



Circuit breaker size S00 for motor protection, CLASS 10 A-release 2.8...4 A N release 52 A Screw terminal Standard switching capacity with transverse auxiliary switch 1 NO+1 NC

|                                                                                     |                      |
|-------------------------------------------------------------------------------------|----------------------|
| product brand name                                                                  | SIRIUS               |
| product designation                                                                 | Circuit breaker      |
| design of the product                                                               | For motor protection |
| product type designation                                                            | 3RV1                 |
| <b>General technical data</b>                                                       |                      |
| size of the circuit-breaker                                                         | S00                  |
| size of contactor can be combined company-specific                                  | S00                  |
| product extension auxiliary switch                                                  | Yes                  |
| power loss [W] for rated value of the current                                       |                      |
| • 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                |
| surge voltage resistance rated value                                                | 6 kV                 |
| 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)                                                       | 01/01/2013           |
| SVHC substance name                                                                 | Lead - 7439-92-1     |
| Weight                                                                              | 0.288 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>Main circuit</b>                                                                 |                      |
| number of poles for main current circuit                                            | 3                    |
| adjustable current response value current of the current-dependent overload release | 2.8 ... 4 A          |
| 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                                                     | 4 A                  |
| operational current                                                                 |                      |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                  | 4 A<br>4 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> <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> | 0.75 kW<br>1.5 kW<br>2.2 kW<br>3 kW<br>0.75 kW<br>1.5 kW<br>2.2 kW<br>3 kW |
| <b>operating frequency</b> <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> <li>• at AC-3e maximum</li> </ul>                                                                                                                                                                                                                                                                                                                                 | 15 1/h<br>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                                                                          |
| <b>number of CO contacts for auxiliary contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                        | 0                                                                          |
| <b>operational current of auxiliary contacts at AC-15</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 110 V</li> <li>• at 120 V</li> <li>• at 125 V</li> <li>• at 230 V</li> </ul>                                                                                                                                                                                                                                                      | 2 A<br>2 A<br>2 A<br>2 A<br>0.5 A                                          |
| <b>operational current of auxiliary contacts at DC-13</b> <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> </ul>                                                                                                                                                                                                                                                                                                                   | 1 A<br>0.15 A                                                              |
| <b>Protective and monitoring functions</b>                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                            |
| <b>product function</b> <ul style="list-style-type: none"> <li>• ground fault detection</li> <li>• phase failure detection</li> </ul>                                                                                                                                                                                                                                                                                                                      | No<br>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> <li>• at AC at 400 V rated value</li> <li>• at AC at 500 V rated value</li> <li>• at AC at 690 V rated value</li> </ul>                                                                                                                                                                                              | 100 kA<br>100 kA<br>3 kA<br>2 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> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>                                                                                                                                                                                                              | 100 kA<br>100 kA<br>3 kA<br>2 kA                                           |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                                                            | 52 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> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                                                                                               | 4 A<br>4 A                                                                 |
| <b>yielded mechanical performance [hp]</b> <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> <li>— at 230 V rated value</li> </ul> </li> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul> </li> </ul>                               | 0.13 hp<br>0.33 hp<br>0.8 hp<br>0.75 hp<br>2 hp                            |

|                                                                                         |                                                                                                              |
|-----------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| — at 575/600 V rated value                                                              | 3 hp                                                                                                         |
| contact rating of auxiliary contacts according to UL                                    | C300 / R300                                                                                                  |
| Short-circuit protection                                                                |                                                                                                              |
| product function short circuit protection                                               | Yes                                                                                                          |
| design of the short-circuit trip                                                        | magnetic                                                                                                     |
| design of the fuse link                                                                 | fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current I <sub>k</sub> < 400 A)                |
| • for short-circuit protection of the auxiliary switch required                         |                                                                                                              |
| design of the fuse link for IT network for short-circuit protection of the main circuit | none required<br>gG 40 A<br>gG 35 A<br>gG 35 A                                                               |
| • at 240 V                                                                              |                                                                                                              |
| • at 400 V                                                                              |                                                                                                              |
| • at 500 V                                                                              |                                                                                                              |
| • at 690 V                                                                              |                                                                                                              |
| Installation/ mounting/ dimensions                                                      |                                                                                                              |
| mounting position                                                                       | any                                                                                                          |
| fastening method                                                                        | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                                     |
| height                                                                                  | 90 mm                                                                                                        |
| width                                                                                   | 45 mm                                                                                                        |
| depth                                                                                   | 75 mm                                                                                                        |
| required spacing                                                                        |                                                                                                              |
| • for grounded parts at 400 V                                                           |                                                                                                              |
| — downwards                                                                             |                                                                                                              |
| — upwards                                                                               |                                                                                                              |
| — at the side                                                                           |                                                                                                              |
| • for live parts at 400 V                                                               |                                                                                                              |
| — downwards                                                                             |                                                                                                              |
| — upwards                                                                               |                                                                                                              |
| — at the side                                                                           |                                                                                                              |
| • for grounded parts at 500 V                                                           |                                                                                                              |
| — downwards                                                                             |                                                                                                              |
| — upwards                                                                               |                                                                                                              |
| — at the side                                                                           |                                                                                                              |
| • for live parts at 500 V                                                               |                                                                                                              |
| — downwards                                                                             |                                                                                                              |
| — upwards                                                                               |                                                                                                              |
| — at the side                                                                           |                                                                                                              |
| • for grounded parts at 690 V                                                           |                                                                                                              |
| — downwards                                                                             |                                                                                                              |
| — upwards                                                                               |                                                                                                              |
| — backwards                                                                             |                                                                                                              |
| — at the side                                                                           |                                                                                                              |
| — forwards                                                                              |                                                                                                              |
| • for live parts at 690 V                                                               |                                                                                                              |
| — downwards                                                                             |                                                                                                              |
| — upwards                                                                               |                                                                                                              |
| — backwards                                                                             |                                                                                                              |
| — at the side                                                                           |                                                                                                              |
| — forwards                                                                              |                                                                                                              |
| Connections/ Terminals                                                                  |                                                                                                              |
| type of electrical connection                                                           | screw-type terminals                                                                                         |
| • for main current circuit                                                              |                                                                                                              |
| • for auxiliary and control circuit                                                     | screw-type terminals                                                                                         |
| arrangement of electrical connectors for main current circuit                           | Top and bottom                                                                                               |
| type of connectable conductor cross-sections                                            | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²), 2x (1 ... 4 mm²)<br>2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²) |
| • for main contacts                                                                     |                                                                                                              |
| — solid or stranded                                                                     |                                                                                                              |
| — finely stranded with core end processing                                              |                                                                                                              |
| type of connectable conductor cross-sections                                            | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)                                                                  |
| • for auxiliary contacts                                                                |                                                                                                              |
| — solid or stranded                                                                     |                                                                                                              |

|                                                                      |                                                  |
|----------------------------------------------------------------------|--------------------------------------------------|
| <b>tightening torque</b>                                             |                                                  |
| • for main contacts with screw-type terminals                        | 0.8 ... 1.2 N·m                                  |
| • for auxiliary contacts with screw-type terminals                   | 0.8 ... 1.2 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                                                  | M3                                               |
| • of the auxiliary and control contacts                              | M3                                               |
| <b>Safety related data</b>                                           |                                                  |
| 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                                              |
| <b>IEC 61508</b>                                                     |                                                  |
| <b>safety device type according to IEC 61508-2</b>                   | Type A                                           |
| <b>Electrical Safety</b>                                             |                                                  |
| <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 |
| <b>Display</b>                                                       |                                                  |
| display version for switching status                                 | Rocker switch                                    |
| <b>Approvals Certificates</b>                                        |                                                  |
| <b>General Product Approval</b>                                      |                                                  |



[KC](#)



| General Product Approval                                                            | For use in hazardous locations                                                      | Test Certificates                                                                   |                                          | Maritime application                                                                  |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  | <a href="#">Special Test Certificate</a> | <a href="#">Type Test Certificates/Test Report</a>                                    |
|                                                                                     | IECEX                                                                               | ATEX                                                                                |                                          |  |

| Maritime application                                                                |                                                                                     |                                                                                     |                                                                                     |                                                                                       |                                                                                       |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| BUREAU VERITAS                                                                      | DNV                                                                                 | LRS                                                                                 | PRS                                                                                 | RINA                                                                                  | RMRS                                                                                  |

| other                        | Railway                                                                             |                               | Environment                                                                         |                                             |
|------------------------------|-------------------------------------------------------------------------------------|-------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------|
| <a href="#">Confirmation</a> |  | <a href="#">Miscellaneous</a> |  | <a href="#">Special Test Certificate</a>    |
|                              | 产品合格<br>QC PASS                                                                     |                               | VDE                                                                                 | <a href="#">Environmental Confirmations</a> |

## 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=3RV1011-1EA15>

### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1EA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1EA15>

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

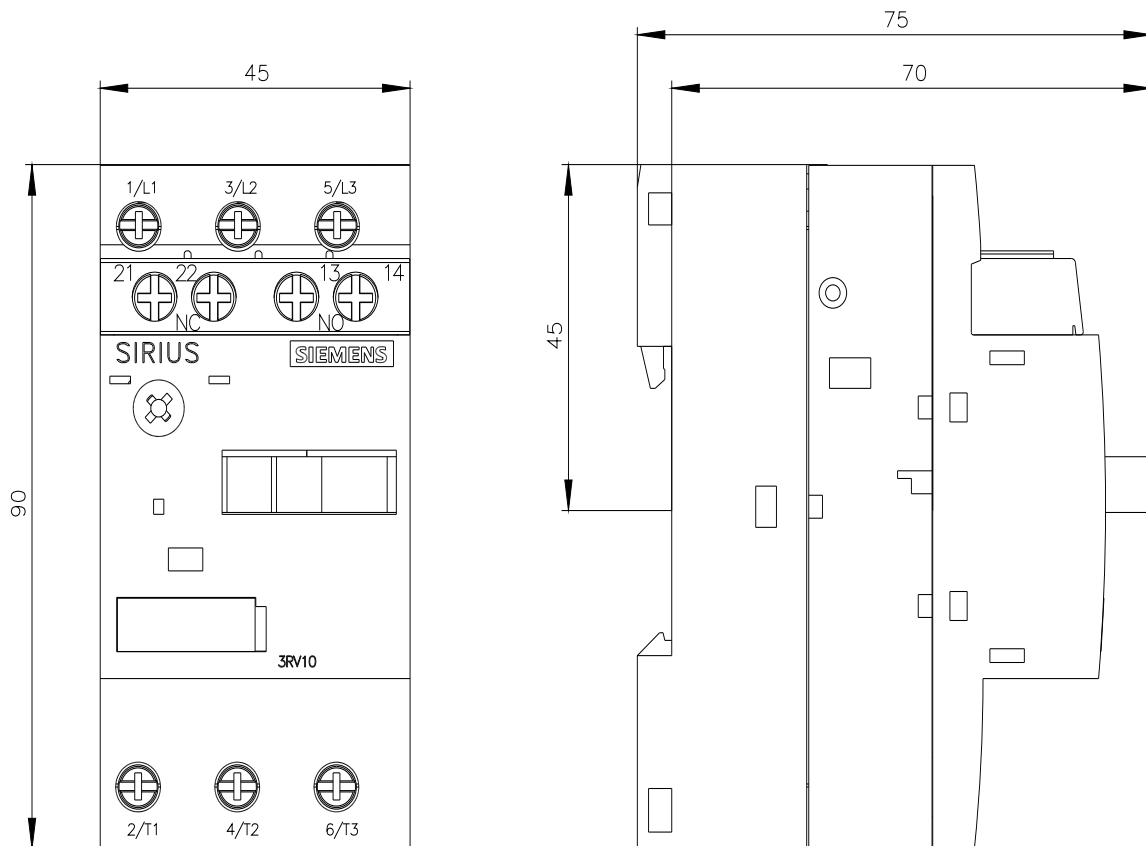
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1EA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1EA15&lang=en)

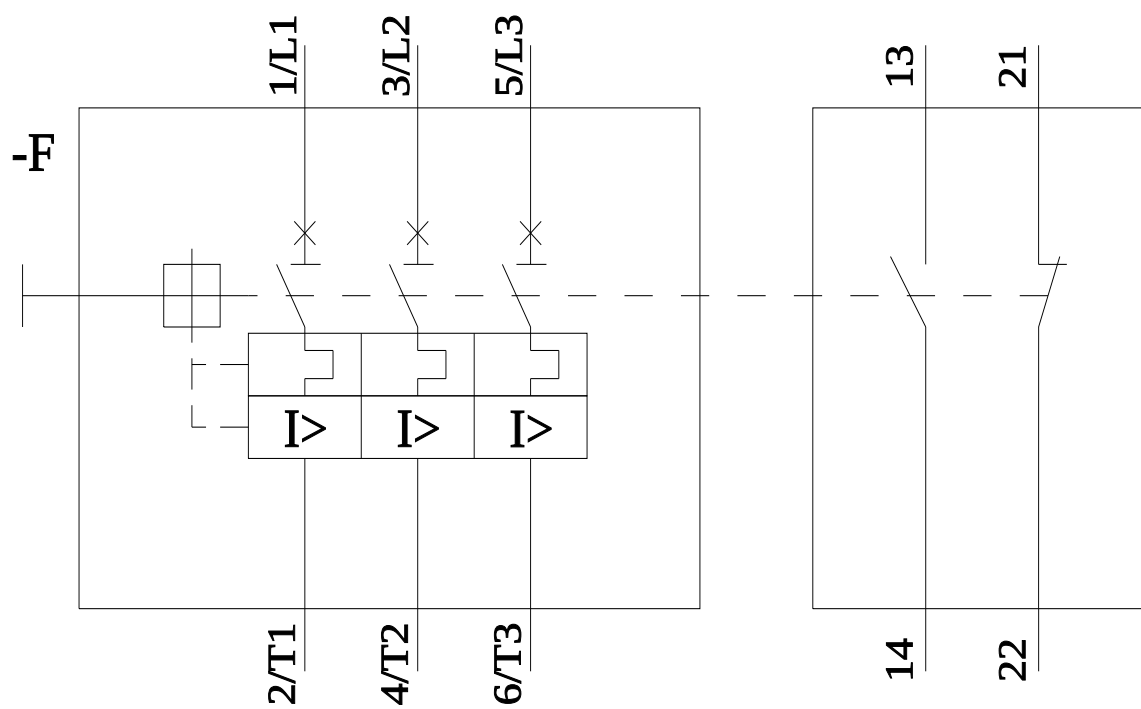
### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1EA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1EA15&objecttype=14&gridview=view1>





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