

Siemens  
EcoTech



circuit breaker frame size S00 for system protection with approval circuit breaker UL 489, CSA C22.2 no. 5-02 thermal overload release 0.16 A short-circuit release 2.1 A screw terminal standard switching capacity

|                                                                                                |                                                           |
|------------------------------------------------------------------------------------------------|-----------------------------------------------------------|
| product brand name                                                                             | SIRIUS                                                    |
| product designation                                                                            | Circuit breaker                                           |
| design of the product                                                                          | For system protection according to UL 489/CSA C22.2 No. 5 |
| 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                                                                    | S00                                                       |
| 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                                                                 | 5.5 W                                                     |
| • at AC in hot operating state per pole                                                        | 1.8 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 (rectangular impulse and sine pulse)         |
| mechanical service life (operating cycles)                                                     |                                                           |
| • of the main contacts typical                                                                 | 100 000                                                   |
| • of auxiliary contacts typical                                                                | 100 000                                                   |
| electrical endurance (operating cycles) typical                                                | 100 000                                                   |
| reference code according to IEC 81346-2                                                        | Q                                                         |
| continuous current rated value                                                                 | 0.16 A                                                    |
| Substance Prohibitance (day/month/year)                                                        | 10/01/2009                                                |
| SVHC substance name                                                                            | Lead CAS-No. 7439-92-1                                    |
| Net Weight                                                                                     | 425 g                                                     |
| <b>Ambient conditions</b>                                                                      |                                                           |
| installation altitude at height above sea level maximum                                        | 2 000 m                                                   |

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| <b>ambient temperature</b>                                           |                |
| • during operation                                                   | -20 ... +60 °C |
| • during storage                                                     | -50 ... +80 °C |
| • during transport                                                   | -50 ... +80 °C |
| <b>temperature compensation</b>                                      | -20 ... +60 °C |
| relative humidity during operation                                   | 10 ... 95 %    |
| <b>Main circuit</b>                                                  |                |
| <b>number of poles for main current circuit</b>                      | 3              |
| <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          |
| • at AC-3e rated value maximum                                       | 690 V          |
| <b>operating frequency rated value</b>                               | 50 ... 60 Hz   |
| <b>operational current rated value</b>                               | 0.16 A         |
| <b>operational current</b>                                           |                |
| • at AC-3 at 400 V rated value                                       | 0.16 A         |
| • at AC-3e at 400 V rated value                                      | 0.16 A         |
| <b>operating power</b>                                               |                |
| • at AC-3                                                            |                |
| — at 230 V rated value                                               | 0 kW           |
| — at 400 V rated value                                               | 0 kW           |
| — at 500 V rated value                                               | 0.1 kW         |
| — at 690 V rated value                                               | 0.1 kW         |
| • at AC-3e                                                           |                |
| — at 230 V rated value                                               | 0 kW           |
| — at 400 V rated value                                               | 0 kW           |
| — at 500 V rated value                                               | 0.1 kW         |
| — at 690 V rated value                                               | 0.1 kW         |
| <b>operating frequency</b>                                           |                |
| • at AC-3 maximum                                                    | 15 1/h         |
| • at AC-3e 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                                            | No             |
| <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                                         | 100 kA         |
| • at AC at 690 V rated value                                         | 100 kA         |
| • at 480 AC Y/277 V according to UL 489 rated value                  | 65 kA          |
| <b>operating short-circuit current breaking capacity (Ics) at AC</b> |                |
| • at 240 V rated value                                               | 100 kA         |
| • at 400 V rated value                                               | 100 kA         |
| • at 500 V rated value                                               | 100 kA         |
| • at 690 V rated value                                               | 100 kA         |
| response value current of instantaneous short-circuit trip unit      | 2.1 A          |
| <b>Short-circuit protection</b>                                      |                |
| <b>product function short circuit protection</b>                     | Yes            |
| <b>design of the short-circuit trip</b>                              | magnetic       |

| Installation/ mounting/ dimensions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 144 mm                                                                                                                                                                              |
| width                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 45 mm                                                                                                                                                                               |
| depth                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 97 mm                                                                                                                                                                               |
| required spacing                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <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>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> <li>• for live parts at 690 V <ul style="list-style-type: none"> <li>— downwards</li> <li>— upwards</li> <li>— backwards</li> <li>— at the side</li> <li>— forwards</li> </ul> </li> </ul> | 30 mm<br>30 mm<br>30 mm<br><br>30 mm<br>30 mm<br>30 mm<br><br>30 mm<br>30 mm<br>30 mm<br><br>70 mm<br>70 mm<br>0 mm<br>30 mm<br>0 mm<br><br>70 mm<br>70 mm<br>0 mm<br>30 mm<br>0 mm |
| Connections/ Terminals                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                     |
| 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 circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Top and bottom                                                                                                                                                                      |
| type of connectable conductor cross-sections                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 1 ... 10 mm <sup>2</sup> , max. 2x 10 mm <sup>2</sup><br>1 ... 16 mm <sup>2</sup> , max. 6 + 16 mm <sup>2</sup><br>2x (14 ... 10)                                                   |
| connectable conductor cross-section for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 1 ... 10 mm <sup>2</sup><br>1 ... 16 mm <sup>2</sup>                                                                                                                                |
| AWG number as coded connectable conductor cross section for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 14 ... 10                                                                                                                                                                           |
| tightening torque                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>• for main contacts with screw-type terminals</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 2.5 ... 3 N·m                                                                                                                                                                       |
| design of screwdriver shaft                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Diameter 5 to 6 mm                                                                                                                                                                  |
| size of the screwdriver tip                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Pozidriv size 2                                                                                                                                                                     |
| design of the thread of the connection screw                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                     |

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • for main contacts                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | M4                                                                                                                                                                             |
| <b>Safety related data</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                |
| product function suitable for safety function                                                                                                                                                                                                                                                                                                                                                                                                                                       | Yes                                                                                                                                                                            |
| <b>suitability for use</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                                                                |
| • safety-related switching on                                                                                                                                                                                                                                                                                                                                                                                                                                                       | No                                                                                                                                                                             |
| • safety-related switching OFF                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Yes                                                                                                                                                                            |
| <b>service life maximum</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 10 a                                                                                                                                                                           |
| <b>test wear-related service life necessary</b>                                                                                                                                                                                                                                                                                                                                                                                                                                     | Yes                                                                                                                                                                            |
| <b>proportion of dangerous failures</b>                                                                                                                                                                                                                                                                                                                                                                                                                                             |                                                                                                                                                                                |
| • with low demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                        | 40 %                                                                                                                                                                           |
| • with high demand rate according to SN 31920                                                                                                                                                                                                                                                                                                                                                                                                                                       | 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>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                |
| • for proof test interval or service life according to IEC 61508                                                                                                                                                                                                                                                                                                                                                                                                                    | 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>                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                |
| • global warming potential [CO2 eq] / during manufacturing                                                                                                                                                                                                                                                                                                                                                                                                                          | 1.98 kg                                                                                                                                                                        |
| • global warming potential [CO2 eq] / during sales                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0.134 kg                                                                                                                                                                       |
| • global warming potential [CO2 eq] / during operation                                                                                                                                                                                                                                                                                                                                                                                                                              | 72.7 kg                                                                                                                                                                        |
| • global warming potential [CO2 eq] / after end of life                                                                                                                                                                                                                                                                                                                                                                                                                             | -0.116 kg                                                                                                                                                                      |
| • global warming potential [CO2 eq] / total                                                                                                                                                                                                                                                                                                                                                                                                                                         | 74.698 kg                                                                                                                                                                      |
| <b>Environment</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>General Product Approval</b>                                                                                                                                                |
| <a href="#">Environmental Confirmations</a>      |                                                                                                                                                                                |
| <b>General Product Approval</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <b>Test Certificates</b>                                                                                                                                                       |
|                                                                                                                                         | <a href="#">Type Test Certificates/Test Report</a> <a href="#">Special Test Certificate</a>                                                                                    |
| <b>Maritime application</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <b>other</b>                                                                                                                                                                   |
|                                                                                                                                                                                                                                                                                                               | <a href="#">Miscellaneous</a> <a href="#">Confirmation</a> <a href="#">Miscellaneous</a>  |
| <b>Railway</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                                                                                                                                                                |
| <a href="#">Special Test Certificate</a>                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                                                                                                                                                                |

## 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=3RV2711-0AD10>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RV2711-0AD10>

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

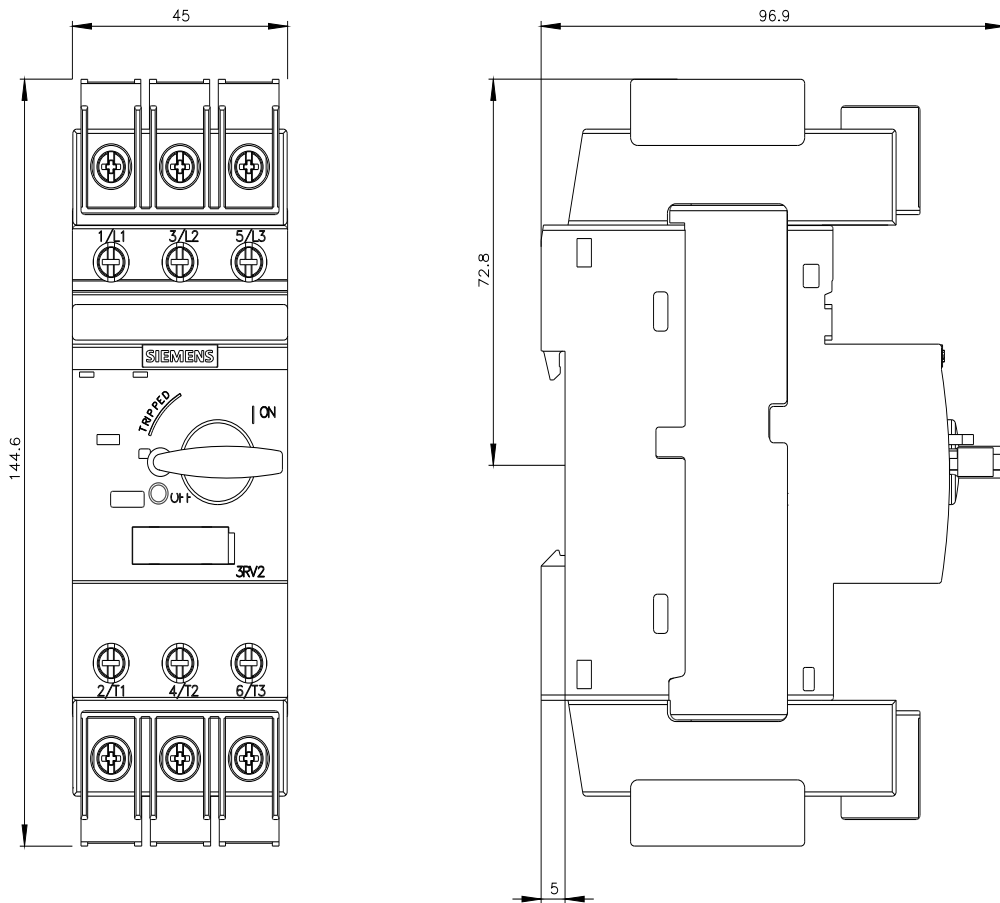
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RV2711-0AD10&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RV2711-0AD10&lang=en)

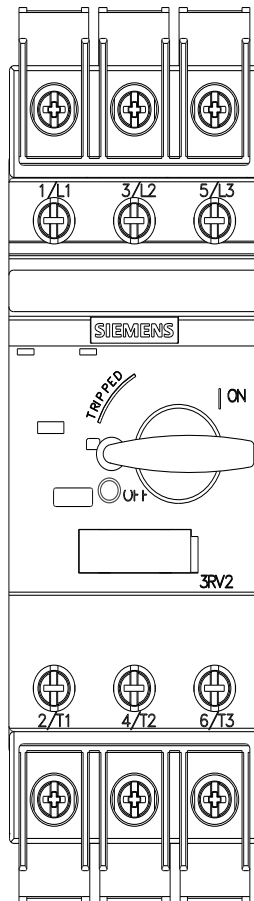
### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RV2711-0AD10>

### 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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