

Siemens  
EcoTech



Circuit breaker size S2 for motor protection, CLASS 10 A-release 62...73 A N-release 949 A screw terminal increased switching capacity

|                                                                                                |                        |
|------------------------------------------------------------------------------------------------|------------------------|
| product brand name                                                                             | SIRIUS                 |
| product designation                                                                            | Circuit breaker        |
| design of the product                                                                          | For motor protection   |
| product type designation                                                                       | 3RV2                   |
| <b>General technical data</b>                                                                  |                        |
| Product equipment of circuit breaker for motor protection complete unit with protection device | Yes                    |
| size of the circuit-breaker                                                                    | S2                     |
| size of contactor can be combined company-specific                                             | S2                     |
| product function disconnecter functionality                                                    | Yes                    |
| product extension auxiliary switch                                                             | Yes                    |
| power loss [W] for rated value of the current                                                  |                        |
| • at AC in hot operating state                                                                 | 29.5 W                 |
| • at AC in hot operating state per pole                                                        | 9.8 W                  |
| type of calculation of power loss current-dependent                                            | quadratic              |
| insulation voltage with degree of pollution 3 at AC rated value                                | 690 V                  |
| surge voltage resistance rated value                                                           | 6 kV                   |
| maximum permissible voltage for protective separation                                          |                        |
| • in networks with ungrounded star point between main and auxiliary circuit                    | 400 V                  |
| • in networks with grounded star point between main and auxiliary circuit                      | 400 V                  |
| protection class IP                                                                            |                        |
| • on the front according to IEC 60529                                                          | IP20                   |
| • on the front                                                                                 | IP20                   |
| • of the terminal                                                                              | IP00                   |
| shock resistance according to IEC 60068-2-27                                                   | 25 g / 11 ms Sinus     |
| mechanical service life (operating cycles)                                                     |                        |
| • of the main contacts typical                                                                 | 20 000                 |
| • of auxiliary contacts typical                                                                | 20 000                 |
| electrical endurance (operating cycles) typical                                                | 20 000                 |
| reference code according to IEC 81346-2                                                        | Q                      |
| continuous current rated value                                                                 | 73 A                   |
| Substance Prohibitance (day/month/year)                                                        | 03/01/2017             |
| SVHC substance name                                                                            | Lead CAS-No. 7439-92-1 |
| Net Weight                                                                                     | 1.17 kg                |
| <b>Ambient conditions</b>                                                                      |                        |
| 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         |
| temperature compensation                                                                       | -20 ... +60 °C         |
| relative humidity during operation                                                             | 10 ... 95 %            |
| <b>Main circuit</b>                                                                            |                        |
| number of poles for main current circuit                                                       | 3                      |
| adjustable current response value current of the current-dependent overload release            | 62 ... 73 A            |

|                                                                                                |               |
|------------------------------------------------------------------------------------------------|---------------|
| <b>type of voltage for main current circuit</b>                                                | AC            |
| <b>operating voltage</b>                                                                       |               |
| • rated value                                                                                  | 690 V         |
| • rated value                                                                                  | 20 ... 690 V  |
| • at AC-3 rated value maximum                                                                  | 690 V         |
| <b>operating frequency rated value</b>                                                         | 50 ... 60 Hz  |
| <b>operational current rated value</b>                                                         | 73 A          |
| <b>operational current</b>                                                                     |               |
| • at AC-3 at 400 V rated value                                                                 | 73 A          |
| <b>operating power</b>                                                                         |               |
| • at AC-3                                                                                      |               |
| — at 230 V rated value                                                                         | 22 kW         |
| — at 400 V rated value                                                                         | 37 kW         |
| — at 500 V rated value                                                                         | 45 kW         |
| — at 690 V rated value                                                                         | 55 kW         |
| <b>operating frequency</b>                                                                     |               |
| • at AC-3 maximum                                                                              | 15 1/h        |
| <b>Auxiliary circuit</b>                                                                       |               |
| <b>type of voltage for auxiliary and control circuit</b>                                       | AC/DC         |
| <b>number of NC contacts for auxiliary contacts</b>                                            | 0             |
| <b>number of NO contacts for auxiliary contacts</b>                                            | 0             |
| number of CO contacts for auxiliary contacts                                                   | 0             |
| <b>Protective and monitoring functions</b>                                                     |               |
| <b>product function</b>                                                                        |               |
| • ground fault detection                                                                       | No            |
| • phase failure detection                                                                      | Yes           |
| <b>trip class</b>                                                                              | CLASS 10      |
| <b>design of the overload release</b>                                                          | thermal       |
| <b>protection function thermal overload protection (ANSI 49)</b>                               | Yes           |
| <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                                                                   | 100 kA        |
| • at AC at 500 V rated value                                                                   | 10 kA         |
| • at AC at 690 V rated value                                                                   | 6 kA          |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b>                           |               |
| • at 240 V rated value                                                                         | 100 kA        |
| • at 400 V rated value                                                                         | 50 kA         |
| • at 500 V rated value                                                                         | 8 kA          |
| • at 690 V rated value                                                                         | 4 kA          |
| response value current of instantaneous short-circuit trip unit                                | 949 A         |
| <b>UL/CSA ratings</b>                                                                          |               |
| <b>full-load current (FLA) for 3-phase AC motor</b>                                            |               |
| • at 480 V rated value                                                                         | 65 A          |
| • at 600 V rated value                                                                         | 62 A          |
| <b>yielded mechanical performance [hp]</b>                                                     |               |
| • for 3-phase AC motor                                                                         |               |
| — at 200/208 V rated value                                                                     | 20 hp         |
| — at 220/230 V rated value                                                                     | 25 hp         |
| — at 460/480 V rated value                                                                     | 50 hp         |
| — at 575/600 V rated value                                                                     | 60 hp         |
| <b>Short-circuit protection</b>                                                                |               |
| <b>product function short circuit protection</b>                                               | Yes           |
| <b>design of the short-circuit trip</b>                                                        | magnetic      |
| <b>design of the fuse link for IT network for short-circuit protection of the main circuit</b> |               |
| • at 240 V                                                                                     | none required |
| • at 400 V                                                                                     | 160           |
| • at 500 V                                                                                     | 125           |
| • at 690 V                                                                                     | 100           |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| certificate of suitability according to ATEX directive 2014/34/EU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | DMT 02 ATEX F 001                                                                                                                                                                                                                                                |
| type of protection according to ATEX directive 2014/34/EU                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Ex II (2) GD                                                                                                                                                                                                                                                     |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                                  |
| mounting position                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | any                                                                                                                                                                                                                                                              |
| fastening method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                                                                                                                                                                                         |
| Mounting method of circuit breaker for Transformer protection, Generator protection and system protection optional standard bar mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Yes                                                                                                                                                                                                                                                              |
| height                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 140 mm                                                                                                                                                                                                                                                           |
| width                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 55 mm                                                                                                                                                                                                                                                            |
| depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 149 mm                                                                                                                                                                                                                                                           |
| required spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for live parts at 400 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for live parts at 500 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for grounded parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— at the side</li> </ul> </li> </ul> | 0 mm<br>0 mm<br>50 mm<br>50 mm<br>0 mm<br><br>0 mm<br>0 mm<br>50 mm<br>10 mm<br>50 mm<br><br>0 mm<br>0 mm<br>50 mm<br>50 mm<br>10 mm<br><br>50 mm<br>50 mm<br>10 mm<br><br>50 mm<br>50 mm<br>10 mm<br><br>50 mm<br>50 mm<br>10 mm<br><br>50 mm<br>50 mm<br>10 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                  |
| product component removable terminal for auxiliary and control circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | No                                                                                                                                                                                                                                                               |
| type of electrical connection                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                                  |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | screw-type terminals                                                                                                                                                                                                                                             |
| arrangement of electrical connectors for main current                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 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 ... 35 mm <sup>2</sup> ), 1x (1 ... 50 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>— finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                        | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> ) |
| <ul style="list-style-type: none"> <li>for AWG cables for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                  | 2x (18 ... 2), 1x (18 ... 1)                                   |
| <b>connectable conductor cross-section for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                |
| <ul style="list-style-type: none"> <li>solid or stranded</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                 | 1 ... 50 mm <sup>2</sup>                                       |
| <ul style="list-style-type: none"> <li>finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                          | 1 ... 35 mm <sup>2</sup>                                       |
| <b>AWG number as coded connectable conductor cross section for main contacts</b>                                                                                                                                                                                                                                                                                                                                                                                                    | 18 ... 1                                                       |
| <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                                                  |
| <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                                                             |
| <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>Environmental Product Declaration</b>                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                |
| <ul style="list-style-type: none"> <li>global warming potential [CO<sub>2</sub> eq] / during manufacturing</li> </ul>                                                                                                                                                                                                                                                                                                                                                               | 12.8 kg                                                        |
| <ul style="list-style-type: none"> <li>global warming potential [CO<sub>2</sub> eq] / during sales</li> </ul>                                                                                                                                                                                                                                                                                                                                                                       | 0.477 kg                                                       |
| <ul style="list-style-type: none"> <li>global warming potential [CO<sub>2</sub> eq] / during operation</li> </ul>                                                                                                                                                                                                                                                                                                                                                                   | 230 kg                                                         |
| <ul style="list-style-type: none"> <li>global warming potential [CO<sub>2</sub> eq] / after end of life</li> </ul>                                                                                                                                                                                                                                                                                                                                                                  | -3.4 kg                                                        |
| <ul style="list-style-type: none"> <li>global warming potential [CO<sub>2</sub> eq] / total</li> </ul>                                                                                                                                                                                                                                                                                                                                                                              | 239.877 kg                                                     |
| <b>Environment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>General Product Approval</b>                                |
| <a href="#">Environmental Conformations</a>      |                                                                |
| <b>General Product Approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>For use in hazardous locations</b>                          |



| For use in hazardous locations | Test Certificates | Maritime application |
|--------------------------------|-------------------|----------------------|
|--------------------------------|-------------------|----------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Miscellaneous](#)

[Confirmation](#)

[Miscellaneous](#)



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

[Confirmation](#)

[Special Test Certificate](#)

| 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=3RV2032-4KA10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2032-4KA10>

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

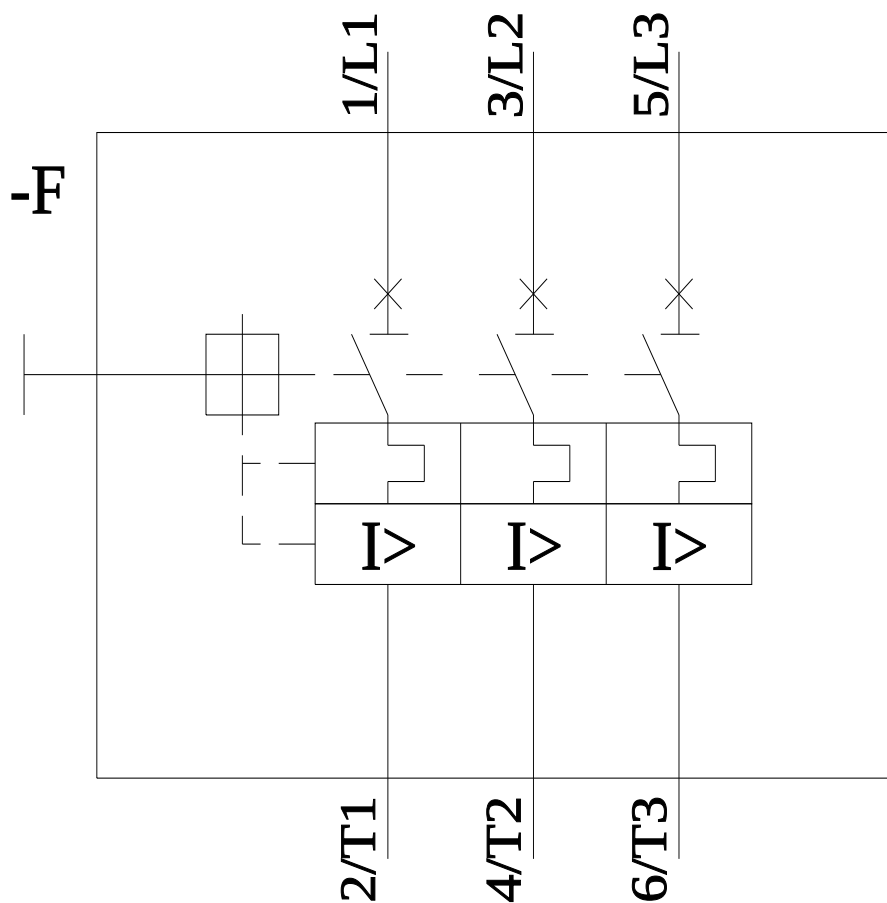
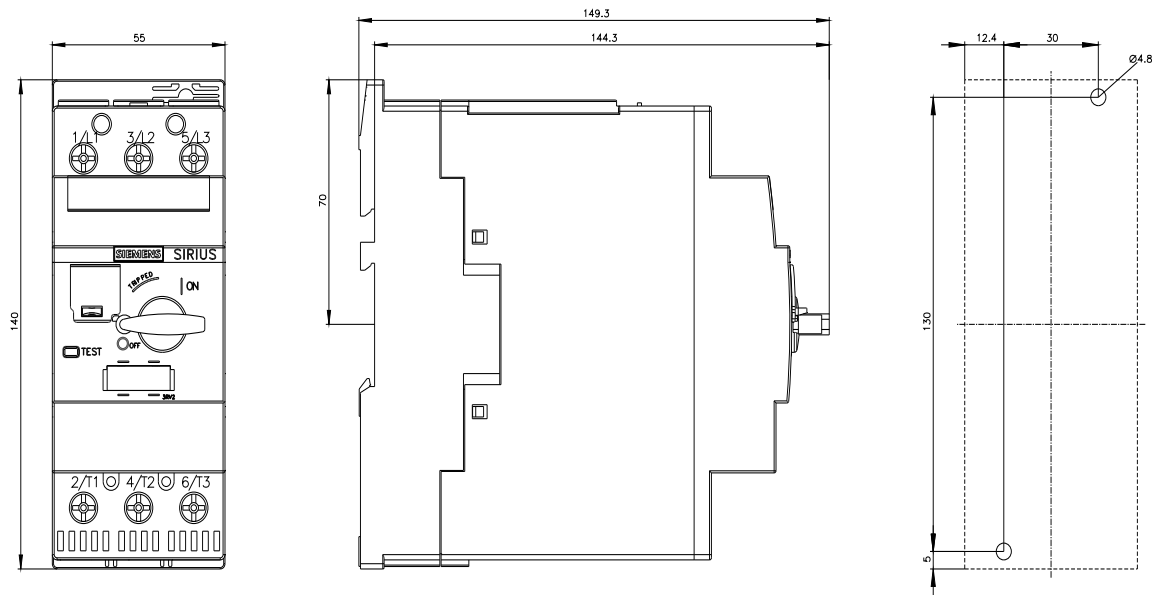
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2032-4KA10&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2032-4KA10&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2032-4KA10>

Characteristic curves

[https://curves.simaris.siemens.com/curves/<mmp\\_prod\\_noCOMP='HAUPT'></mmp\\_prod\\_no>](https://curves.simaris.siemens.com/curves/<mmp_prod_noCOMP='HAUPT'></mmp_prod_no>)



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