



Circuit breaker size S3 for motor protection, CLASS 10 A-release 57...75 A  
N-release 975 A screw terminal Standard switching capacity

|                          |                      |
|--------------------------|----------------------|
| product brand name       | SIRIUS               |
| product designation      | Circuit breaker      |
| design of the product    | For motor protection |
| product type designation | 3RV2                 |

### General technical data

|                                                                   |                   |
|-------------------------------------------------------------------|-------------------|
| size of the circuit-breaker                                       | S3                |
| size of contactor can be combined company-specific                | S3                |
| product extension auxiliary switch                                | Yes               |
| power loss [W] for rated value of the current                     |                   |
| • at AC in hot operating state                                    | 38 W              |
| • at AC in hot operating state per pole                           | 12.7 W            |
| insulation voltage with degree of pollution 3 at AC rated value   | 1 000 V           |
| surge voltage resistance rated value                              | 8 kV              |
| shock resistance according to IEC 60068-2-27                      | 25g / 11 ms Sinus |
| mechanical service life (operating cycles)                        |                   |
| • of the main contacts typical                                    | 25 000            |
| • of auxiliary contacts typical                                   | 25 000            |
| electrical endurance (operating cycles) typical                   | 25 000            |
| 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 according to IEC 81346-2                           | Q                 |
| Substance Prohibitance (Date)                                     | 03/01/2017        |

### Ambient conditions

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

### Main circuit

|                                                                                     |              |
|-------------------------------------------------------------------------------------|--------------|
| number of poles for main current circuit                                            | 3            |
| adjustable current response value current of the current-dependent overload release | 57 ... 75 A  |
| 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                                                     | 75 A         |

|                                                                      |                                                                          |
|----------------------------------------------------------------------|--------------------------------------------------------------------------|
| <b>operational current</b>                                           |                                                                          |
| • at AC-3 at 400 V rated value                                       | 75 A                                                                     |
| • at AC-3e at 400 V rated value                                      | 75 A                                                                     |
| <b>operating power</b>                                               |                                                                          |
| • at AC-3                                                            |                                                                          |
| — at 230 V rated value                                               | 22 kW                                                                    |
| — at 400 V rated value                                               | 37 kW                                                                    |
| — at 500 V rated value                                               | 45 kW                                                                    |
| — at 690 V rated value                                               | 55 kW                                                                    |
| • at AC-3e                                                           |                                                                          |
| — at 230 V rated value                                               | 22 kW                                                                    |
| — at 400 V rated value                                               | 37 kW                                                                    |
| — at 500 V rated value                                               | 45 kW                                                                    |
| — at 690 V rated value                                               | 55 kW                                                                    |
| <b>operating frequency</b>                                           |                                                                          |
| • at AC-3 maximum                                                    | 15 1/h                                                                   |
| • at AC-3e maximum                                                   | 15 1/h                                                                   |
| <b>Protective and monitoring functions</b>                           |                                                                          |
| <b>product function</b>                                              |                                                                          |
| • ground fault detection                                             | No                                                                       |
| • phase failure detection                                            | Yes                                                                      |
| <b>trip class</b>                                                    |                                                                          |
| <b>design of the overload release</b>                                | CLASS 10                                                                 |
| <b>maximum short-circuit current breaking capacity (Icu)</b>         | thermal                                                                  |
| • at AC at 240 V rated value                                         | 100 kA                                                                   |
| • at AC at 400 V rated value                                         | 65 kA                                                                    |
| • at AC at 500 V rated value                                         | 8 kA                                                                     |
| • at AC at 690 V rated value                                         | 5 kA                                                                     |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b> |                                                                          |
| • at 240 V rated value                                               | 100 kA                                                                   |
| • at 400 V rated value                                               | 30 kA                                                                    |
| • at 500 V rated value                                               | 4 kA                                                                     |
| • at 690 V rated value                                               | 3 kA                                                                     |
| response value current of instantaneous short-circuit trip unit      | 975 A                                                                    |
| <b>UL/CSA ratings</b>                                                |                                                                          |
| <b>full-load current (FLA) for 3-phase AC motor</b>                  |                                                                          |
| • at 480 V rated value                                               | 75 A                                                                     |
| • at 600 V rated value                                               | 75 A                                                                     |
| <b>yielded mechanical performance [hp]</b>                           |                                                                          |
| • for single-phase AC motor                                          |                                                                          |
| — at 110/120 V rated value                                           | 7.5 hp                                                                   |
| — at 230 V rated value                                               | 15 hp                                                                    |
| • for 3-phase AC motor                                               |                                                                          |
| — at 200/208 V rated value                                           | 25 hp                                                                    |
| — at 220/230 V rated value                                           | 30 hp                                                                    |
| — at 460/480 V rated value                                           | 60 hp                                                                    |
| — at 575/600 V rated value                                           | 75 hp                                                                    |
| <b>Short-circuit protection</b>                                      |                                                                          |
| <b>product function short circuit protection</b>                     | Yes                                                                      |
| <b>design of the short-circuit trip</b>                              | magnetic                                                                 |
| <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>                                                        | 165 mm                                                                   |
| <b>width</b>                                                         | 70 mm                                                                    |
| <b>depth</b>                                                         | 176 mm                                                                   |
| <b>required spacing</b>                                              |                                                                          |
| • with side-by-side mounting at the side                             | 0 mm                                                                     |
| • for grounded parts at 400 V                                        |                                                                          |
| — downwards                                                          | 70 mm                                                                    |

|                               |        |
|-------------------------------|--------|
| — upwards                     | 70 mm  |
| — at the side                 | 10 mm  |
| • for live parts at 400 V     |        |
| — downwards                   | 70 mm  |
| — upwards                     | 70 mm  |
| — at the side                 | 10 mm  |
| • for grounded parts at 500 V |        |
| — downwards                   | 110 mm |
| — upwards                     | 110 mm |
| — at the side                 | 10 mm  |
| • for live parts at 500 V     |        |
| — downwards                   | 110 mm |
| — upwards                     | 110 mm |
| — at the side                 | 10 mm  |
| • for grounded parts at 690 V |        |
| — downwards                   | 150 mm |
| — upwards                     | 150 mm |
| — at the side                 | 30 mm  |
| • for live parts at 690 V     |        |
| — downwards                   | 150 mm |
| — upwards                     | 150 mm |
| — at the side                 | 30 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
  - solid or stranded
  - finely stranded with core end processing
  - finely stranded without core end processing

2x (2.5 ... 16 mm<sup>2</sup>)  
 2x (2.5 ... 50 mm<sup>2</sup>), 1x (10 ... 70 mm<sup>2</sup>)  
 2x (2.5 ... 35 mm<sup>2</sup>), 1x (2.5 ... 50 mm<sup>2</sup>)  
 2x (10 ... 35 mm<sup>2</sup>), 1x (10 ... 50 mm<sup>2</sup>)

### tightening torque

- for main contacts for ring cable lug

4.5 ... 6 N·m

### outer diameter of the usable ring cable lug maximum

19 mm

### tightening torque

- for main contacts with screw-type terminals

4.5 ... 6 N·m

## 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 %

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](#)



For use in hazardous locations

Declaration of Conformity

Test Certificates



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)

## Marine / Shipping



## Marine / Shipping

other

## Railway



[Confirmation](#)



[Vibration and Shock](#)

[Confirmation](#)

## Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

<https://www.siemens.com/ic10>

Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2041-4KA10>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4KA10>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2041-4KA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2041-4KA10&lang=en)

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2041-4KA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2041-4KA10&objecttype=14&gridview=view1>



