



Circuit breaker size S0 for motor protection, CLASS 10 A-release 4.5...6.3 A N-release 82 A Spring-type terminal Standard switching capacity with transverse auxiliary switches 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>maximum permissible voltage for safe isolation in networks with grounded star point</b> |                      |
| • between main and auxiliary circuit   | 400 V                |
| • between main and auxiliary circuit   | 400 V                |
| shock resistance according to IEC 60068-2-27   | 25g / 11 ms          |
| <b>mechanical service life (switching cycles)</b>  |                      |
| • of the main contacts typical   | 100 000              |
| • of auxiliary contacts typical  | 100 000              |
| electrical endurance (switching cycles) typical  | 100 000              |
| <b>type of protection according to ATEX directive 2014/34/EU</b>                           | Ex II (2) GD         |
| certificate of suitability according to ATEX directive 2014/34/EU                          | DMT 02 ATEX F 001    |
| <b>reference code according to IEC 81346-2</b>   | Q                    |
| <b>Substance Prohibitance (Date)</b>   | 10/01/2009           |
| <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       |
| <b>temperature compensation</b>  | -20 ... +60 °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</b>                                    | 4.5 ... 6.3 A        |

|  |              |
|--|--------------|
| <b>current-dependent overload release</b>                            |              |
| <b>operating voltage</b>   |              |
| • rated value  | 690 V        |
| • rated value  | 20 ... 690 V |
| • at AC-3 rated value maximum  | 690 V        |
| <b>operating frequency rated value</b>                               | 50 ... 60 Hz |
| <b>operational current rated value</b>                               | 6.3 A        |
| <b>operational current</b>   |              |
| • at AC-3 at 400 V rated value                                       | 6.3 A        |
| <b>operating power</b>   |              |
| • at AC-3  |              |
| — at 230 V rated value   | 1.5 kW       |
| — at 400 V rated value   | 2.2 kW       |
| — at 500 V rated value   | 3 kW         |
| — at 690 V rated value   | 4 kW         |
| <b>operating frequency</b>   |              |
| • at AC-3 maximum  | 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>            |              |
| • at 24 V  | 2 A          |
| • at 120 V   | 0.5 A        |
| • at 125 V   | 0.5 A        |
| • at 230 V   | 0.5 A        |
| <b>operational current of auxiliary contacts at DC-13</b>            |              |
| • at 24 V  | 1 A          |
| • at 60 V  | 0.15 A       |
| <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>breaking capacity operating short-circuit current (Ics) 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   | 4 kA         |
| <b>breaking capacity maximum short-circuit current (Icu)</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   | 6 kA         |
| response value current of instantaneous short-circuit trip unit      | 82 A         |
| <b>UL/CSA ratings</b>  |              |
| <b>full-load current (FLA) for 3-phase AC motor</b>                  |              |
| • at 480 V rated value   | 6.3 A        |
| • at 600 V rated value   | 6.3 A        |
| <b>yielded mechanical performance [hp]</b>                           |              |
| • for single-phase AC motor  |              |
| — at 110/120 V rated value   | 0.25 hp      |
| — at 230 V rated value   | 0.5 hp       |
| • for 3-phase AC motor   |              |
| — at 200/208 V rated value   | 1 hp         |
| — at 220/230 V rated value   | 1.5 hp       |

|  |  |
|--|--|
| — at 460/480 V rated value   | 3 hp   |
| — at 575/600 V rated value   | 5 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>   | 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 standard mounting 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>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> | 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>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm<br>50 mm<br>50 mm<br>0 mm<br>30 mm<br>0 mm |
| <b>Connections/ Terminals</b>  |  |
| <b>product component removable terminal for auxiliary and control circuit</b>  | No   |
| <b>type of electrical connection</b>   |  |
| <ul style="list-style-type: none"> <li>for main current circuit</li> <li>for auxiliary and control circuit</li> </ul>  | spring-loaded terminals<br>spring-loaded 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> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul> </li> <li>at AWG cables for main contacts</li> </ul>   | 2x (1 ... 10 mm <sup>2</sup> )<br>2x (1 ... 6 mm <sup>2</sup> )<br>2x (1 ... 6 mm <sup>2</sup> )<br>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> ) |
| • at 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  |  |
|--|--|
| <b>B10 value</b>   |  |
| • with high demand rate according to SN 31920                  | 5 000  |
| <b>proportion of dangerous failures</b>                        |  |
| • with low demand rate according to SN 31920                   | 50 %   |
| • with high demand rate according to SN 31920                  | 50 %   |
| <b>failure rate [FIT]</b>                                      |  |
| • with low demand rate according to SN 31920                   | 50 FIT   |
| <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   |

### Certificates/ approvals

#### General Product Approval



[Confirmation](#)



[KC](#)



| For use in hazardous locations | Declaration of Conformity | Test Certificates                                  |
|--------------------------------|---------------------------|--|
|                                |                           |  |
| ATEX                           | IECEX                     | EG-Konf.   |
|                                |                           | <a href="#">UK Declaration of Conformity</a>       |
|                                |                           | <a href="#">Special Test Certificate</a>           |
|                                |                           | <a href="#">Type Test Certificates/Test Report</a> |

### Marine / Shipping



| Marine / Shipping | other                        | Railway                             |
|-------------------|------------------------------|-------------------------------------|
|                   | <a href="#">Confirmation</a> |                                     |
| RMRS              |                              | VDE                                 |
|                   |                              | <a href="#">Confirmation</a>        |
|                   |                              | <a href="#">Vibration and Shock</a> |

### Further information

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=3RV2021-1GA25>

Cax online generator

<http://support.automation.siemens.com/WWW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-1GA25>

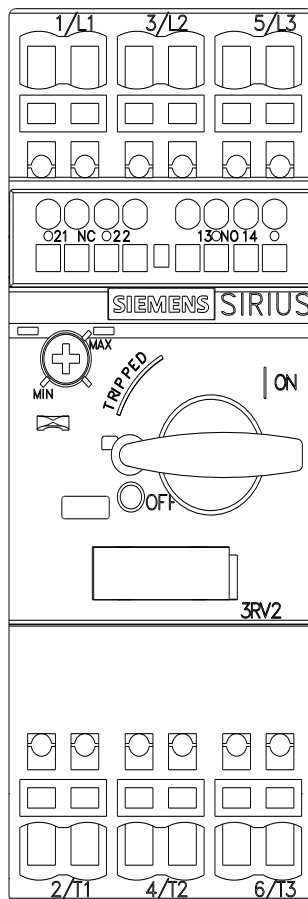
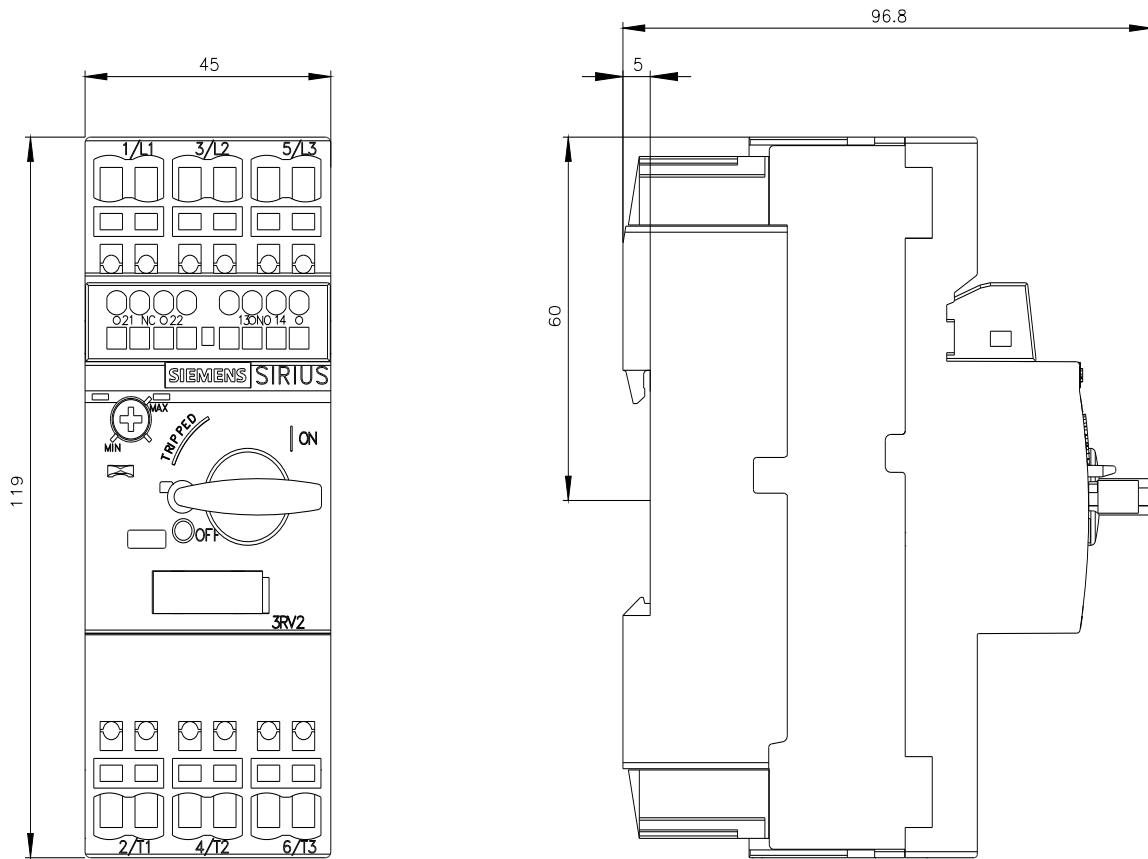
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

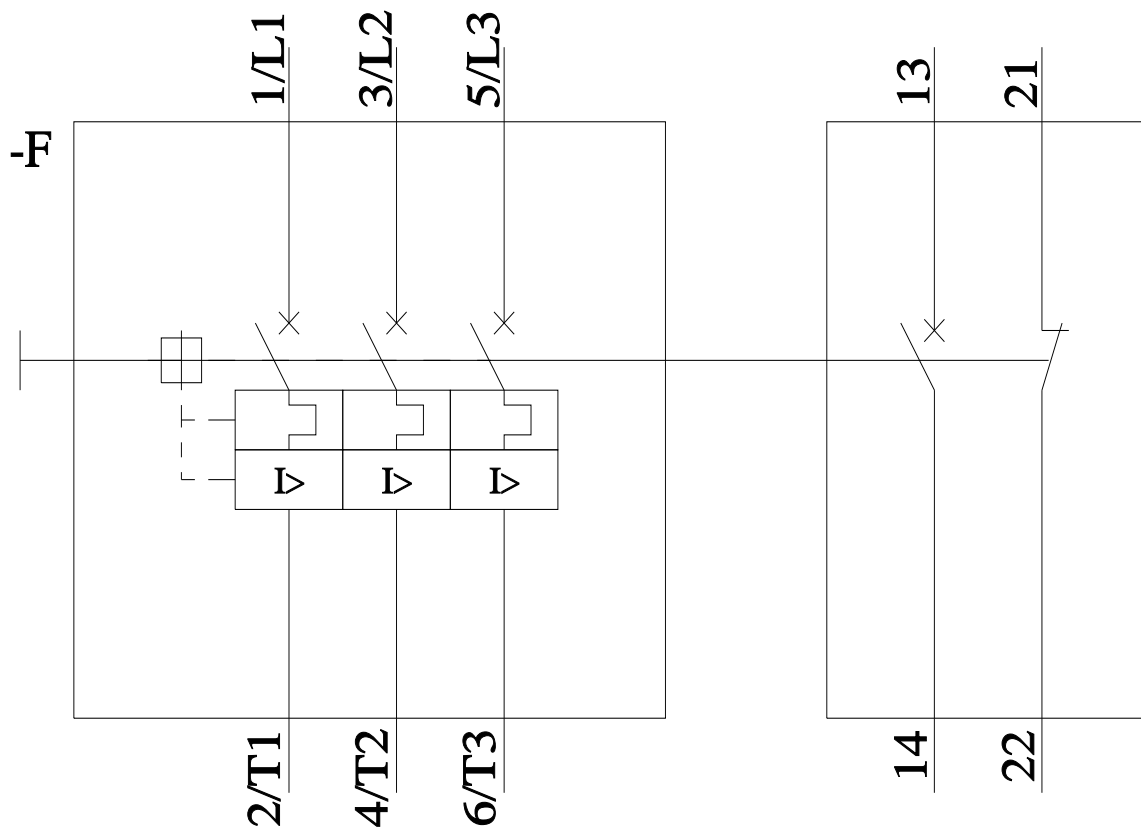
<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-1GA25>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-1GA25&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-1GA25&lang=en)

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





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