

Circuit breaker size S2 for motor protection, CLASS 10 with overload relay function A-release 32...40 A N-release 585 A Standard switching capacity



|                          |                                                   |
|--------------------------|---------------------------------------------------|
| Product brand name       | SIRIUS                                            |
| Product designation      | Circuit breaker                                   |
| Design of the product    | For motor protection with overload relay function |
| Product type designation | 3RV2                                              |

| General technical data                                                                                                        |               |
|-------------------------------------------------------------------------------------------------------------------------------|---------------|
| Size of the circuit-breaker                                                                                                   | S2            |
| Size of contactor can be combined company-specific                                                                            | S2            |
| Product extension                                                                                                             | Yes           |
| <ul style="list-style-type: none"> <li>Auxiliary switch</li> </ul>                                                            |               |
| Power loss [W] for rated value of the current                                                                                 |               |
| <ul style="list-style-type: none"> <li>at AC in hot operating state</li> <li>at AC in hot operating state per pole</li> </ul> | 20 W<br>6.7 W |
| Insulation voltage with degree of pollution 3 rated value                                                                     | 690 V         |
| Surge voltage resistance rated value                                                                                          | 6 kV          |
| maximum permissible voltage for safe isolation                                                                                |               |
| <ul style="list-style-type: none"> <li>in networks with grounded star point between main and auxiliary circuit</li> </ul>     | 400 V         |

|                                                                                                                             |                   |
|-----------------------------------------------------------------------------------------------------------------------------|-------------------|
| <ul style="list-style-type: none"> <li>• in networks with grounded star point between main and auxiliary circuit</li> </ul> | 400 V             |
| <b>Protection class IP</b>                                                                                                  |                   |
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                                                            | IP20              |
| <ul style="list-style-type: none"> <li>• of the terminal</li> </ul>                                                         | IP00              |
| <b>Shock resistance</b>                                                                                                     |                   |
| <ul style="list-style-type: none"> <li>• acc. to IEC 60068-2-27</li> </ul>                                                  | 25g / 11 ms Sinus |
| <b>Mechanical service life (switching cycles)</b>                                                                           |                   |
| <ul style="list-style-type: none"> <li>• of the main contacts typical</li> </ul>                                            | 50 000            |
| <ul style="list-style-type: none"> <li>• of auxiliary contacts typical</li> </ul>                                           | 50 000            |
| <b>Electrical endurance (switching cycles)</b>                                                                              |                   |
| <ul style="list-style-type: none"> <li>• typical</li> </ul>                                                                 | 50 000            |
| <b>Reference code acc. to DIN EN 81346-2</b>                                                                                | Q                 |

#### Ambient conditions

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b>               |                |
| <ul style="list-style-type: none"> <li>• maximum</li> </ul>          | 2 000 m        |
| <b>Ambient temperature</b>                                           |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | -20 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | -50 ... +80 °C |
| <ul style="list-style-type: none"> <li>• during transport</li> </ul> | -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>                                                                                                                                                     | 32 ... 40 A                                  |
| <b>Operating voltage</b>                                                                                                                                                                                                              |                                              |
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>                                                                                                                                                                       | 690 V                                        |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>                                                                                                                                                       | 690 V                                        |
| <b>Operating frequency rated value</b>                                                                                                                                                                                                | 50 ... 60 Hz                                 |
| <b>Operating current rated value</b>                                                                                                                                                                                                  | 40 A                                         |
| <b>Operating current</b>                                                                                                                                                                                                              |                                              |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>                                                                                                 | 40 A                                         |
| <b>Operating power</b>                                                                                                                                                                                                                |                                              |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 230 V rated value</li> <li>— at 400 V rated value</li> <li>— at 500 V rated value</li> <li>— at 690 V rated value</li> </ul> </li> </ul> | 11 000 W<br>18 500 W<br>22 000 W<br>37 000 W |
| <b>Operating frequency</b>                                                                                                                                                                                                            |                                              |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                                                                                                                                   | 15 1/h                                       |

| Auxiliary circuit                                               |          |
|-----------------------------------------------------------------|----------|
| Number of NC contacts for auxiliary contacts                    | 0        |
| • Note                                                          | 1        |
| Number of NO contacts for auxiliary contacts                    | 0        |
| • Note                                                          | 1        |
| Protective and monitoring functions                             |          |
| Product function                                                |          |
| • Ground fault detection                                        | No       |
| • Phase failure detection                                       | Yes      |
| Trip class                                                      | CLASS 10 |
| Design of the overload release                                  | thermal  |
| Operational short-circuit current breaking capacity (Ics) at AC |          |
| • at 240 V rated value                                          | 100 A    |
| • at 400 V rated value                                          | 30 kA    |
| • at 500 V rated value                                          | 5 kA     |
| • at 690 V rated value                                          | 2 kA     |
| Maximum short-circuit current breaking capacity (Icu)           |          |
| • 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                                    | 10 kA    |
| • at AC at 690 V rated value                                    | 4 kA     |
| Response value current                                          |          |
| • of instantaneous short-circuit trip unit                      | 585 A    |
| UL/CSA ratings                                                  |          |
| Full-load current (FLA) for three-phase AC motor                |          |
| • at 480 V rated value                                          | 40 A     |
| • at 600 V rated value                                          | 40 A     |
| Yielded mechanical performance [hp]                             |          |
| • for single-phase AC motor                                     |          |
| — at 110/120 V rated value                                      | 3 hp     |
| — at 230 V rated value                                          | 7.5 hp   |
| • for three-phase AC motor                                      |          |
| — at 200/208 V rated value                                      | 15 hp    |
| — at 220/230 V rated value                                      | 15 hp    |
| — at 460/480 V rated value                                      | 30 hp    |
| — at 575/600 V rated value                                      | 40 hp    |
| Short-circuit protection                                        |          |
| Product function Short circuit protection                       | Yes      |
| Design of the short-circuit trip                                | magnetic |

|                                                                                                |               |
|------------------------------------------------------------------------------------------------|---------------|
| <b>Design of the fuse link for IT network for short-circuit protection of the main circuit</b> |               |
| • at 240 V                                                                                     | none required |
| • at 400 V                                                                                     | 125           |
| • at 500 V                                                                                     | 100           |
| • at 690 V                                                                                     | 80            |

| 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>                      | 140 mm                                                                                 |
| <b>Width</b>                       | 75 mm                                                                                  |
| <b>Depth</b>                       | 149 mm                                                                                 |
| <b>Required spacing</b>            |                                                                                        |
| • with side-by-side mounting       |                                                                                        |
| — forwards                         | 0 mm                                                                                   |
| — Backwards                        | 0 mm                                                                                   |
| — upwards                          | 50 mm                                                                                  |
| — downwards                        | 50 mm                                                                                  |
| — at the side                      | 0 mm                                                                                   |
| • for grounded parts               |                                                                                        |
| — forwards                         | 0 mm                                                                                   |
| — Backwards                        | 0 mm                                                                                   |
| — upwards                          | 50 mm                                                                                  |
| — at the side                      | 10 mm                                                                                  |
| — downwards                        | 50 mm                                                                                  |
| • for live parts                   |                                                                                        |
| — forwards                         | 0 mm                                                                                   |
| — Backwards                        | 0 mm                                                                                   |
| — upwards                          | 50 mm                                                                                  |
| — downwards                        | 50 mm                                                                                  |
| — at the side                      | 10 mm                                                                                  |

| Connections/ Terminals                                               |                      |
|----------------------------------------------------------------------|----------------------|
| <b>Product function</b>                                              |                      |
| • removable terminal for auxiliary and control circuit               | No                   |
| <b>Type of electrical connection</b>                                 |                      |
| • for main current circuit                                           | screw-type terminals |
| • for auxiliary and control current circuit                          | 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>— single or multi-stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• at AWG conductors for main contacts</li> </ul> | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )<br>2x (1 ... 16 mm <sup>2</sup> ), 1x (1 ... 25 mm <sup>2</sup> )<br>2x (18 ... 3), 1x (18 ... 2) |
| <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>                                                                                            | 3 ... 4.5 N·m<br>0.8 ... 1.2 N·m                                                                                                                                 |
| <b>Design of screwdriver shaft</b>                                                                                                                                                                                                                     | Diameter 5 to 6 mm                                                                                                                                               |
| <b>Size of the screwdriver tip</b>                                                                                                                                                                                                                     | Pozidriv 2                                                                                                                                                       |
| <b>Design of the thread of the connection screw</b>                                                                                                                                                                                                    |                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• for main contacts</li> <li>• of the auxiliary and control contacts</li> </ul>                                                                                                                                 | M6<br>M3                                                                                                                                                         |

#### Safety related data

|                                                                                                                                             |              |
|---------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <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> <li>• with high demand rate acc. to SN 31920</li> </ul> | 50 %<br>50 % |
| <b>Failure rate [FIT]</b>                                                                                                                   |              |
| <ul style="list-style-type: none"> <li>• with low demand rate acc. to SN 31920</li> </ul>                                                   | 50 FIT       |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b>                                                                   | 10 y         |
| <b>Display version</b>                                                                                                                      |              |
| <ul style="list-style-type: none"> <li>• for switching status</li> </ul>                                                                    | Handle       |

#### Certificates/ approvals

| General Product Approval | Declaration of Conformity |
|--------------------------|---------------------------|
|--------------------------|---------------------------|



[KC](#)



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

[Miscellaneous](#)

[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)



| Railway |
|---------|
|---------|

[Vibration and Shock](#)

[Confirmation](#)

## Further information

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

[www.siemens.com/sirius/catalogs](http://www.siemens.com/sirius/catalogs)

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RV2131-4UA10>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2131-4UA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2131-4UA10>

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

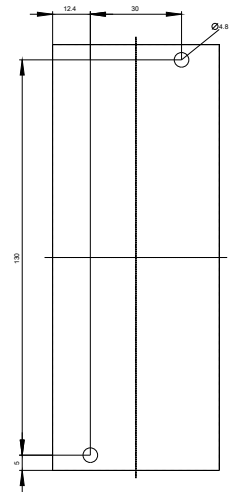
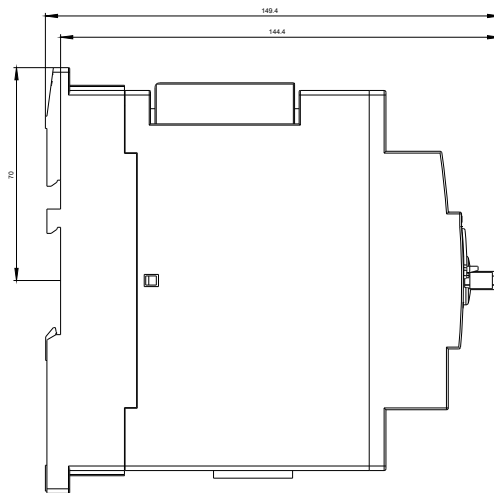
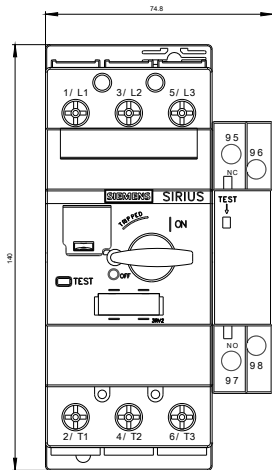
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2131-4UA10&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2131-4UA10&lang=en)

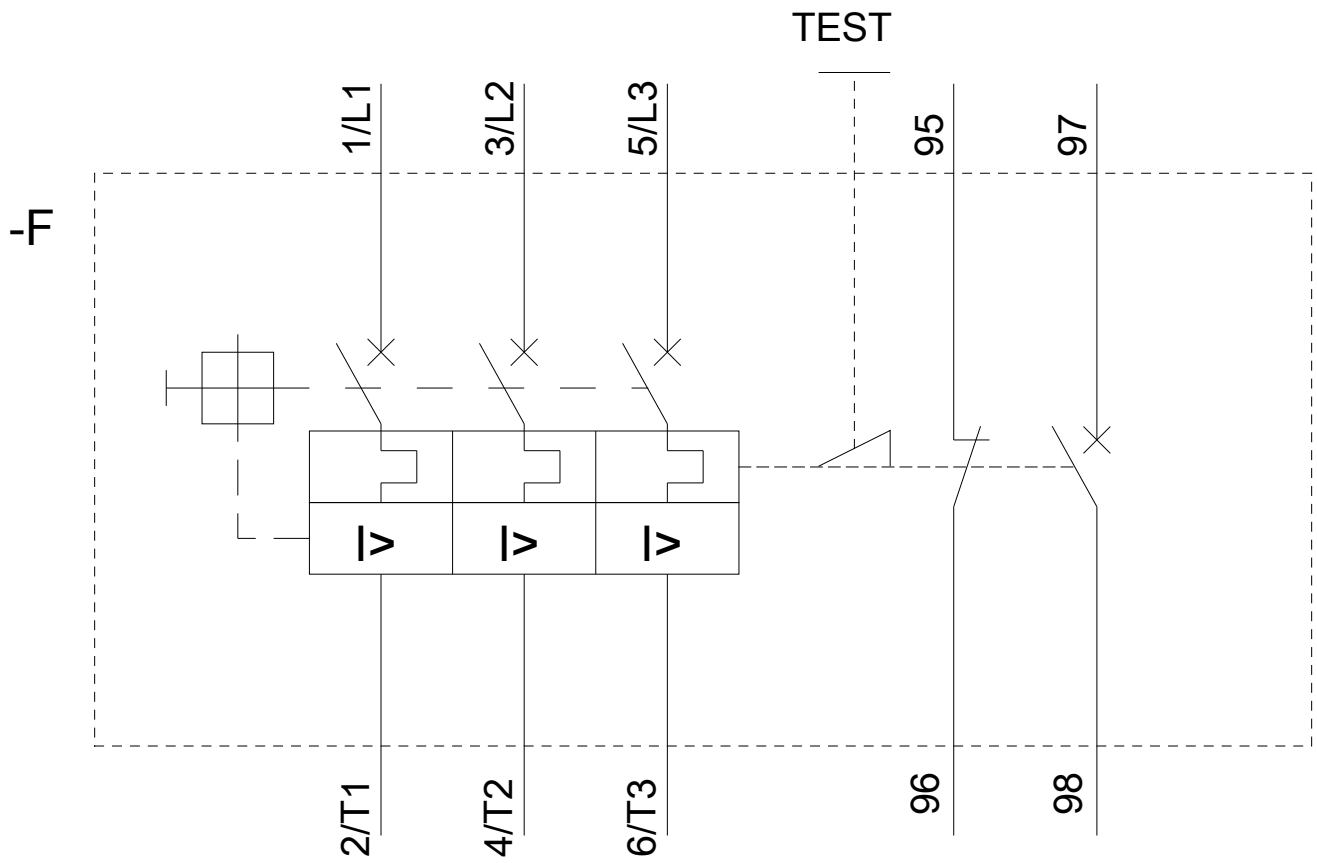
**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2131-4UA10/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2131-4UA10&objecttype=14&gridview=view1>





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