



Circuit breaker size S00 for system protection with approval circuit breaker UL 489, CSA C22.2 No.5-02 A-release 12.5 A N-release 163 A screw terminal Standard switching capacity

|                                 |                                                           |
|---------------------------------|-----------------------------------------------------------|
| <b>product brand name</b>       | SIRIUS                                                    |
| <b>product designation</b>      | Circuit breaker                                           |
| <b>design of the product</b>    | For system protection according to UL 489/CSA C22.2 No. 5 |
| <b>product type designation</b> | 3RV2                                                      |

### General technical data

|                                                                 |             |
|-----------------------------------------------------------------|-------------|
| <b>size of the circuit-breaker</b>                              | S00         |
| product extension auxiliary switch                              | Yes         |
| <b>power loss [W] for rated value of the current</b>            |             |
| • 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       |
| <b>surge voltage resistance rated value</b>                     | 6 kV        |
| <b>shock resistance according to IEC 60068-2-27</b>             | 25g / 11 ms |
| <b>mechanical service life (operating cycles)</b>               |             |
| • of the main contacts typical                                  | 100 000     |
| • of auxiliary contacts typical                                 | 100 000     |
| electrical endurance (operating cycles) typical                 | 100 000     |
| <b>reference code according to IEC 81346-2</b>                  | Q           |
| <b>Substance Prohibition (Date)</b>                             | 10/01/2009  |

### Ambient conditions

|                                                         |                |
|---------------------------------------------------------|----------------|
| 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 %    |

### Main circuit

|                                                 |              |
|-------------------------------------------------|--------------|
| <b>number of poles for main current circuit</b> | 3            |
| <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        |
| <b>operating frequency rated value</b>          | 50 ... 60 Hz |
| <b>operational current rated value</b>          | 12.5 A       |
| <b>operational current</b>                      |              |
| • at AC-3 at 400 V rated value                  | 12.5 A       |
| • at AC-3e at 400 V rated value                 | 12.5 A       |
| <b>operating power</b>                          |              |
| • at AC-3                                       |              |
| — at 230 V rated value                          | 3 kW         |
| — at 400 V rated value                          | 5.5 kW       |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                                                                                 |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>— at 500 V rated value</li> <li>— at 690 V rated value</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>                                                                                                                                                                                                                                                                                                    | 7.5 kW<br>7.5 kW<br><br>3 kW<br>5.5 kW<br>7.5 kW<br>7.5 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>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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                 |
| <ul style="list-style-type: none"> <li>• ground fault detection</li> <li>• phase failure detection</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | No<br>No                                                                                                        |
| <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> <li>• at 480 AC Y/277 V according to UL 489 rated value</li> </ul>                                                                                                                                                                                                                                                                                                                                             | 100 kA<br>100 kA<br>42 kA<br>6 kA<br>65 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>42 kA<br>4 kA                                                                               |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 163 A                                                                                                           |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                 |
| <ul style="list-style-type: none"> <li>• at 400 V</li> <li>• at 500 V</li> <li>• at 690 V</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | gL/gG 63 A<br>gL/gG 50 A<br>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 DIN rail according to DIN EN 60715                                        |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 144 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> </ul> </li> </ul> | <br>30 mm<br>30 mm<br>30 mm<br><br>30 mm<br>30 mm<br>30 mm<br><br>30 mm<br>30 mm<br>30 mm<br><br>30 mm<br>30 mm |

- at the side 30 mm
- for grounded parts at 690 V
  - downwards 70 mm
  - upwards 70 mm
  - backwards 0 mm
  - at the side 30 mm
  - forwards 0 mm
- for live parts at 690 V
  - downwards 70 mm
  - upwards 70 mm
  - backwards 0 mm
  - at the side 30 mm
  - forwards 0 mm

#### Connections/ Terminals

##### type of electrical connection

- for main current circuit

screw-type terminals

##### arrangement of electrical connectors for main current circuit

Top and bottom

##### type of connectable conductor cross-sections

- for main contacts
  - solid or stranded
  - finely stranded with core end processing
- at AWG cables for main contacts

1 ... 10 mm<sup>2</sup>, max. 2x 10 mm<sup>2</sup>  
 1 ... 16 mm<sup>2</sup>, max. 6 + 16 mm<sup>2</sup>  
 2x (14 ... 10)

##### tightening torque

- for main contacts with screw-type terminals

2.5 ... 3 N·m

##### design of screwdriver shaft

Diameter 5 to 6 mm

##### size of the screwdriver tip

Pozidriv size 2

##### design of the thread of the connection screw

- for main contacts

M4

#### Safety related data

##### B10 value

- with high demand rate according to SN 31920

5 000

##### proportion of dangerous failures

- with low demand rate according to SN 31920
- with high demand rate according to SN 31920

50 %  
50 %

##### failure rate [FIT]

- 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

IP20

touch protection on the front according to IEC 60529  
 display version for switching status

finger-safe, for vertical contact from the front  
 Handle

#### Certificates/ approvals

##### General Product Approval



[Confirmation](#)



[KC](#)



##### Declaration of Conformity

##### Test Certificates

##### Marine / Shipping



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



##### Marine / Shipping

##### other

##### Railway



[Confirmation](#)



[Vibration and Shock](#)

#### 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=3RV2711-1KD10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2711-1KD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2711-1KD10>

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

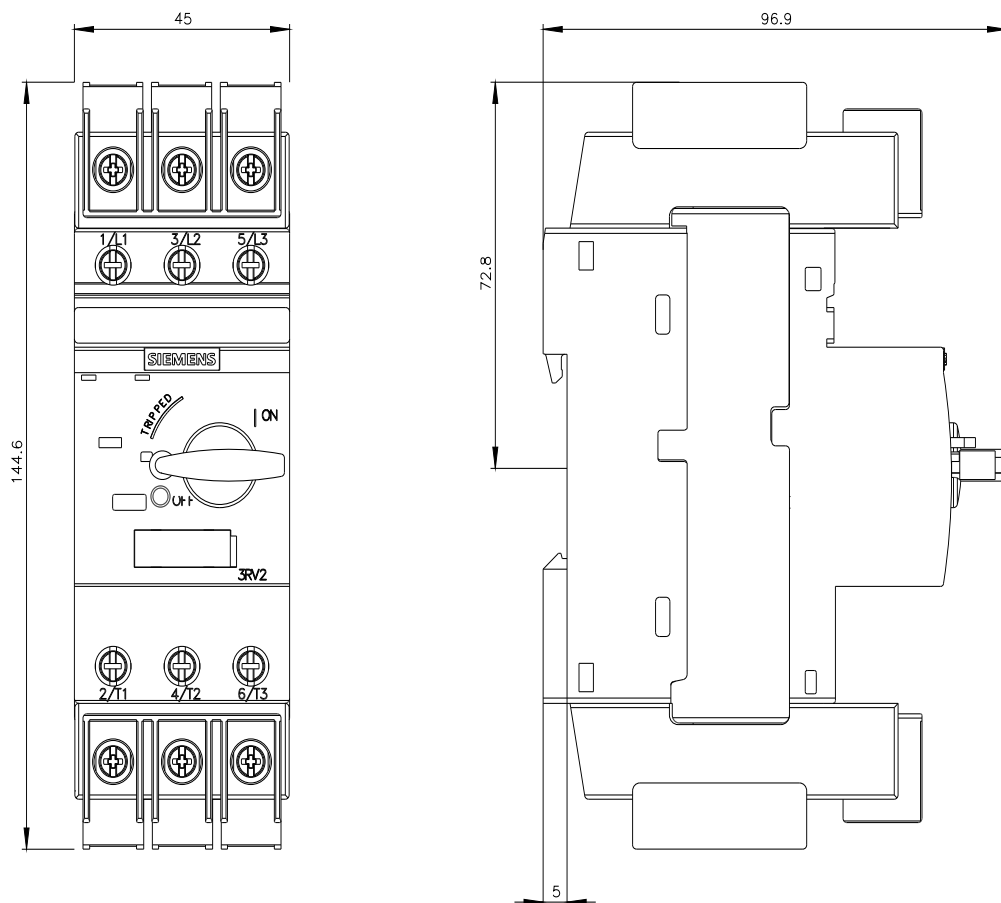
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2711-1KD10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2711-1KD10&lang=en)

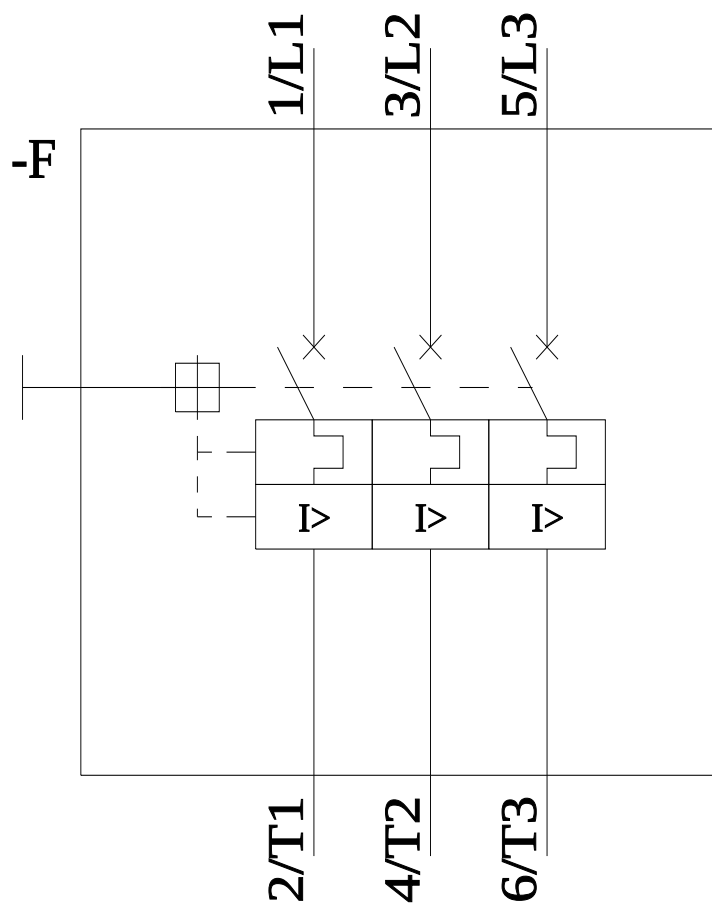
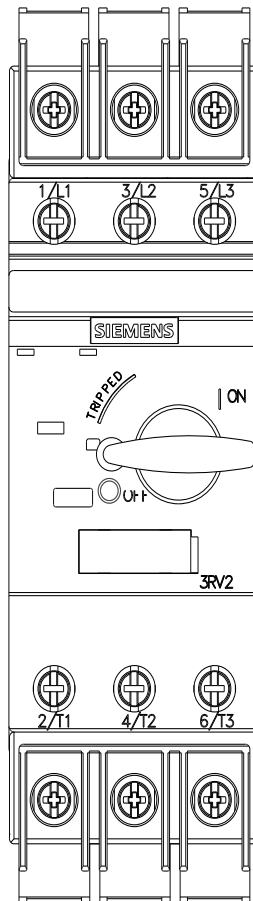
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2711-1KD10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2711-1KD10&objecttype=14&gridview=view1>





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