



Circuit breaker size S00 for motor protection, CLASS 10 A-release 5.5...8 A  
N-release 104 A Screw terminal Standard switching capacity

|                                                                                     |                      |
|-------------------------------------------------------------------------------------|----------------------|
| 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                                                      | 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                 |
| maximum permissible voltage for safe isolation in networks with grounded star point |                      |
| • between main and auxiliary circuit                                                | 400 V                |
| • between main and auxiliary circuit                                                | 400 V                |
| mechanical service life (switching cycles)                                          |                      |
| • of the main contacts typical                                                      | 100 000              |
| • of auxiliary contacts typical                                                     | 100 000              |
| electrical endurance (switching cycles) typical                                     | 100 000              |
| type of protection according to ATEX directive 2014/34/EU                           | Ex II (2) GD         |
| certificate of suitability according to ATEX directive 2014/34/EU                   | DMT 02 ATEX F 001    |
| reference code acc. to IEC 81346-2                                                  | Q                    |
| Substance Prohibitance (Date)                                                       | 01.01.2013 00:00:00  |
| <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       |
| temperature compensation                                                            | -20 ... +60 °C       |
| relative humidity during operation                                                  | 10 ... 95 %          |
| <b>Main circuit</b>                                                                 |                      |
| number of poles for main current circuit                                            | 3                    |

|                                                                                                |              |
|------------------------------------------------------------------------------------------------|--------------|
| <b>adjustable current response value current of the current-dependent overload release</b>     | 5.5 ... 8 A  |
| <b>operating voltage</b>                                                                       |              |
| • rated value                                                                                  | 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>                                                         | 8 A          |
| operational current at AC-3 at 400 V rated value                                               | 8 A          |
| <b>operating power at AC-3</b>                                                                 |              |
| • at 230 V rated value                                                                         | 1.5 kW       |
| • at 400 V rated value                                                                         | 3 kW         |
| • at 500 V rated value                                                                         | 4 kW         |
| • at 690 V rated value                                                                         | 5.5 kW       |
| operating frequency at AC-3 maximum                                                            | 15 1/h       |
| <b>Auxiliary circuit</b>                                                                       |              |
| 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 operating short-circuit current (Ics) at AC</b>                           |              |
| • at 240 V rated value                                                                         | 100 kA       |
| • at 400 V rated value                                                                         | 12.5 kA      |
| • at 500 V rated value                                                                         | 3 kA         |
| • at 690 V rated value                                                                         | 2 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                                                                   | 50 kA        |
| • at AC at 500 V rated value                                                                   | 3 kA         |
| • at AC at 690 V rated value                                                                   | 2 kA         |
| response value current of instantaneous short-circuit trip unit                                | 104 A        |
| <b>UL/CSA ratings</b>                                                                          |              |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                            |              |
| • at 480 V rated value                                                                         | 8 A          |
| • at 600 V rated value                                                                         | 8 A          |
| <b>yielded mechanical performance [hp]</b>                                                     |              |
| • for single-phase AC motor                                                                    |              |
| — at 110/120 V rated value                                                                     | 0.333 hp     |
| — at 230 V rated value                                                                         | 1 hp         |
| • for 3-phase AC motor                                                                         |              |
| — at 200/208 V rated value                                                                     | 2 hp         |
| — at 220/230 V rated value                                                                     | 2 hp         |
| — at 460/480 V rated value                                                                     | 5 hp         |
| — at 575/600 V rated value                                                                     | 5 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 240 V                                                                                     | gL/gG 80 A   |
| • at 400 V                                                                                     | gL/gG 63 A   |
| • at 500 V                                                                                     | gL/gG 40 A   |
| • at 690 V                                                                                     | gL/gG 40 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 90 mm                                                                                                                                                                          |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 45 mm                                                                                                                                                                          |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 75 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> | 20 mm<br>20 mm<br>9 mm<br><br>20 mm<br>20 mm<br>9 mm<br><br>20 mm<br>20 mm<br>9 mm<br><br>20 mm<br>20 mm<br>0 mm<br>9 mm<br>0 mm<br><br>20 mm<br>20 mm<br>0 mm<br>9 mm<br>0 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                |
| product component removable terminal for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No                                                                                                                                                                             |
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>for main current circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | screw-type 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> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 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)                                                                   |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 2x (0,5 ... 1,5 mm²), 2x (0,75 ... 2,5 mm²)                                                                                                                                    |
| <b>tightening torque</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> <li>for auxiliary contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0.8 ... 1.2 N·m<br>0.8 ... 1.2 N·m                                                                                                                                             |
| <b>size of the screwdriver tip</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Pozidriv 2                                                                                                                                                                     |
| <b>design of the thread of the connection screw</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | M3                                                                                                                                                                             |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                |
| <b>B10 value</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>with high demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 5 000                                                                                                                                                                          |
| <b>proportion of dangerous failures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                |
| <ul style="list-style-type: none"> <li>with low demand rate acc. to SN 31920</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 50 %                                                                                                                                                                           |

|                                                           |                                                  |
|-----------------------------------------------------------|--------------------------------------------------|
| • with high demand rate acc. to SN 31920                  | 50 %                                             |
| <b>failure rate [FIT]</b>                                 |                                                  |
| • with low demand rate acc. to SN 31920                   | 50 FIT                                           |
| <b>protection class IP on the front acc. to IEC 60529</b> | IP20                                             |
| <b>touch protection on the front acc. to IEC 60529</b>    | finger-safe, for vertical contact from the front |
| display version for switching status                      | Rocker switch                                    |

#### Certificates/ approvals

|                          |                                |
|--------------------------|--------------------------------|
| General Product Approval | For use in hazardous locations |
|--------------------------|--------------------------------|



|                           |                   |                   |
|---------------------------|-------------------|-------------------|
| Declaration of Conformity | Test Certificates | Marine / Shipping |
|---------------------------|-------------------|-------------------|

[UK Declaration of Conformity](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



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



[Confirmation](#)

[Miscellaneous](#)

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



[Special Test Certificate](#)

#### 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=3RV1011-1HA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV1011-1HA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1HA10>

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

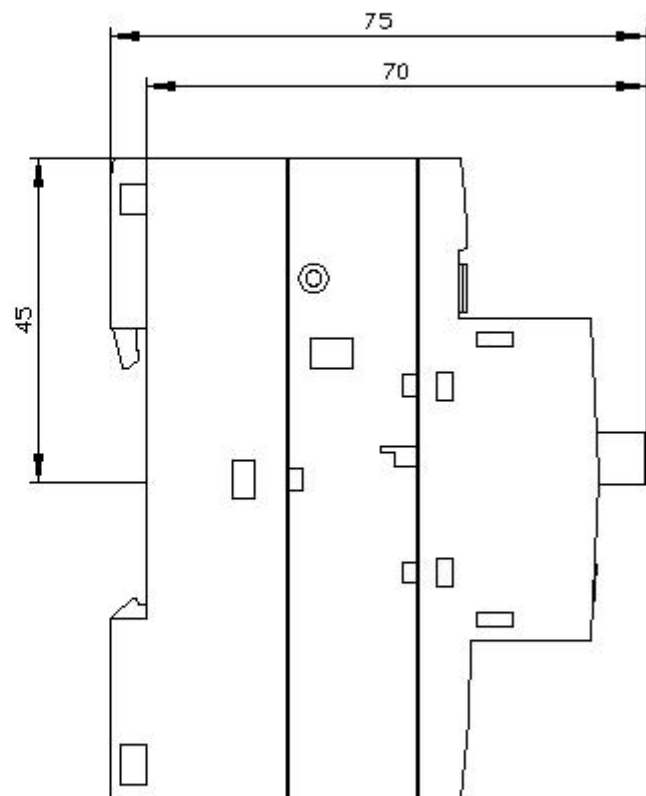
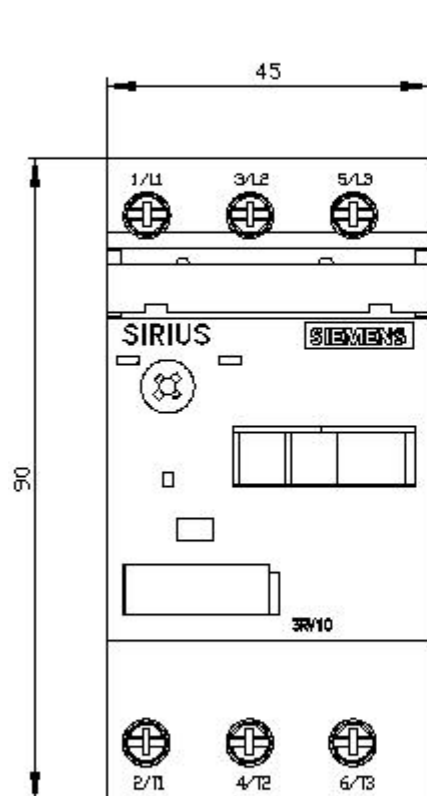
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV1011-1HA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV1011-1HA10&lang=en)

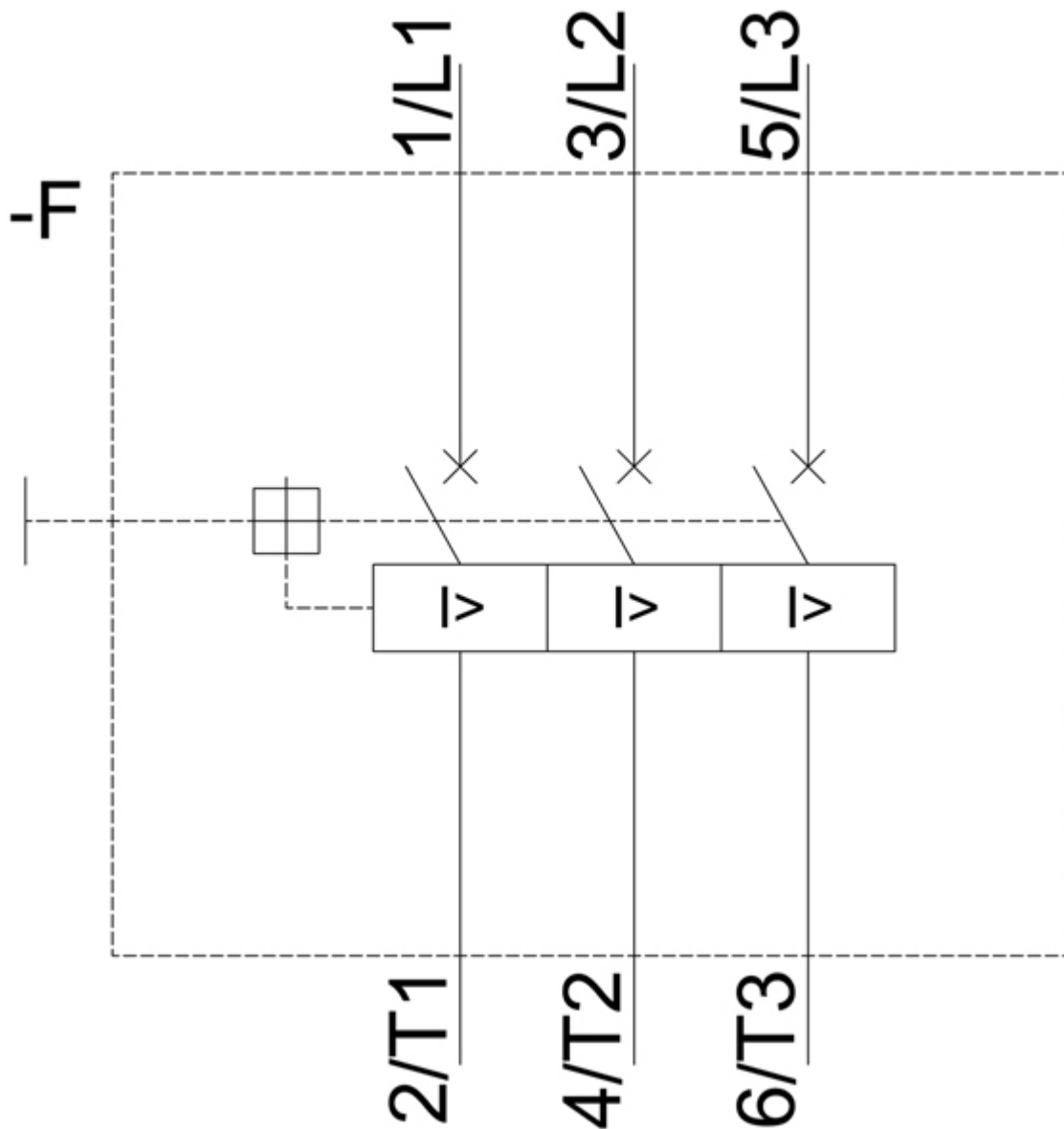
Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV1011-1HA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV1011-1HA10&objecttype=14&gridview=view1>





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2/5/2021 