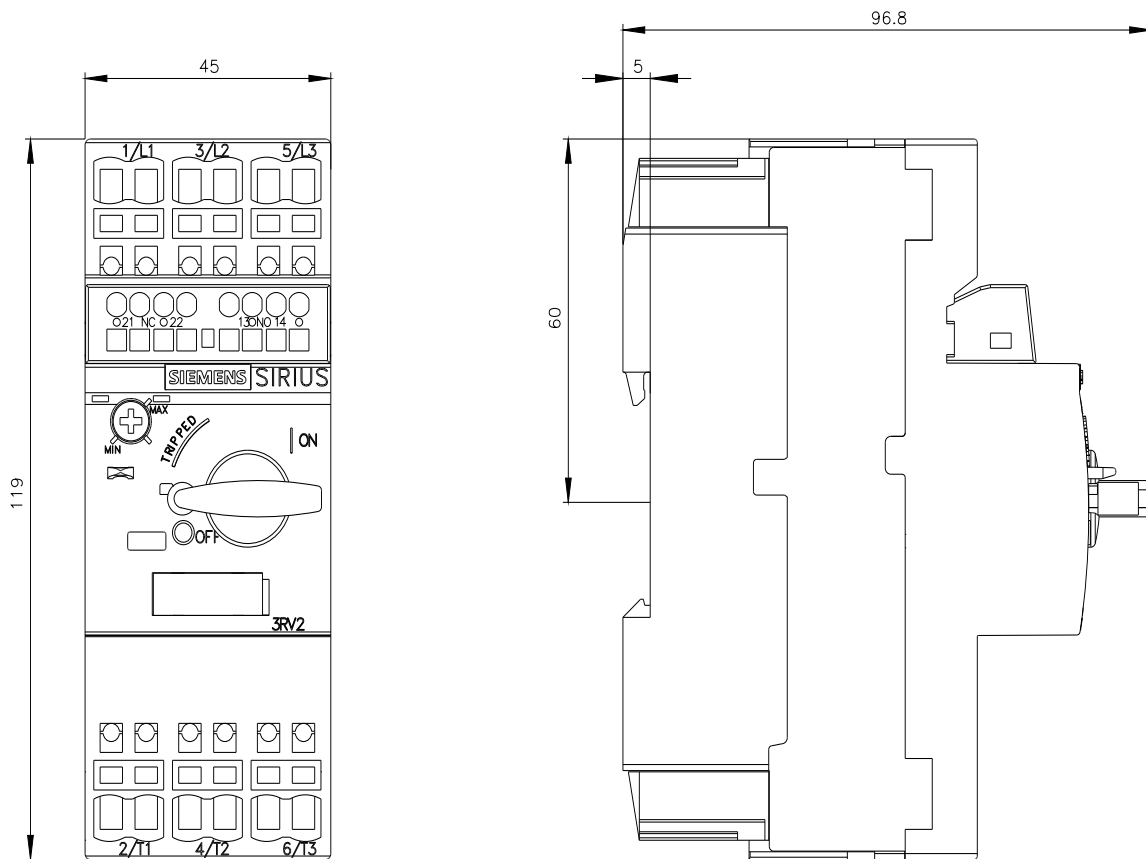
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-0KA25&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0KA25&lang=en)

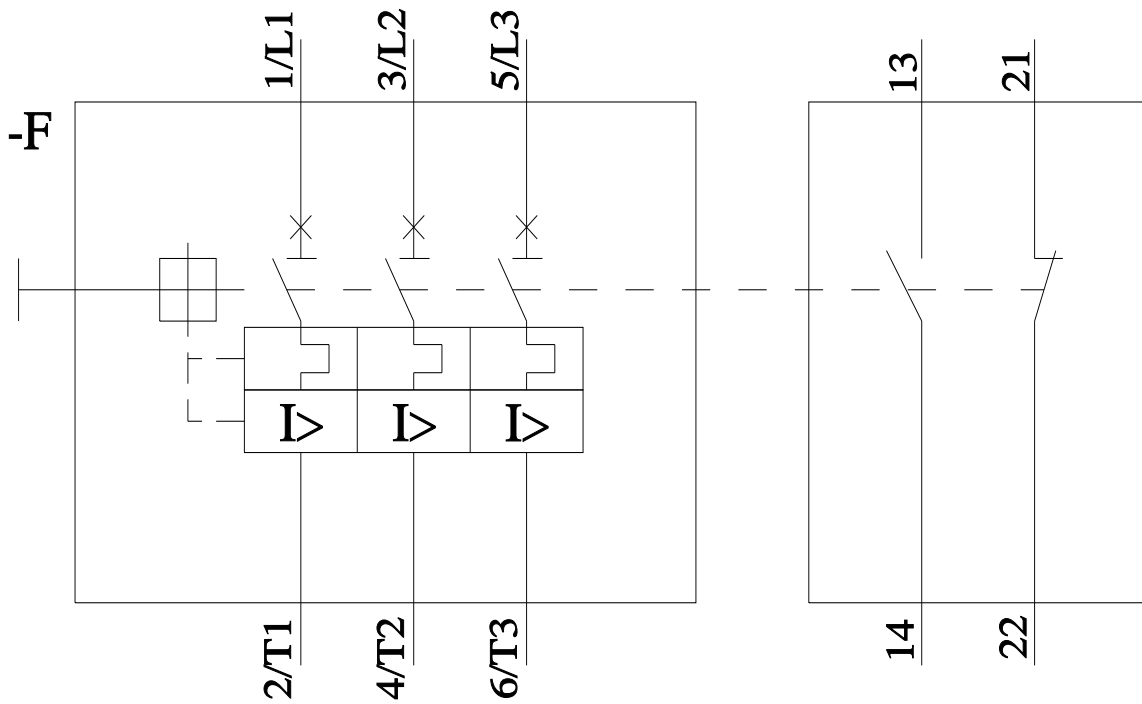
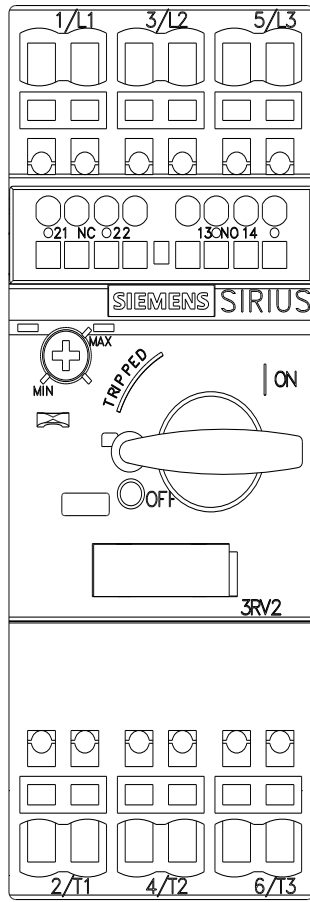
Cax online generator

<https://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RV2021-0KA25>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)





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