

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



Figure similar

|                          |                      |
|--------------------------|----------------------|
| 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] total typical                                              | 32 W    |
| Insulation voltage with degree of pollution 3 rated value                 | 1 000 V |
| Surge voltage resistance rated value                                      | 8 kV    |
| maximum permissible voltage for safe isolation                            |         |
| • in networks with grounded star point between main and auxiliary circuit | 400 V   |
| • in networks with grounded star point between main and auxiliary circuit | 400 V   |

|                                                   |                                                                  |
|---------------------------------------------------|------------------------------------------------------------------|
| <b>Protection class IP</b>                        |                                                                  |
| • on the front                                    | IP20                                                             |
| • of the terminal                                 | IP00                                                             |
| <b>Shock resistance</b>                           |                                                                  |
| • acc. to IEC 60068-2-27                          | 25g / 11 ms Sinus                                                |
| <b>Mechanical service life (switching cycles)</b> |                                                                  |
| • of the main contacts typical                    | 25 000                                                           |
| • of auxiliary contacts typical                   | 25 000                                                           |
| <b>Electrical endurance (switching cycles)</b>    |                                                                  |
| • typical                                         | 25 000                                                           |
| Certificate of suitability relating to ATEX       | on request                                                       |
| <b>Protection against electrical shock</b>        | finger-safe when touched vertically from front acc. to IEC 60529 |
| Equipment marking acc. to DIN EN 81346-2          | Q                                                                |

#### Ambient conditions

|                                                        |                |
|--------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b> |                |
| • maximum                                              | 2 000 m        |
| <b>Ambient temperature</b>                             |                |
| • during operation                                     | -20 ... +60 °C |
| • during storage                                       | -50 ... +80 °C |
| • during transport                                     | -50 ... +80 °C |
| <b>Temperature compensation</b>                        | -20 ... +60 °C |
| Relative humidity during operation                     | 10 ... 95 %    |

#### Main circuit

|                                                                                   |              |
|-----------------------------------------------------------------------------------|--------------|
| <b>Number of poles for main current circuit</b>                                   | 3            |
| <b>Adjustable pick-up value current of the current-dependent overload release</b> | 57 ... 75 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>Operating current rated value</b>                                              | 75 A         |
| <b>Operating current</b>                                                          |              |
| • at AC-3                                                                         |              |
| — at 400 V rated value                                                            | 75 A         |
| <b>Operating power</b>                                                            |              |
| • at AC-3                                                                         |              |
| — at 230 V rated value                                                            | 22 000 W     |
| — at 400 V rated value                                                            | 37 000 W     |
| — at 500 V rated value                                                            | 45 000 W     |
| — at 690 V rated value                                                            | 55 000 W     |
| <b>Operating frequency</b>                                                        |              |
| • at AC-3 maximum                                                                 | 15 1/h       |

| Protective and monitoring functions                                    |                                                                                        |
|------------------------------------------------------------------------|----------------------------------------------------------------------------------------|
| <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>Operational short-circuit current breaking capacity (Ics) at AC</b> |                                                                                        |
| • at 240 V rated value                                                 | 100 000 A                                                                              |
| • at 400 V rated value                                                 | 30 000 A                                                                               |
| • at 500 V rated value                                                 | 4 000 A                                                                                |
| • at 690 V rated value                                                 | 3 000 A                                                                                |
| <b>Maximum short-circuit current breaking capacity (Icu)</b>           |                                                                                        |
| • 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>Response value current</b>                                          |                                                                                        |
| • of instantaneous short-circuit trip unit                             | 975 A                                                                                  |
| UL/CSA ratings                                                         |                                                                                        |
| <b>Full-load current (FLA) for three-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 three-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                                                                                  |
| Short-circuit protection                                               |                                                                                        |
| <b>Product function Short circuit protection</b>                       | Yes                                                                                    |
| <b>Design of the short-circuit trip</b>                                | magnetic                                                                               |
| Installation/ mounting/ dimensions                                     |                                                                                        |
| <b>Mounting position</b>                                               | any                                                                                    |
| <b>Mounting type</b>                                                   | screw and snap-on mounting onto 35 mm standard mounting 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 150 mm</li> <li>— downwards 150 mm</li> <li>— at the side 0 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 150 mm</li> <li>— at the side 30 mm</li> <li>— downwards 150 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 0 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 150 mm</li> <li>— downwards 150 mm</li> <li>— at the side 30 mm</li> </ul> </li> </ul> |        |

## Connections/Terminals

|                                                                                                                                                                                                                                                                   |                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|
| <b>Product function</b>                                                                                                                                                                                                                                           |                      |
| <ul style="list-style-type: none"> <li>• removable terminal for auxiliary and control circuit</li> </ul>                                                                                                                                                          | 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 2x (2.5 ... 16 mm<sup>2</sup>)</li> <li>— single or multi-stranded 2x (2,5 ... 50 mm<sup>2</sup>), 1x (10 ... 70 mm<sup>2</sup>)</li> </ul> </li> </ul> |                      |
| <b>Tightening torque</b>                                                                                                                                                                                                                                          |                      |
| <ul style="list-style-type: none"> <li>• for ring cable lug <ul style="list-style-type: none"> <li>— for main contacts 4.5 ... 6 N·m</li> </ul> </li> </ul>                                                                                                       |                      |
| <b>Outer diameter of the usable ring cable lug maximum</b>                                                                                                                                                                                                        | 19 mm                |
| <b>Tightening torque</b>                                                                                                                                                                                                                                          |                      |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals 4.5 ... 6 N·m</li> </ul>                                                                                                                                                     |                      |

## Safety related data

|                                                                                           |      |
|-------------------------------------------------------------------------------------------|------|
| <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 %   |
| T1 value for proof test interval or service life acc. to IEC 61508 | 10 y   |
| Display version                                                    |        |
| • for switching status                                             | Handle |

#### Certificates/approvals

| General Product Approval                                                          |                                                                                   |                                                                                   | For use in hazardous locations                                                    |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |
| CCC                                                                               | CSA                                                                               | UL                                                                                |                                                                                   | ATEX                                                                                | IECEX                                                                               |

| Declaration of Conformity                                                         | Test Certificates                        | other                                                        |                              |                                                                                     |                               |
|-----------------------------------------------------------------------------------|------------------------------------------|--------------------------------------------------------------|------------------------------|-------------------------------------------------------------------------------------|-------------------------------|
|  | <a href="#">Special Test Certificate</a> | <a href="#">Declaration of the Compliance with the order</a> | <a href="#">Confirmation</a> |  | <a href="#">Miscellaneous</a> |
| EG-Konf.                                                                          |                                          |                                                              |                              | VDE                                                                                 |                               |

#### Railway

[Vibration and Shock](#)

#### Further information

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

<http://www.siemens.com/industrial-controls/catalogs>

##### Industry Mall (Online ordering system)

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

##### Cax online generator

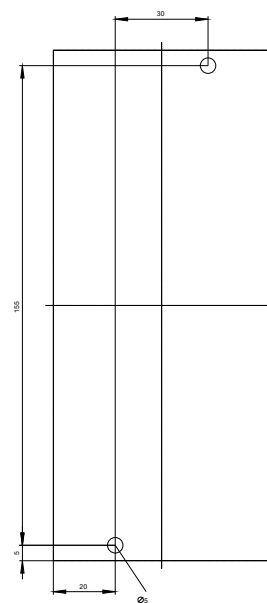
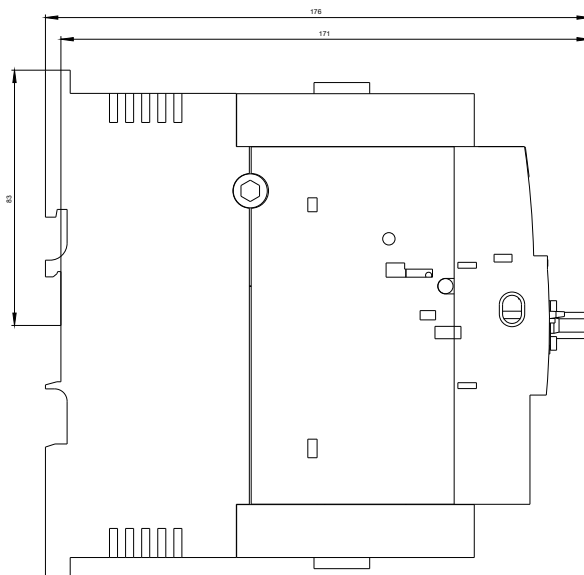
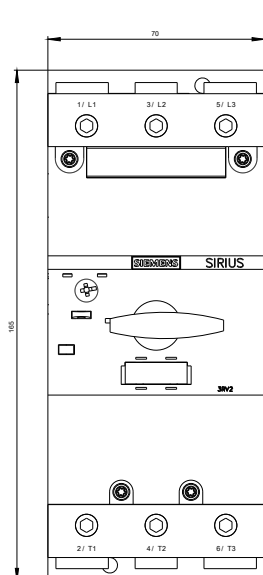
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2041-4KA10>

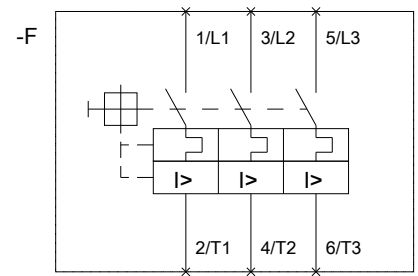
##### Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<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)





last modified:

12/11/2017