

Siemens  
EcoTech



Circuit breaker size S0 for motor protection, Class 10 A-release 0.22...0.32 A  
Short-circuit release 4.2 A Screw terminal Standard switching capacity



|   |                      |
|---|----------------------|
| product brand name  | SIRIUS               |
| product designation   | Circuit breaker      |
| design of the product   | For motor protection |
| product type designation  | 3RV2                 |
| <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                                  | 5.5 W                |
| • at AC in hot operating state per pole                         | 1.8 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              |
| reference code according to IEC 81346-2                         | Q                    |
| Substance Prohibitance (Date)                                   | 10/01/2009           |
| SVHC substance name   | Lead - 7439-92-1     |
| Weight  | 0.287 kg             |
| <b>Ambient conditions</b>                                       |                      |
| installation altitude at height above sea level maximum         | 2 000 m              |
| ambient temperature   |                      |
| • during operation  | -20 ... +60 °C       |
| • during storage  | -50 ... +80 °C       |
| • during transport  | -50 ... +80 °C       |
| relative humidity during operation                              | 10 ... 95 %          |
| <b>Environmental footprint</b>                                  |                      |
| Global Warming Potential [CO2 eq] total                         | 75.078 kg            |
| 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            |
| Siemens Eco Profile (SEP)                                       | Siemens EcoTech      |
| <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> | 0.22 ... 0.32 A  |
| <b>operating voltage</b>   |  |
| • rated value  | 20 ... 690 V   |
| • at AC-3 rated value maximum  | 690 V  |
| • at AC-3e rated value maximum   | 690 V  |
| <b>operating frequency rated value</b>   | 50 ... 60 Hz   |
| <b>operational current rated value</b>   | 0.32 A   |
| <b>operational current</b>   |  |
| • at AC-3 at 400 V rated value   | 0.32 A   |
| • at AC-3e at 400 V rated value  | 0.32 A   |
| <b>operating power</b>   |  |
| • at AC-3  |  |
| — at 230 V rated value   | 0 kW   |
| — at 400 V rated value   | 0.1 kW   |
| — at 500 V rated value   | 0.1 kW   |
| — at 690 V rated value   | 0.1 kW   |
| • at AC-3e   |  |
| — at 230 V rated value   | 0 kW   |
| — at 400 V rated value   | 0.1 kW   |
| — at 500 V rated value   | 0.1 kW   |
| — at 690 V rated value   | 0.1 kW   |
| <b>operating frequency</b>   |  |
| • at AC-3 maximum  | 15 1/h   |
| • at AC-3e maximum   | 15 1/h   |
| <b>Auxiliary circuit</b>   |  |
| <b>number of NC contacts for auxiliary contacts</b>  | 0  |
| <b>number of NO contacts for auxiliary contacts</b>  | 0  |
| number of CO contacts for auxiliary contacts   | 0  |
| <b>Protective and monitoring functions</b>   |  |
| <b>product function</b>  |  |
| • ground fault detection   | No   |
| • phase failure detection  | Yes  |
| <b>trip class</b>  | CLASS 10   |
| <b>design of the overload release</b>  | thermal  |
| <b>maximum short-circuit current breaking capacity (I<sub>cu</sub>)</b>                    |  |
| • at AC at 240 V rated value   | 100 kA   |
| • at AC at 400 V rated value   | 100 kA   |
| • at AC at 500 V rated value   | 100 kA   |
| • at AC at 690 V rated value   | 100 kA   |
| <b>operating short-circuit current breaking capacity (I<sub>cs</sub>) at AC</b>            |  |
| • at 240 V rated value   | 100 kA   |
| • at 400 V rated value   | 100 kA   |
| • at 500 V rated value   | 100 kA   |
| • at 690 V rated value   | 100 kA   |
| response value current of instantaneous short-circuit trip unit                            | 4.2 A  |
| <b>UL/CSA ratings</b>  |  |
| <b>full-load current (FLA) for 3-phase AC motor</b>  |  |
| • at 480 V rated value   | 0.32 A   |
| • at 600 V rated value   | 0.32 A   |
| <b>Short-circuit protection</b>  |  |
| <b>product function short circuit protection</b>   | Yes  |
| <b>design of the short-circuit trip</b>  | magnetic   |
| <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>  |  |

|  |       |
|--|-------|
| • with side-by-side mounting at the side | 0 mm  |
| • for grounded parts at 400 V            |       |
| — downwards                              | 30 mm |
| — upwards                                | 30 mm |
| — at the side                            | 9 mm  |
| • for live parts at 400 V                |       |
| — downwards                              | 30 mm |
| — upwards                                | 30 mm |
| — at the side                            | 9 mm  |
| • for grounded parts at 500 V            |       |
| — downwards                              | 30 mm |
| — upwards                                | 30 mm |
| — at the side                            | 9 mm  |
| • for live parts at 500 V                |       |
| — downwards                              | 30 mm |
| — upwards                                | 30 mm |
| — at the side                            | 9 mm  |
| • for grounded parts at 690 V            |       |
| — 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> |
| • for AWG cables for main contacts                                   | 2x (16 ... 12), 2x (14 ... 8)   |
| <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  |

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

|  |  |
|--|--|
| IEC 61508  |  |
| safety device type according to IEC 61508-2  | Type A   |
| T1 value   | 10 a   |
| <ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul> |  |
| Electrical Safety  |  |
| protection class IP on the front according to IEC 60529  | IP20   |
| touch protection on the front according to IEC 60529   | finger-safe, for vertical contact from the front |
| Display  |  |
| display version for switching status   | Handle   |
| Approvals Certificates   |  |
| General Product Approval   |  |



[Confirmation](#)



[KC](#)

|                          |                                |                   |                   |
|--------------------------|--------------------------------|-------------------|-------------------|
| General Product Approval | For use in hazardous locations | Test Certificates | Marine / Shipping |
|--------------------------|--------------------------------|-------------------|-------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Miscellaneous](#)

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

[Confirmation](#)



[Special Test Certificate](#)

[Confirmation](#)



Siemens EcoTech



|             |
|-------------|
| Environment |
|-------------|

[Environmental Confirmations](#)

|                     |
|---------------------|
| 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=3RV2021-0DA10>

Cax online generator

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

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

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

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

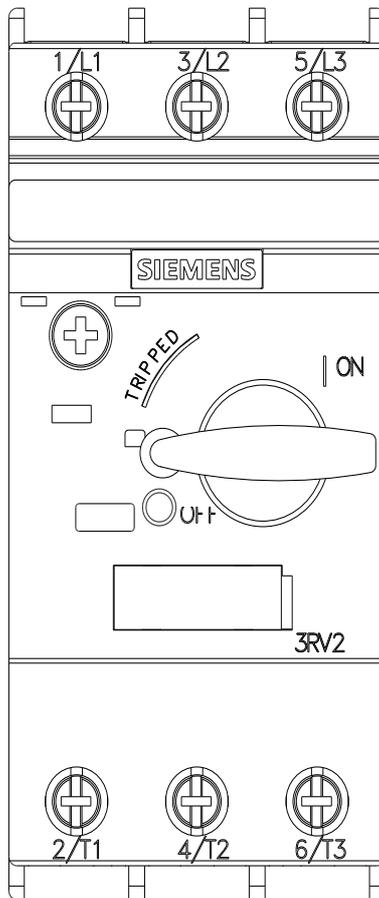
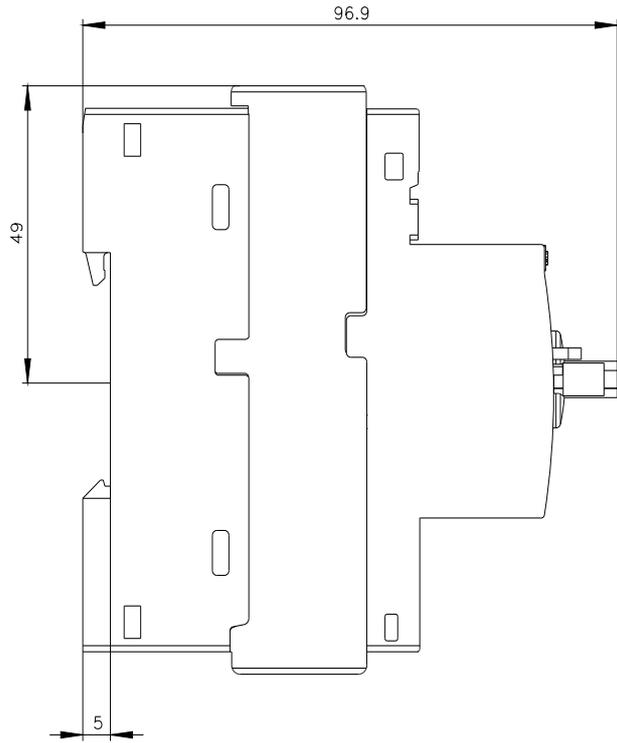
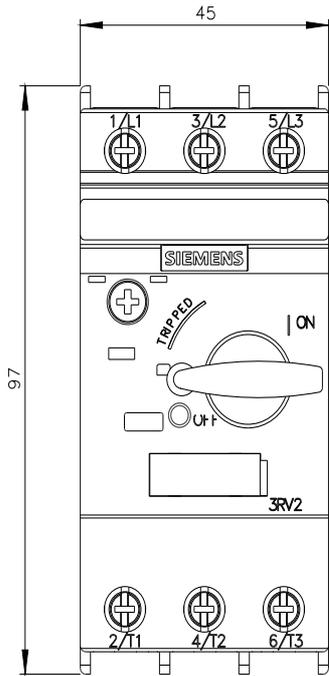
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-0DA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-0DA10&lang=en)

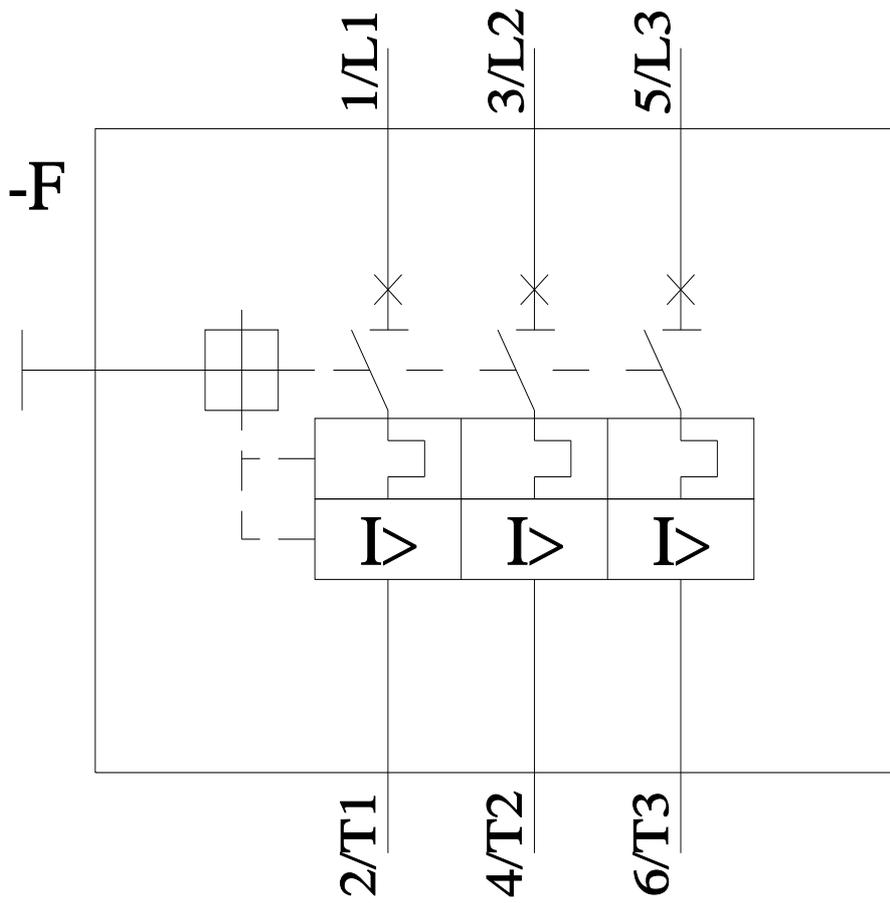
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

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

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

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





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