



Circuit breaker size S0 for starter combination Rated current 10 A N release 130 A  
Spring-type terminal Standard switching capacity



|   |                          |
|---|--------------------------|
| product brand name  | SIRIUS                   |
| product designation   | Circuit breaker          |
| design of the product   | For starter combinations |
| 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                                  | 9.25 W                   |
| • at AC in hot operating state per pole                         | 3.1 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  | 0.407 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>                                  |                          |
| Environmental Product Declaration(EPD)                          | Yes                      |
| 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          |

| Main circuit  |              |
|---|--------------|
| number of poles for main current circuit                        | 3            |
| type of voltage for main current circuit                        | AC           |
| operating voltage   |              |
| • rated value   | 20 ... 690 V |
| • at AC-3 rated value maximum                                   | 690 V        |
| • at AC-3e rated value maximum                                  | 690 V        |
| operating frequency rated value                                 | 50 ... 60 Hz |
| operational current rated value                                 | 10 A         |
| operational current   |              |
| • at AC-3 at 400 V rated value                                  | 10 A         |
| • at AC-3e at 400 V rated value                                 | 10 A         |
| operating power   |              |
| • at AC-3   |              |
| — at 230 V rated value  | 2.2 kW       |
| — at 400 V rated value  | 4 kW         |
| — at 500 V rated value  | 5.5 kW       |
| — at 690 V rated value  | 7.5 kW       |
| • at AC-3e  |              |
| — at 230 V rated value  | 2.2 kW       |
| — at 400 V rated value  | 4 kW         |
| — at 500 V rated value  | 5.5 kW       |
| — at 690 V rated value  | 7.5 kW       |
| operating frequency   |              |
| • at AC-3 maximum   | 15 1/h       |
| • at AC-3e maximum  | 15 1/h       |
| Auxiliary circuit   |              |
| type of voltage for auxiliary and control circuit               | AC/DC        |
| number of NC contacts for auxiliary contacts                    | 0            |
| number of NO contacts for auxiliary contacts                    | 0            |
| number of CO contacts for auxiliary contacts                    | 0            |
| Protective and monitoring functions                             |              |
| product function  |              |
| • ground fault detection  | No           |
| • phase failure detection                                       | No           |
| maximum short-circuit current breaking capacity (Icu)           |              |
| • at AC at 240 V rated value                                    | 100 kA       |
| • at AC at 400 V rated value                                    | 100 kA       |
| • at AC at 500 V rated value                                    | 42 kA        |
| • at AC at 690 V rated value                                    | 6 kA         |
| operating short-circuit current breaking capacity (Ics) at AC   |              |
| • at 240 V rated value  | 100 kA       |
| • at 400 V rated value  | 100 kA       |
| • at 500 V rated value  | 42 kA        |
| • at 690 V rated value  | 4 kA         |
| response value current of instantaneous short-circuit trip unit | 130 A        |
| UL/CSA ratings  |              |
| full-load current (FLA) for 3-phase AC motor                    |              |
| • at 480 V rated value  | 10 A         |
| • at 600 V rated value  | 10 A         |
| yielded mechanical performance [hp]                             |              |
| • for single-phase AC motor                                     |              |
| — at 110/120 V rated value                                      | 0.5 hp       |
| — at 230 V rated value  | 1.5 hp       |
| • for 3-phase AC motor  |              |
| — at 200/208 V rated value                                      | 2 hp         |
| — at 220/230 V rated value                                      | 3 hp         |
| — at 460/480 V rated value                                      | 5 hp         |
| — at 575/600 V rated value                                      | 10 hp        |
| Short-circuit protection  |              |

|   |  |
|---|--|
| product function short circuit protection                     | Yes  |
| design of the short-circuit trip                              | magnetic   |
| <b>Installation/ mounting/ dimensions</b>                     |  |
| mounting position   | any  |
| fastening method  | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| height  | 119 mm   |
| width   | 45 mm  |
| depth   | 97 mm  |
| required spacing  |  |
| • 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   |
| <b>Connections/ Terminals</b>                                 |  |
| type of electrical connection                                 |  |
| • for main current circuit                                    | spring-loaded terminals  |
| arrangement of electrical connectors for main current circuit | Top and bottom   |
| type of connectable conductor cross-sections                  |  |
| • for main contacts   |  |
| — solid or stranded   | 2x (1 ... 10 mm <sup>2</sup> )   |
| — finely stranded with core end processing                    | 2x (1 ... 6 mm <sup>2</sup> )  |
| — finely stranded without core end processing                 | 2x (1 ... 6 mm <sup>2</sup> )  |
| • for AWG cables for main contacts                            | 2x (18 ... 8)  |
| design of screwdriver shaft                                   | Diameter 3 mm  |
| size of the screwdriver tip                                   | 3,0 x 0,5 mm   |
| <b>Safety related data</b>                                    |  |
| product function suitable for safety function                 | Yes  |
| suitability for use   |  |
| • safety-related switching on                                 | No   |
| • safety-related switching OFF                                | Yes  |
| service life maximum  | 10 a   |
| test wear-related service life necessary                      | Yes  |
| proportion of dangerous failures                              |  |
| • with low demand rate according to SN 31920                  | 40 %   |
| • with high demand rate according to SN 31920                 | 50 %   |

|  |  |
|--|--|
| B10 value with high demand rate according to SN 31920            | 5 000  |
| failure rate [FIT] with low demand rate according to SN 31920    | 50 FIT   |
| ISO 13849  |  |
| device type according to ISO 13849-1                             | 3  |
| overdimensioning according to ISO 13849-2 necessary              | Yes  |
| IEC 61508  |  |
| safety device type according to IEC 61508-2                      | Type A   |
| T1 value   |  |
| • for proof test interval or service life according to IEC 61508 | 10 a   |
| 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   |  |



KC



| General Product Approval | Test Certificates | Maritime application |
|--------------------------|-------------------|----------------------|
|--------------------------|-------------------|----------------------|



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



| Maritime application | other |
|----------------------|-------|
|----------------------|-------|



LRS



PRS



RINA

[Miscellaneous](#)



[Confirmation](#)

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



[Special Test Certificate](#)

[Confirmation](#)



Siemens  
EcoTech



[Environmental Confirmations](#)

| 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=3RV2321-1JC20>

#### Cax online generator

<http://support.automation.siemens.com/WW/CAxorder/default.aspx?lang=en&mlfb=3RV2321-1JC20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-1JC20>

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

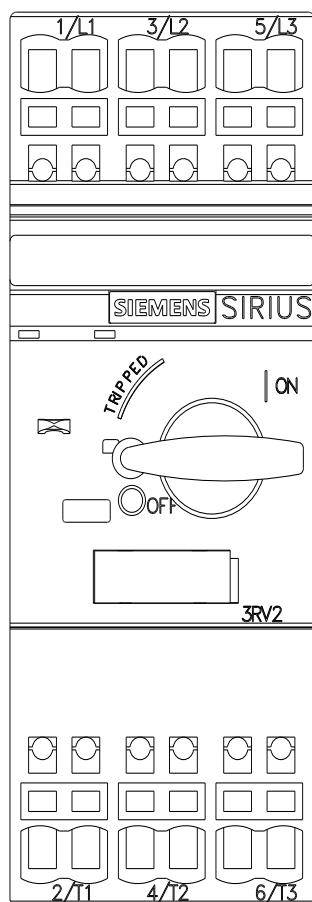
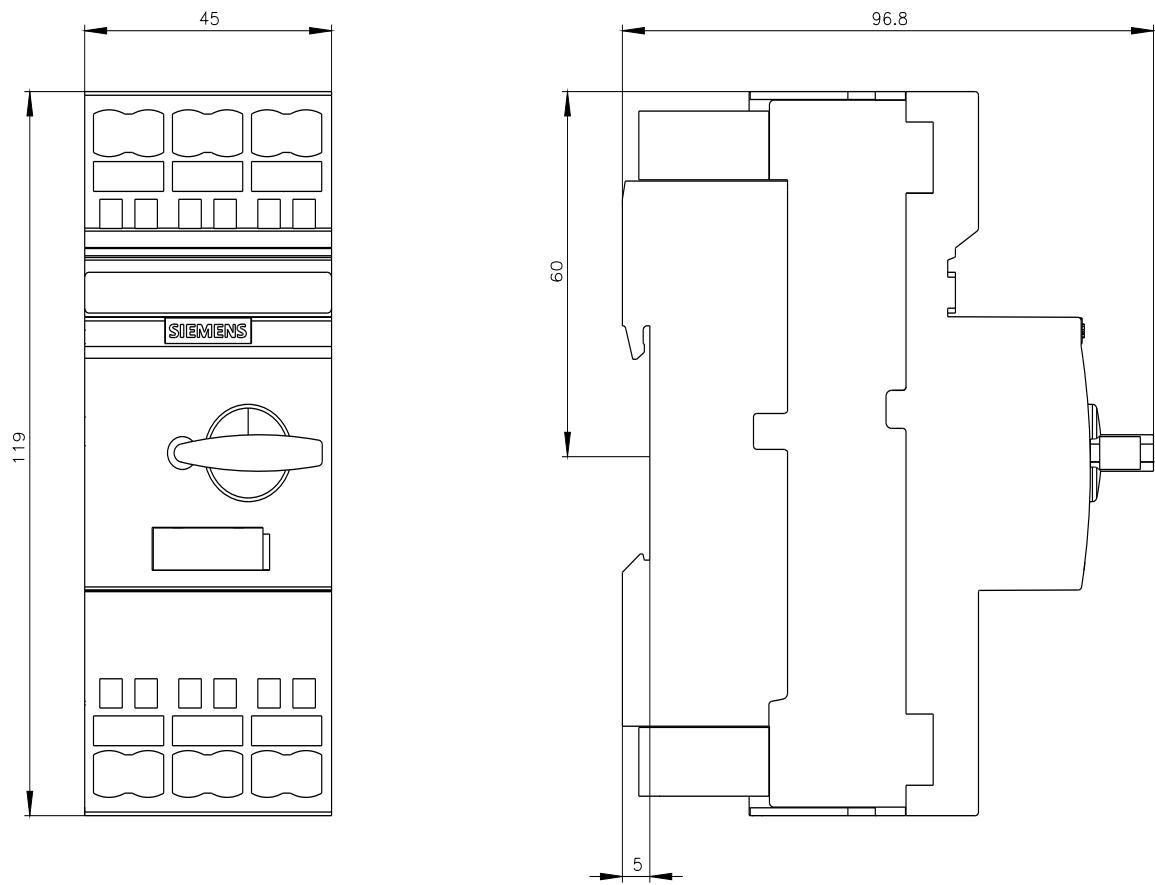
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2321-1JC20&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2321-1JC20&lang=en)

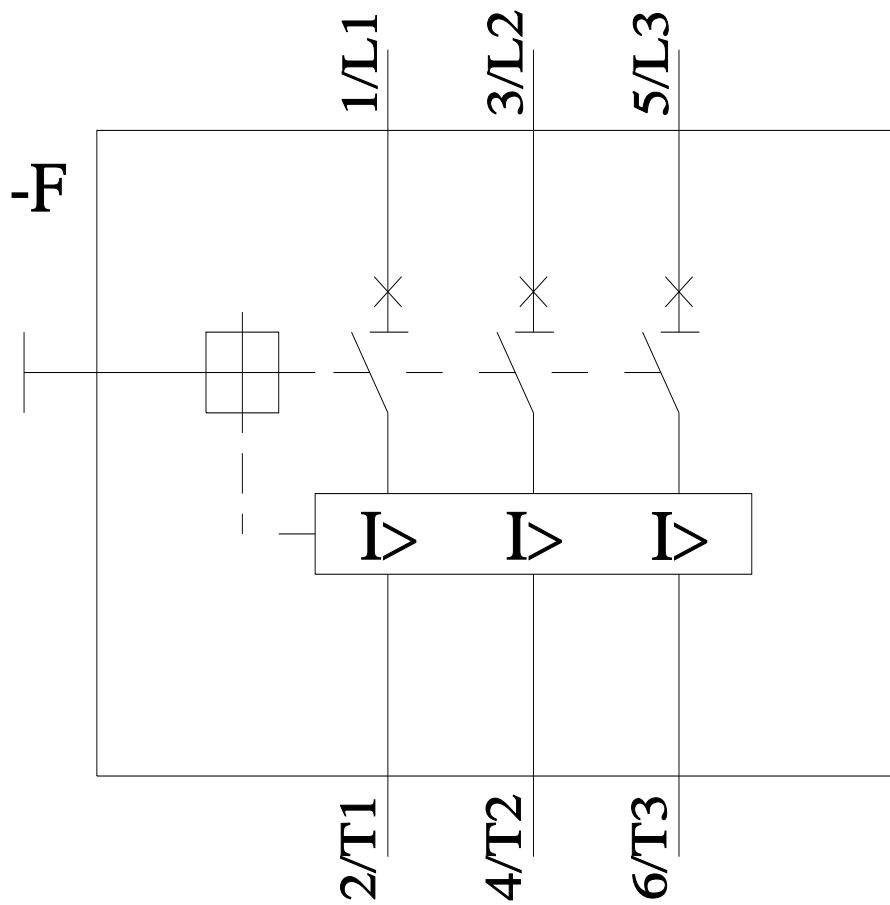
#### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2321-1JC20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2321-1JC20&objecttype=14&gridview=view1>





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last modified:

5/16/2025 