



contactor AC-1, 60 A, 400 V / 40 °C, 4-pole, 48 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S2

|                                                                               |                               |
|-------------------------------------------------------------------------------|-------------------------------|
| product brand name                                                            | SIRIUS                        |
| product designation                                                           | Contactor                     |
| product type designation                                                      | 3RT23                         |
| <b>General technical data</b>                                                 |                               |
| size of contactor                                                             | S2                            |
| product extension                                                             |                               |
| • function module for communication                                           | No                            |
| • auxiliary switch                                                            | Yes                           |
| power loss [W] for rated value of the current                                 |                               |
| • at AC in hot operating state                                                | 12.8 W                        |
| • at AC in hot operating state per pole                                       | 3.2 W                         |
| • without load current share typical                                          | 6.4 W                         |
| type of calculation of power loss current-dependent                           | quadratic                     |
| insulation voltage                                                            |                               |
| • of main circuit with degree of pollution 3 rated value                      | 690 V                         |
| • of the auxiliary and control circuit with degree of pollution 3 rated value | 690 V                         |
| surge voltage resistance                                                      |                               |
| • of main circuit rated value                                                 | 6 kV                          |
| • of auxiliary circuit rated value                                            | 6 kV                          |
| shock resistance at rectangular impulse                                       |                               |
| • at AC                                                                       | 11.8 g / 5 ms, 7.4 g / 10 ms  |
| shock resistance with sine pulse                                              |                               |
| • at AC                                                                       | 18.5 g / 5 ms, 11.6 g / 10 ms |
| mechanical service life (operating cycles)                                    |                               |
| • of contactor typical                                                        | 10 000 000                    |
| • of the contactor with added auxiliary switch block typical                  | 10 000 000                    |
| reference code according to IEC 81346-2                                       | Q                             |
| Substance Prohibition (day/month/year)                                        | 10/01/2014                    |
| Net Weight                                                                    | 1.135 kg                      |
| <b>Ambient conditions</b>                                                     |                               |
| installation altitude at height above sea level maximum                       | 2 000 m                       |
| ambient temperature                                                           |                               |
| • during operation                                                            | -25 ... +60 °C                |
| • during storage                                                              | -55 ... +80 °C                |
| relative humidity minimum                                                     | 10 %                          |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum                | 95 %                          |
| <b>Main circuit</b>                                                           |                               |

|                                                                   |                    |
|-------------------------------------------------------------------|--------------------|
| <b>number of poles for main current circuit</b>                   | 4                  |
| <b>number of NO contacts for main contacts</b>                    | 4                  |
| <b>type of voltage for main current circuit</b>                   | AC                 |
| <b>operational current</b>                                        |                    |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value       | 60 A               |
| • at AC-1                                                         |                    |
| — up to 690 V at ambient temperature 40 °C rated value            | 60 A               |
| — up to 690 V at ambient temperature 60 °C rated value            | 55 A               |
| • at AC-3                                                         |                    |
| — at 400 V rated value                                            | 38 A               |
| minimum cross-section in main circuit at maximum AC-1 rated value | 16 mm <sup>2</sup> |
| <b>operational current</b>                                        |                    |
| • <b>at 1 current path at DC-1</b>                                |                    |
| — at 24 V rated value                                             | 55 A               |
| — at 60 V rated value                                             | 23 A               |
| — at 110 V rated value                                            | 4.5 A              |
| — at 220 V rated value                                            | 1 A                |
| — at 440 V rated value                                            | 0.4 A              |
| • <b>with 2 current paths in series at DC-1</b>                   |                    |
| — at 24 V rated value                                             | 55 A               |
| — at 60 V rated value                                             | 55 A               |
| — at 110 V rated value                                            | 45 A               |
| — at 220 V rated value                                            | 5 A                |
| — at 440 V rated value                                            | 1 A                |
| • <b>with 3 current paths in series at DC-1</b>                   |                    |
| — at 24 V rated value                                             | 55 A               |
| — at 60 V rated value                                             | 55 A               |
| — at 110 V rated value                                            | 55 A               |
| — at 220 V rated value                                            | 45 A               |
| — at 440 V rated value                                            | 2.9 A              |
| • <b>at 1 current path at DC-3 at DC-5</b>                        |                    |
| — at 24 V rated value                                             | 20 A               |
| — at 60 V rated value                                             | 5 A                |
| — at 110 V rated value                                            | 2.5 A              |
| — at 220 V rated value                                            | 1 A                |
| — at 440 V rated value                                            | 0.1 A              |
| • <b>with 2 current paths in series at DC-3 at DC-5</b>           |                    |
| — at 24 V rated value                                             | 45 A               |
| — at 60 V rated value                                             | 45 A               |
| — at 110 V rated value                                            | 25 A               |
| — at 220 V rated value                                            | 5 A                |
| — at 440 V rated value                                            | 0.27 A             |
| • <b>with 3 current paths in series at DC-3 at DC-5</b>           |                    |
| — at 24 V rated value                                             | 45 A               |
| — at 60 V rated value                                             | 45 A               |
| — at 110 V rated value                                            | 45 A               |
| — at 220 V rated value                                            | 25 A               |
| — at 440 V rated value                                            | 0.6 A              |
| <b>no-load switching frequency</b>                                |                    |
| • at AC                                                           | 5 000 1/h          |
| <b>operating frequency</b>                                        |                    |
| • at AC-1 maximum                                                 | 700 1/h            |
| <b>Control circuit/ Control</b>                                   |                    |
| <b>type of voltage</b>                                            | AC                 |
| <b>type of voltage of the control supply voltage</b>              | AC                 |
| <b>control supply voltage at AC</b>                               |                    |

|                                                                                                                                                                                                                                                                       |                                                   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> <li>• at 60 Hz rated value</li> </ul>                                                                                                                                                              | 48 V<br>48 V                                      |
| <b>operating range factor control supply voltage rated value of magnet coil at AC</b>                                                                                                                                                                                 |                                                   |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                      | 0.8 ... 1.1<br>0.85 ... 1.1                       |
| <b>apparent pick-up power of magnet coil at AC</b>                                                                                                                                                                                                                    |                                                   |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                      | 210 VA<br>188 VA                                  |
| <b>inductive power factor with closing power of the coil</b>                                                                                                                                                                                                          |                                                   |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                      | 0.69<br>0.65                                      |
| <b>apparent holding power of magnet coil at AC</b>                                                                                                                                                                                                                    |                                                   |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                      | 17.2 VA<br>16.5 VA                                |
| <b>inductive power factor with the holding power of the coil</b>                                                                                                                                                                                                      |                                                   |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> <li>• at 60 Hz</li> </ul>                                                                                                                                                                                      | 0.36<br>0.39                                      |
| <b>closing delay</b>                                                                                                                                                                                                                                                  |                                                   |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                             | 10 ... 80 ms                                      |
| <b>opening delay</b>                                                                                                                                                                                                                                                  |                                                   |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                                                                                                                                                                             | 10 ... 18 ms                                      |
| <b>arcing time</b>                                                                                                                                                                                                                                                    | 10 ... 20 ms                                      |
| <b>control version of the switch operating mechanism</b>                                                                                                                                                                                                              | Standard A1 - A2                                  |
| <b>Auxiliary circuit</b>                                                                                                                                                                                                                                              |                                                   |
| <b>number of NC contacts for auxiliary contacts</b>                                                                                                                                                                                                                   | 1                                                 |
| <ul style="list-style-type: none"> <li>• attachable</li> <li>• instantaneous contact</li> </ul>                                                                                                                                                                       | 2<br>1                                            |
| <b>number of NO contacts for auxiliary contacts</b>                                                                                                                                                                                                                   | 1                                                 |
| <ul style="list-style-type: none"> <li>• attachable</li> <li>• instantaneous contact</li> </ul>                                                                                                                                                                       | 2<br>1                                            |
| operational current at AC-12 maximum                                                                                                                                                                                                                                  | 10 A                                              |
| <b>operational current at AC-15</b>                                                                                                                                                                                                                                   |                                                   |
| <ul style="list-style-type: none"> <li>• at 230 V rated value</li> <li>• at 400 V rated value</li> <li>• at 500 V rated value</li> <li>• at 690 V rated value</li> </ul>                                                                                              | 10 A<br>3 A<br>2 A<br>1 A                         |
| <b>operational current at DC-12</b>                                                                                                                                                                                                                                   |                                                   |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 60 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul> | 10 A<br>6 A<br>6 A<br>3 A<br>2 A<br>1 A<br>0.15 A |
| <b>operational current at DC-13</b>                                                                                                                                                                                                                                   |                                                   |
| <ul style="list-style-type: none"> <li>• at 24 V rated value</li> <li>• at 48 V rated value</li> <li>• at 110 V rated value</li> <li>• at 125 V rated value</li> <li>• at 220 V rated value</li> <li>• at 600 V rated value</li> </ul>                                | 10 A<br>2 A<br>1 A<br>0.9 A<br>0.3 A<br>0.1 A     |
| <b>contact reliability of auxiliary contacts</b>                                                                                                                                                                                                                      | 1 faulty switching per 100 million (17 V, 1 mA)   |
| <b>UL/CSA ratings</b>                                                                                                                                                                                                                                                 |                                                   |
| <b>contact rating of auxiliary contacts according to UL</b>                                                                                                                                                                                                           | A600 / P600                                       |
| <b>Short-circuit protection</b>                                                                                                                                                                                                                                       |                                                   |
| design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V                                                                                                                                                             | C characteristic: 10 A; 0.4 kA                    |
| <b>design of the fuse link</b>                                                                                                                                                                                                                                        |                                                   |

- for short-circuit protection of the main circuit
  - with type of coordination 1 required
  - with type of coordination 2 required
- for short-circuit protection of the auxiliary switch required

gG: 160 A (690 V, 100 kA)  
 gG: 63 A (690 V, 100 kA)  
 gG: 10 A (690 V, 1 kA)

#### Installation/ mounting/ dimensions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| fastening method side-by-side mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Yes                                                                                                                                  |
| <b>fastening method</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715                                                             |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 114 mm                                                                                                                               |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 75 mm                                                                                                                                |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 130 mm                                                                                                                               |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting               <ul style="list-style-type: none"> <li>— forwards</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>— 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>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | 10 mm<br>10 mm<br>10 mm<br>0 mm<br><br>10 mm<br>10 mm<br>6 mm<br>10 mm<br><br>10 mm<br>10 mm<br>10 mm<br>6 mm                        |

#### Connections/ Terminals

|                                                                                                                                                                                                                                                                                       |                                                                                                                                                                             |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>type of electrical connection</b>                                                                                                                                                                                                                                                  |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control circuit</li> <li>• at contactor for auxiliary contacts</li> <li>• of magnet coil</li> </ul>                                                                                    | screw-type terminals<br>screw-type terminals<br>Screw-type terminals<br>screw terminal                                                                                      |
| <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> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for main contacts</li> </ul>                            | 2x (1 ... 35 mm²), 1x (1 ... 50 mm²)<br>2x (1 ... 25 mm²), 1x (1 ... 35 mm²)<br>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> <li>• finely stranded with core end processing</li> </ul>                                                                                                                                                             | 1 ... 50 mm²<br>1 ... 35 mm²                                                                                                                                                |
| <b>connectable conductor cross-section for auxiliary contacts</b>                                                                                                                                                                                                                     |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• solid or stranded</li> <li>• finely stranded with core end processing</li> <li>• finely stranded without core end processing</li> </ul>                                                                                                      | 0.5 ... 2.5 mm²<br>0.5 ... 2.5 mm²<br>0.5 ... 2.5 mm²                                                                                                                       |
| <b>type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                   |                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts               <ul style="list-style-type: none"> <li>— solid</li> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul> </li> <li>• for AWG cables for auxiliary contacts</li> </ul> | 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)<br>2x (20 ... 16), 2x (18 ... 14) |
| <b>AWG number as coded connectable conductor cross section for main contacts</b>                                                                                                                                                                                                      | 18 ... 1                                                                                                                                                                    |
| <b>AWG number as coded connectable conductor cross section for auxiliary contacts</b>                                                                                                                                                                                                 | 20 ... 14                                                                                                                                                                   |

#### Safety related data

|                                                                                                                                                                 |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|
| <b>product function</b>                                                                                                                                         |           |
| <ul style="list-style-type: none"> <li>• mirror contact according to IEC 60947-4-1</li> <li>• positively driven operation according to IEC 60947-5-1</li> </ul> | Yes<br>No |

|                                                                                                                                                                                                                                                                                            |                                                  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------|
| Electrical Safety                                                                                                                                                                                                                                                                          |                                                  |
| protection class IP on the front according to IEC 60529                                                                                                                                                                                                                                    | IP20                                             |
| touch protection on the front according to IEC 60529                                                                                                                                                                                                                                       | finger-safe, for vertical contact from the front |
| Communication/ Protocol                                                                                                                                                                                                                                                                    |                                                  |
| product function bus communication                                                                                                                                                                                                                                                         | No                                               |
| Approvals Certificates                                                                                                                                                                                                                                                                     |                                                  |
| Environmental Product Declaration                                                                                                                                                                                                                                                          |                                                  |
| <ul style="list-style-type: none"> <li>global warming potential [CO2 eq] / during manufacturing</li> <li>global warming potential [CO2 eq] / during operation</li> <li>global warming potential [CO2 eq] / after end of life</li> <li>global warming potential [CO2 eq] / total</li> </ul> | 4.83 kg<br>297 kg<br>-0.64 kg<br>302 kg          |
| Environment                                                                                                                                                                                                                                                                                | General Product Approval                         |

[Environmental Confirmations](#)



|                          |     |                   |                      |
|--------------------------|-----|-------------------|----------------------|
| General Product Approval | EMV | Test Certificates | Maritime application |
|--------------------------|-----|-------------------|----------------------|



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



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



[Confirmation](#)

|       |         |                 |
|-------|---------|-----------------|
| other | Railway | Dangerous goods |
|-------|---------|-----------------|



[Special Test Certificate](#)

[Transport Information](#)

#### 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=3RT2336-1AH20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2336-1AH20>

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

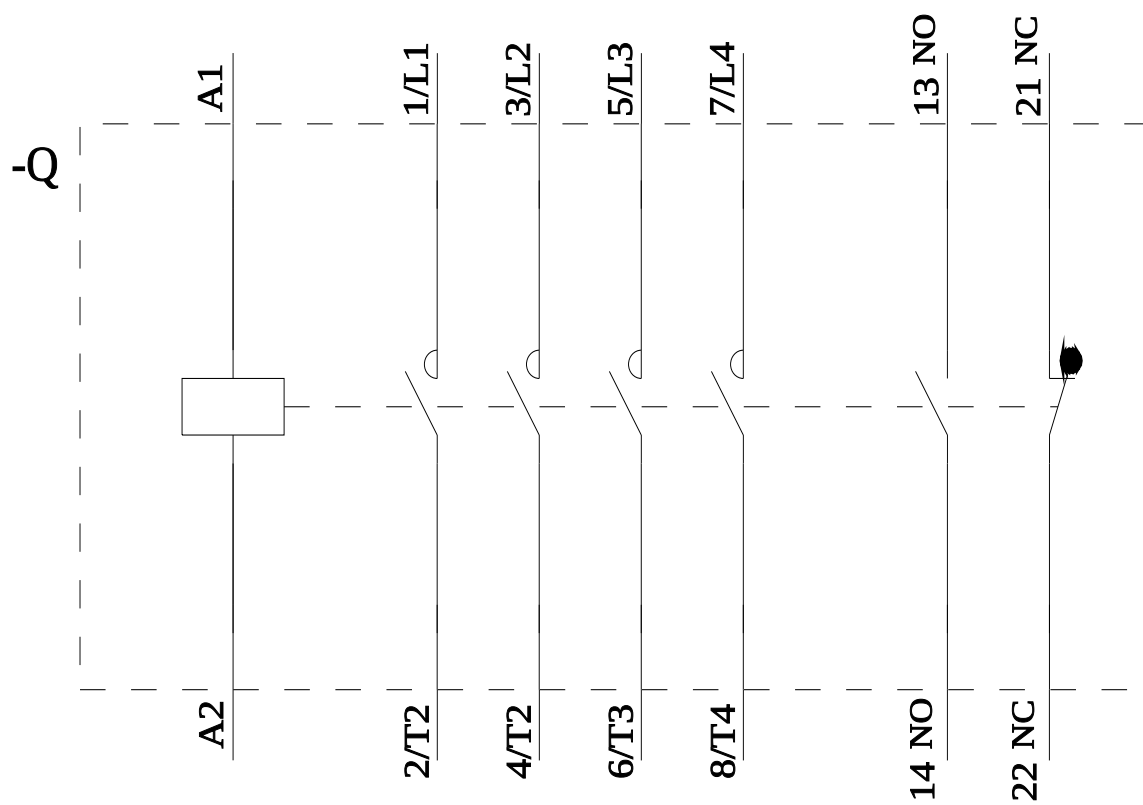
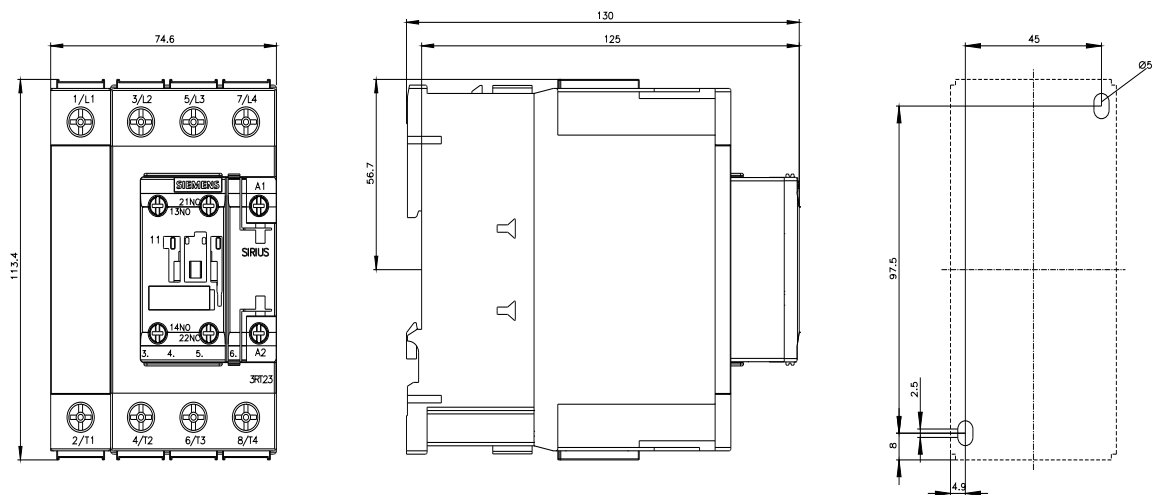
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RT2336-1AH20&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2336-1AH20&lang=en)

Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2336-1AH20>

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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