

Siemens  
EcoTech



Circuit breaker size S2 for motor protection, CLASS 10 A-release 12...17 A N-release 260 A screw terminal Standard switching capacity with transverse auxiliary switches 1 NO+1 NC



|                                                                    |                      |
|--------------------------------------------------------------------|----------------------|
| 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                                        | S2                   |
| size of contactor can be combined company-specific                 | S2                   |
| product extension auxiliary switch                                 | Yes                  |
| power loss [W] for rated value of the current                      |                      |
| • at AC in hot operating state                                     | 14.5 W               |
| • at AC in hot operating state per pole                            | 4.8 W                |
| insulation voltage with degree of pollution 3 at AC rated value    | 690 V                |
| surge voltage resistance rated value                               | 6 kV                 |
| shock resistance according to IEC 60068-2-27                       | 25g / 11 ms Sinus    |
| mechanical service life (operating cycles)                         |                      |
| • of the main contacts typical                                     | 50 000               |
| • of auxiliary contacts typical                                    | 50 000               |
| electrical endurance (operating cycles) typical                    | 50 000               |
| reference code according to IEC 81346-2                            | Q                    |
| Substance Prohibitance (Date)                                      | 10/15/2014           |
| SVHC substance name                                                | Lead - 7439-92-1     |
| Weight                                                             | 1.085 kg             |
| 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 %          |
| Environmental footprint                                            |                      |
| Environmental Product Declaration (EPD)                            | Yes                  |
| global warming potential [CO <sub>2</sub> eq] total                | 239.877 kg           |
| global warming potential [CO <sub>2</sub> eq] during manufacturing | 12.8 kg              |
| global warming potential [CO <sub>2</sub> eq] during sales         | 0.477 kg             |
| global warming potential [CO <sub>2</sub> eq] during operation     | 230 kg               |
| global warming potential [CO <sub>2</sub> eq] after end of life    | -3.4 kg              |
| Siemens Eco Profile (SEP)                                          | Siemens EcoTech      |

| Main circuit                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| number of poles for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                            | 3                                                                          |
| adjustable current response value current of the current-dependent overload release                                                                                                                                                                                                                                                                                                                                                                 | 12 ... 17 A                                                                |
| type of voltage for main current circuit                                                                                                                                                                                                                                                                                                                                                                                                            | AC                                                                         |
| operating voltage <ul style="list-style-type: none"> <li>• rated value</li> <li>• at AC-3 rated value maximum</li> <li>• at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                                                                                    | 20 ... 690 V<br>690 V<br>690 V                                             |
| operating frequency rated value                                                                                                                                                                                                                                                                                                                                                                                                                     | 50 ... 60 Hz                                                               |
| operational current rated value                                                                                                                                                                                                                                                                                                                                                                                                                     | 17 A                                                                       |
| operational current <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                       | 17 A<br>17 A                                                               |
| operating power <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> <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> | 4 kW<br>7.5 kW<br>7.5 kW<br>15 kW<br><br>4 kW<br>7.5 kW<br>7.5 kW<br>15 kW |
| operating frequency <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                                                           |
| Auxiliary circuit                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                            |
| design of the auxiliary switch                                                                                                                                                                                                                                                                                                                                                                                                                      | transverse                                                                 |
| type of voltage for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                   | AC/DC                                                                      |
| number of NC contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                        | 1                                                                          |
| number of NO contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                        | 1                                                                          |
| number of CO contacts for auxiliary contacts                                                                                                                                                                                                                                                                                                                                                                                                        | 0                                                                          |
| operational current of auxiliary contacts at AC-15 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 230 V</li> </ul>                                                                                                                                                                                                                                                                                                                  | 2 A<br>0.5 A                                                               |
| operational current of auxiliary contacts at DC-13 <ul style="list-style-type: none"> <li>• at 24 V</li> <li>• at 60 V</li> <li>• at 110 V</li> <li>• at 125 V</li> <li>• at 220 V</li> </ul>                                                                                                                                                                                                                                                       | 1 A<br>0.15 A<br>0 A<br>0 A<br>0 A                                         |
| Protective and monitoring functions                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                            |
| product function <ul style="list-style-type: none"> <li>• ground fault detection</li> <li>• phase failure detection</li> </ul>                                                                                                                                                                                                                                                                                                                      | No<br>Yes                                                                  |
| trip class                                                                                                                                                                                                                                                                                                                                                                                                                                          | CLASS 10                                                                   |
| design of the overload release                                                                                                                                                                                                                                                                                                                                                                                                                      | thermal                                                                    |
| maximum short-circuit current breaking capacity (Icu) <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> </ul>                                                                                                                                                                                              | 100 kA<br>65 kA<br>12 kA<br>5 kA                                           |
| operating short-circuit current breaking capacity (Ics) at AC <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>30 kA<br>6 kA<br>3 kA                                            |
| response value current of instantaneous short-circuit trip unit                                                                                                                                                                                                                                                                                                                                                                                     | 260 A                                                                      |
| UL/CSA ratings                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                            |

|                                                                                                |                                                                                      |
|------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
| <b>full-load current (FLA) for 3-phase AC motor</b>                                            |                                                                                      |
| • at 480 V rated value                                                                         | 17 A                                                                                 |
| • at 600 V rated value                                                                         | 17 A                                                                                 |
| <b>yielded mechanical performance [hp]</b>                                                     |                                                                                      |
| • for single-phase AC motor                                                                    |                                                                                      |
| — at 110/120 V rated value                                                                     | 1.5 hp                                                                               |
| — at 230 V rated value                                                                         | 3 hp                                                                                 |
| • for 3-phase AC motor                                                                         |                                                                                      |
| — at 200/208 V rated value                                                                     | 5 hp                                                                                 |
| — at 220/230 V rated value                                                                     | 7.5 hp                                                                               |
| — at 460/480 V rated value                                                                     | 15 hp                                                                                |
| — at 575/600 V rated value                                                                     | 15 hp                                                                                |
| <b>contact rating of auxiliary contacts according to UL</b>                                    | C300 / R300                                                                          |
| <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</b>                                                                 |                                                                                      |
| • for short-circuit protection of the auxiliary switch required                                | fuse gG: 10 A, miniature circuit breaker C 6 A (short-circuit current $I_k < 400$ A) |
| <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                                                                                     | 100                                                                                  |
| • at 500 V                                                                                     | 80                                                                                   |
| • at 690 V                                                                                     | 63                                                                                   |
| <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>                                                                                  | 140 mm                                                                               |
| <b>width</b>                                                                                   | 55 mm                                                                                |
| <b>depth</b>                                                                                   | 149 mm                                                                               |
| <b>required spacing</b>                                                                        |                                                                                      |
| • with side-by-side mounting at the side                                                       | 0 mm                                                                                 |
| • for grounded parts at 400 V                                                                  |                                                                                      |
| — downwards                                                                                    | 50 mm                                                                                |
| — upwards                                                                                      | 50 mm                                                                                |
| — at the side                                                                                  | 10 mm                                                                                |
| • for live parts at 400 V                                                                      |                                                                                      |
| — downwards                                                                                    | 50 mm                                                                                |
| — upwards                                                                                      | 50 mm                                                                                |
| — at the side                                                                                  | 10 mm                                                                                |
| • for grounded parts at 500 V                                                                  |                                                                                      |
| — downwards                                                                                    | 50 mm                                                                                |
| — upwards                                                                                      | 50 mm                                                                                |
| — at the side                                                                                  | 10 mm                                                                                |
| • for live parts at 500 V                                                                      |                                                                                      |
| — downwards                                                                                    | 50 mm                                                                                |
| — upwards                                                                                      | 50 mm                                                                                |
| — at the side                                                                                  | 10 mm                                                                                |
| • for grounded parts at 690 V                                                                  |                                                                                      |
| — downwards                                                                                    | 50 mm                                                                                |
| — upwards                                                                                      | 50 mm                                                                                |
| — at the side                                                                                  | 10 mm                                                                                |
| • for live parts at 690 V                                                                      |                                                                                      |
| — downwards                                                                                    | 50 mm                                                                                |
| — upwards                                                                                      | 50 mm                                                                                |
| — at the side                                                                                  | 10 mm                                                                                |
| <b>Connections/ Terminals</b>                                                                  |                                                                                      |
| <b>type of electrical connection</b>                                                           |                                                                                      |
| • for main current circuit                                                                     | screw-type terminals                                                                 |
| • for auxiliary and control circuit                                                            | screw-type terminals                                                                 |
| <b>arrangement of electrical connectors for main current</b>                                   | Top and bottom                                                                       |

|                                                                                                                                                 |                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|
| <b>circuit</b>                                                                                                                                  |                                                                       |
| <b>type of connectable conductor cross-sections</b>                                                                                             |                                                                       |
| <ul style="list-style-type: none"> <li>for main contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> </ul> </li> </ul>      | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )        |
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>                                                    | 2x (1 ... 16 mm <sup>2</sup> ), 1x (1 ... 25 mm <sup>2</sup> )        |
| <ul style="list-style-type: none"> <li>for AWG cables for main contacts</li> </ul>                                                              | 2x (18 ... 3), 1x (18 ... 2)                                          |
| <b>type of connectable conductor cross-sections</b>                                                                                             |                                                                       |
| <ul style="list-style-type: none"> <li>for auxiliary contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> </ul> </li> </ul> | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>                                                    | 2x (0.5 ... 1.5 mm <sup>2</sup> ), 2x (0.75 ... 2.5 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>for AWG cables for auxiliary contacts</li> </ul>                                                         | 2x (20 ... 16), 2x (18 ... 14)                                        |
| <b>tightening torque</b>                                                                                                                        |                                                                       |
| <ul style="list-style-type: none"> <li>for main contacts with screw-type terminals</li> </ul>                                                   | 3 ... 4.5 N·m                                                         |
| <ul style="list-style-type: none"> <li>for auxiliary contacts with screw-type terminals</li> </ul>                                              | 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 size 2                                                       |
| <b>design of the thread of the connection screw</b>                                                                                             |                                                                       |
| <ul style="list-style-type: none"> <li>for main contacts</li> </ul>                                                                             | M6                                                                    |
| <ul style="list-style-type: none"> <li>of the auxiliary and control contacts</li> </ul>                                                         | M3                                                                    |
| <b>Safety related data</b>                                                                                                                      |                                                                       |
| product function suitable for safety function                                                                                                   | Yes                                                                   |
| <b>suitability for use</b>                                                                                                                      |                                                                       |
| <ul style="list-style-type: none"> <li>safety-related switching on</li> </ul>                                                                   | No                                                                    |
| <ul style="list-style-type: none"> <li>safety-related switching OFF</li> </ul>                                                                  | Yes                                                                   |
| <b>service life maximum</b>                                                                                                                     | 10 a                                                                  |
| <b>test wear-related service life necessary</b>                                                                                                 | Yes                                                                   |
| <b>proportion of dangerous failures</b>                                                                                                         |                                                                       |
| <ul style="list-style-type: none"> <li>with low demand rate according to SN 31920</li> </ul>                                                    | 40 %                                                                  |
| <ul style="list-style-type: none"> <li>with high demand rate according to SN 31920</li> </ul>                                                   | 50 %                                                                  |
| <b>B10 value with high demand rate according to SN 31920</b>                                                                                    | 5 000                                                                 |
| <b>failure rate [FIT] with low demand rate according to SN 31920</b>                                                                            | 50 FIT                                                                |
| <b>ISO 13849</b>                                                                                                                                |                                                                       |
| <b>device type according to ISO 13849-1</b>                                                                                                     | 3                                                                     |
| <b>overdimensioning according to ISO 13849-2 necessary</b>                                                                                      | Yes                                                                   |
| <b>IEC 61508</b>                                                                                                                                |                                                                       |
| <b>safety device type according to IEC 61508-2</b>                                                                                              | Type A                                                                |
| <b>T1 value</b>                                                                                                                                 |                                                                       |
| <ul style="list-style-type: none"> <li>for proof test interval or service life according to IEC 61508</li> </ul>                                | 10 a                                                                  |
| <b>Electrical Safety</b>                                                                                                                        |                                                                       |
| <b>protection class IP on the front according to IEC 60529</b>                                                                                  | IP20                                                                  |
| <b>touch protection on the front according to IEC 60529</b>                                                                                     | finger-safe, for vertical contact from the front                      |
| <b>Display</b>                                                                                                                                  |                                                                       |
| display version for switching status                                                                                                            | Handle                                                                |
| <b>Approvals Certificates</b>                                                                                                                   |                                                                       |
| <b>General Product Approval</b>                                                                                                                 |                                                                       |



[KC](#)



|                          |                                |                   |                      |
|--------------------------|--------------------------------|-------------------|----------------------|
| General Product Approval | For use in hazardous locations | Test Certificates | Maritime application |
|--------------------------|--------------------------------|-------------------|----------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



|                      |       |
|----------------------|-------|
| Maritime application | other |
|----------------------|-------|



[Miscellaneous](#)

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



[Confirmation](#)



[Special Test Certificate](#)

[Confirmation](#)



|             |
|-------------|
| Environment |
|-------------|



[Environmental Confirmations](#)

|                     |
|---------------------|
| Further information |
|---------------------|

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

Information for data generation and storage

<https://support.industry.siemens.com/cs/ww/en/view/109995012>

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=3RV2031-4TA15>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2031-4TA15>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4TA15>

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

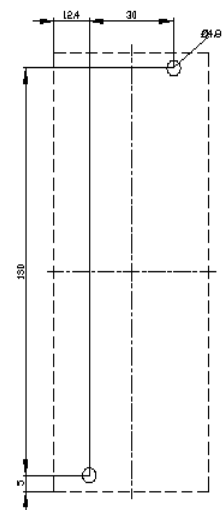
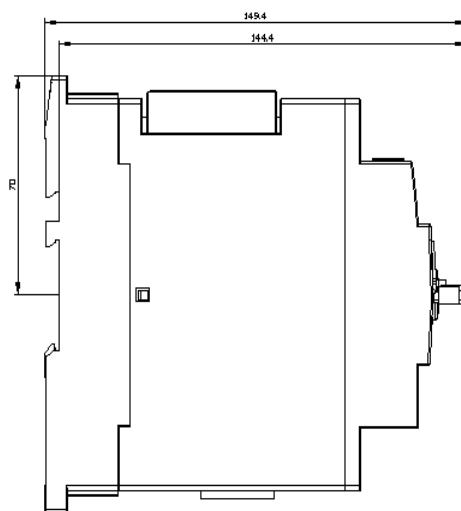
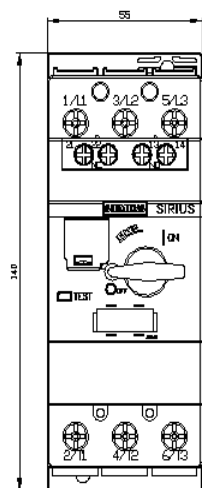
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2031-4TA15&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2031-4TA15&lang=en)

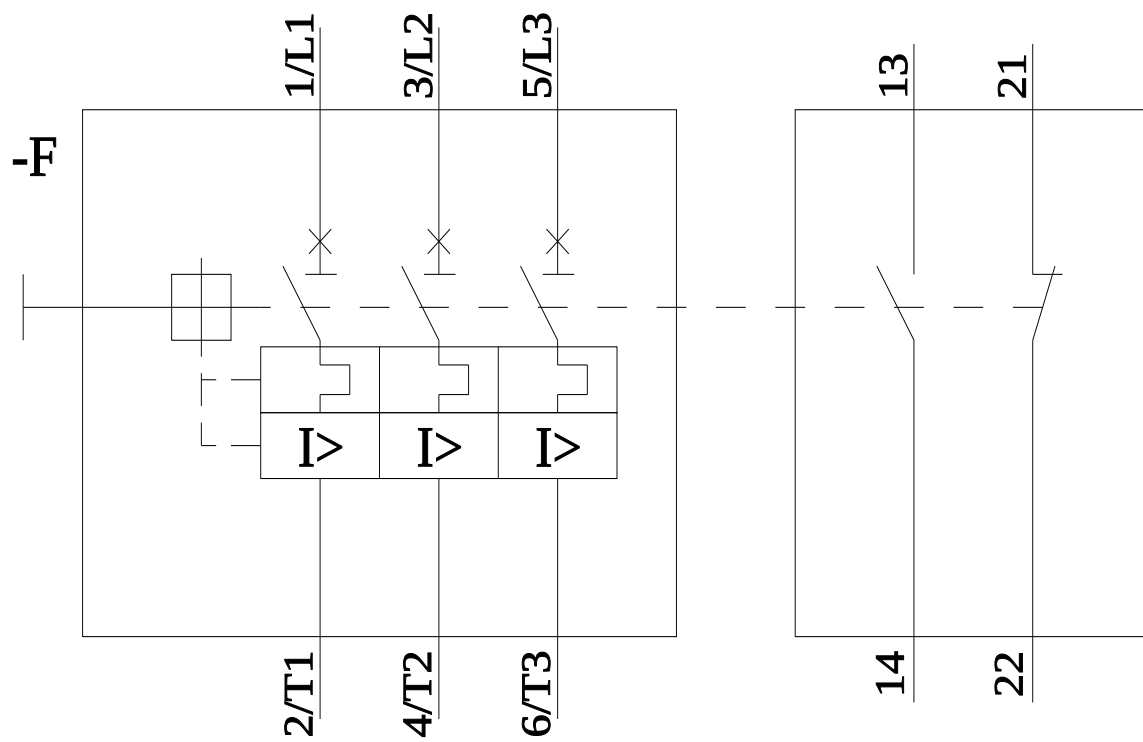
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2031-4TA15/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RV2031-4TA15&objecttype=14&gridview=view1>





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