



Circuit breaker size S0 for motor protection, CLASS 10 A-release 23...28 A  
N-release 364 A ring cable lug connection Standard switching capacity

|  |                      |
|--|----------------------|
| <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   | 13.25 W              |
| • at AC in hot operating state per pole  | 4.4 W                |
| insulation voltage with degree of pollution 3 at AC rated value                            | 690 V                |
| <b>surge voltage resistance rated value</b>  | 6 kV                 |
| 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       |
| 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> | 23 ... 28 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                |

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| <b>operating frequency rated value</b>   | 50 ... 60 Hz |
| <b>operational current rated value</b>   | 28 A         |
| <b>operational current</b>   |              |
| • at AC-3 at 400 V rated value   | 28 A         |
| • at AC-3e at 400 V rated value  | 28 A         |
| <b>operating power</b>   |              |
| • at AC-3  |              |
| — at 230 V rated value   | 7.5 kW       |
| — at 400 V rated value   | 15 kW        |
| — at 500 V rated value   | 18.5 kW      |
| — at 690 V rated value   | 22 kW        |
| • at AC-3e   |              |
| — at 230 V rated value   | 7.5 kW       |
| — at 400 V rated value   | 15 kW        |
| — at 500 V rated value   | 18.5 kW      |
| — at 690 V rated value   | 22 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>breaking capacity maximum short-circuit current (I<sub>cu</sub>)</b>                        |              |
| • at AC at 240 V rated value   | 100 kA       |
| • at AC at 400 V rated value   | 55 kA        |
| • at AC at 500 V rated value   | 10 kA        |
| • at AC at 690 V rated value   | 4 kA         |
| <b>breaking capacity operating short-circuit current (I<sub>cs</sub>) at AC</b>                |              |
| • at 240 V rated value   | 100 kA       |
| • at 400 V rated value   | 25 kA        |
| • at 500 V rated value   | 5 kA         |
| • at 690 V rated value   | 2 kA         |
| response value current of instantaneous short-circuit trip unit                                | 364 A        |
| <b>UL/CSA ratings</b>  |              |
| <b>full-load current (FLA) for 3-phase AC motor</b>  |              |
| • at 480 V rated value   | 28 A         |
| • at 600 V rated value   | 28 A         |
| <b>yielded mechanical performance [hp]</b>   |              |
| • for single-phase AC motor  |              |
| — at 110/120 V rated value   | 2 hp         |
| — at 230 V rated value   | 5 hp         |
| • for 3-phase AC motor   |              |
| — at 200/208 V rated value   | 7.5 hp       |
| — at 220/230 V rated value   | 10 hp        |
| — at 460/480 V rated value   | 20 hp        |
| <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 for IT network for short-circuit protection of the main circuit</b> |              |
| • at 400 V   | gL/gG 63 A   |

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|--|--|
| <ul style="list-style-type: none"> <li>• at 500 V</li> <li>• at 690 V</li> </ul>   | gL/gG 63 A<br>gL/gG 63 A   |
| <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>  | 97 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>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>  | Ring cable lug connection<br>ring terminal lug connection  |
| <b>arrangement of electrical connectors for main current circuit</b>   | Top and bottom   |
| <b>tightening torque</b>   |  |
| <ul style="list-style-type: none"> <li>• for main contacts for ring cable lug</li> <li>• for auxiliary contacts for ring cable lug</li> </ul>  | 2 ... 2.5 N·m<br>1.2 ... 0.8 N·m   |
| <b>outer diameter of the usable ring cable lug maximum</b>   | 7.5 mm   |
| <b>design of screwdriver shaft</b>   | Diameter 5 to 6 mm   |
| <b>size of the screwdriver tip</b>   | size 2 and Pozidriv 2  |
| <b>design of the thread of the connection screw</b>  |  |
| <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• of the auxiliary and control contacts</li> </ul>   | M4<br>M3   |
| <b>Safety related data</b>   |  |
| <b>B10 value</b>   |  |
| <ul style="list-style-type: none"> <li>• with high demand rate according to SN 31920</li> </ul>  | 5 000  |
| <b>proportion of dangerous failures</b>  |  |
| <ul style="list-style-type: none"> <li>• with low demand rate according to SN 31920</li> <li>• with high demand rate according to SN 31920</li> </ul>  | 50 %<br>50 %   |
| <b>failure rate [FIT]</b>  |  |

|   |        |
|---|--------|
| • with low demand rate according to SN 31920                            | 50 FIT |
| T1 value for proof test interval or service life according to IEC 61508 | 10 y   |
| protection class IP on the front according to IEC 60529                 | IP00   |
| display version for switching status                                    | Handle |

### Certificates/ approvals

#### General Product Approval



[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- 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=3RV2021-4NA40>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2021-4NA40>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4NA40>

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

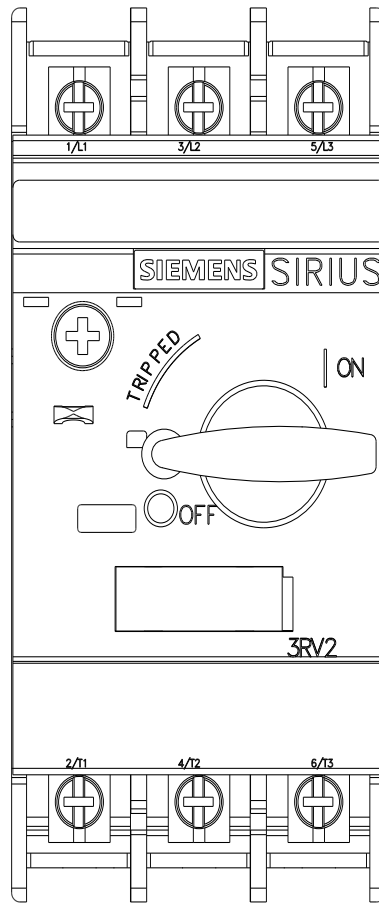
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2021-4NA40&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2021-4NA40&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2021-4NA40/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2021-4NA40&objecttype=14&gridview=view1>



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