



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 9.00...12.5 A 230 V AC screw terminal for 60 mm busbar systems (also fulfills type of coordination 1)  
Type of coordination 2, I<sub>q</sub> = 150 kA 1 NO+1 NC (contactor)

|  |  |
|--|--|
| <b>product brand name</b>  | SIRIUS   |
| <b>product designation</b>   | Direct (on-line) starter   |
| <b>design of the product</b>   | for 60 mm busbars  |
| <b>product type designation</b>  | 3RA21  |
| <b>manufacturer's article number</b>   |  |
| <ul style="list-style-type: none"> <li>• of the supplied contactor</li> <li>• of the supplied circuit-breakers</li> <li>• of the supplied busbar adapter</li> <li>• of the supplied link module</li> </ul> | <a href="#">3RT2024-1AP00</a><br><a href="#">3RV2011-1KA10</a><br><a href="#">8US1251-5NT10</a><br><a href="#">3RA2921-1AA00</a> |
| <b>General technical data</b>  |  |
| <b>size of the circuit-breaker</b>   | S00  |
| <b>size of load feeder</b>   | S0   |
| <b>power loss [W] for rated value of the current</b>   |  |
| <ul style="list-style-type: none"> <li>• at AC in hot operating state per pole</li> <li>• without load current share typical</li> </ul>  | 3.4 W<br>7.6 W   |
| <b>type of calculation of power loss current-dependent</b>   | quadratic  |
| insulation voltage with degree of pollution 3 at AC rated value  | 690 V  |
| <b>surge voltage resistance rated value</b>  | 6 kV   |
| <b>degree of protection NEMA rating</b>  | other  |
| <b>shock resistance according to IEC 60068-2-27</b>  | 6 g / 11 ms  |
| mechanical service life (operating cycles) of contactor typical  | 10 000 000   |
| <b>type of coordination</b>  | 2  |
| <b>reference code according to IEC 81346-2:2019</b>  | Q  |
| <b>Substance Prohibitance (day/month/year)</b>   | 10/01/2009   |
| <b>SVHC substance name</b>   | Lead CAS-No. 7439-92-1   |
| <b>Net Weight</b>  | 1.246 kg   |
| <b>Ambient conditions</b>  |  |
| <b>ambient temperature</b>   |  |
| <ul style="list-style-type: none"> <li>• during operation</li> <li>• during storage</li> <li>• during transport</li> </ul>   | -20 ... +60 °C<br>-50 ... +80 °C<br>-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>design of the switching contact</b>   | electromechanical  |
| <b>adjustable current response value current of the current-dependent overload release</b>   | 9 ... 12.5 A   |
| <b>operating voltage</b>   |  |

|   |  |
|---|--|
| <ul style="list-style-type: none"> <li>• rated value</li> </ul>   | 690 V                                  |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>   | 690 V                                  |
| <ul style="list-style-type: none"> <li>• at AC-3e rated value maximum</li> </ul>  | 690 V                                  |
| <b>operating frequency rated value</b>  | 50 ... 60 Hz                           |
| <b>operational current</b>  |  |
| <ul style="list-style-type: none"> <li>• at AC-3 at 400 V rated value</li> </ul>  | 12 A                                   |
| <ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>   | 12 A                                   |
| <b>operating power</b>  |  |
| <ul style="list-style-type: none"> <li>• at AC-3 <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>                       | 5 500 W                                |
| <ul style="list-style-type: none"> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>                      | 5 500 W                                |
| <b>Control circuit/ Control</b>   |  |
| <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> </ul>  | 230 V                                  |
| <b>apparent holding power of magnet coil at AC</b>  | 7.6 VA                                 |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>  | 7.6 VA                                 |
| <b>inductive power factor with the holding power of the coil</b>  | 0.25                                   |
| <ul style="list-style-type: none"> <li>• at 50 Hz</li> </ul>  | 0.25                                   |
| <b>Auxiliary circuit</b>  |  |
| <b>product extension auxiliary switch</b>   | Yes                                    |
| <b>Protective and monitoring functions</b>  |  |
| <b>trip class</b>   | CLASS 10                               |
| <b>design of the overload release</b>   | thermal (bimetallic)                   |
| response value current of instantaneous short-circuit trip unit   | 163 A                                  |
| <b>UL/CSA ratings</b>   |  |
| <b>full-load current (FLA) for 3-phase AC motor</b>   |  |
| <ul style="list-style-type: none"> <li>• at 480 V rated value</li> </ul>  | 11 A                                   |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>  | 10 A                                   |
| <b>yielded mechanical performance [hp]</b>  |  |
| <ul style="list-style-type: none"> <li>• for single-phase AC motor <ul style="list-style-type: none"> <li>— at 110/120 V rated value</li> </ul> </li> </ul> | 0.75 hp                                |
| <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul>  | 2 hp                                   |
| <ul style="list-style-type: none"> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> </ul> </li> </ul>      | 3 hp                                   |
| <ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> </ul>  | 3 hp                                   |
| <ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul>  | 7.5 hp                                 |
| <ul style="list-style-type: none"> <li>— at 575/600 V rated value</li> </ul>  | 10 hp                                  |
| <b>Short-circuit protection</b>   |  |
| <b>product function short circuit protection</b>  | Yes                                    |
| <b>design of the short-circuit trip</b>   | magnetic                               |
| <b>conditional short-circuit current (I<sub>q</sub>)</b>  |  |
| <ul style="list-style-type: none"> <li>• at 400 V according to IEC 60947-4-1 rated value</li> </ul>   | 150 000 A                              |
| <b>Installation/ mounting/ dimensions</b>   |  |
| <b>mounting position</b>  | vertical                               |
| <b>fastening method</b>   | for snapping onto 60 mm busbar systems |
| <b>height</b>   | 260 mm                                 |
| <b>width</b>  | 45 mm                                  |
| <b>depth</b>  | 155 mm                                 |
| <b>required spacing</b>   |  |
| <ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>                        | 20 mm                                  |
| <ul style="list-style-type: none"> <li>— backwards</li> </ul>   | 0 mm                                   |
| <ul style="list-style-type: none"> <li>— upwards</li> </ul>   | 50 mm                                  |
| <ul style="list-style-type: none"> <li>— at the side</li> </ul>   | 20 mm                                  |
| <ul style="list-style-type: none"> <li>— downwards</li> </ul>   | 10 mm                                  |
| <ul style="list-style-type: none"> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> </ul> </li> </ul>                            | 20 mm                                  |

|               |       |
|---------------|-------|
| — backwards   | 0 mm  |
| — upwards     | 50 mm |
| — downwards   | 10 mm |
| — at the side | 20 mm |

#### Connections/ Terminals

##### type of electrical connection

- for main current circuit screw-type terminals
- for auxiliary and control circuit screw-type terminals

#### Safety related data

product function suitable for safety function Yes

##### Electrical Safety

touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front

#### Communication/ Protocol

##### protocol is supported

- PROFINET IO protocol No
- PROFIsafe protocol No

protocol is supported AS-Interface protocol No

#### Approvals Certificates

##### Environment

##### General Product Approval

[Environmental Confirmations](#)



##### For use in hazardous locations

##### Test Certificates

##### Maritime application



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)



##### Maritime application

##### other



[Confirmation](#)

[Confirmation](#)

##### other

##### Railway



[Special Test Certificate](#)

#### Further information

##### Information on the packaging

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

##### Information for data generation and storage

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

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

<https://www.siemens.com/ic10>

##### Industry Mall (Online ordering system)

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2120-1KD24-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1KD24-0AP0>

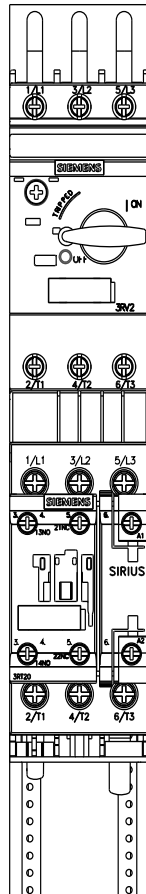
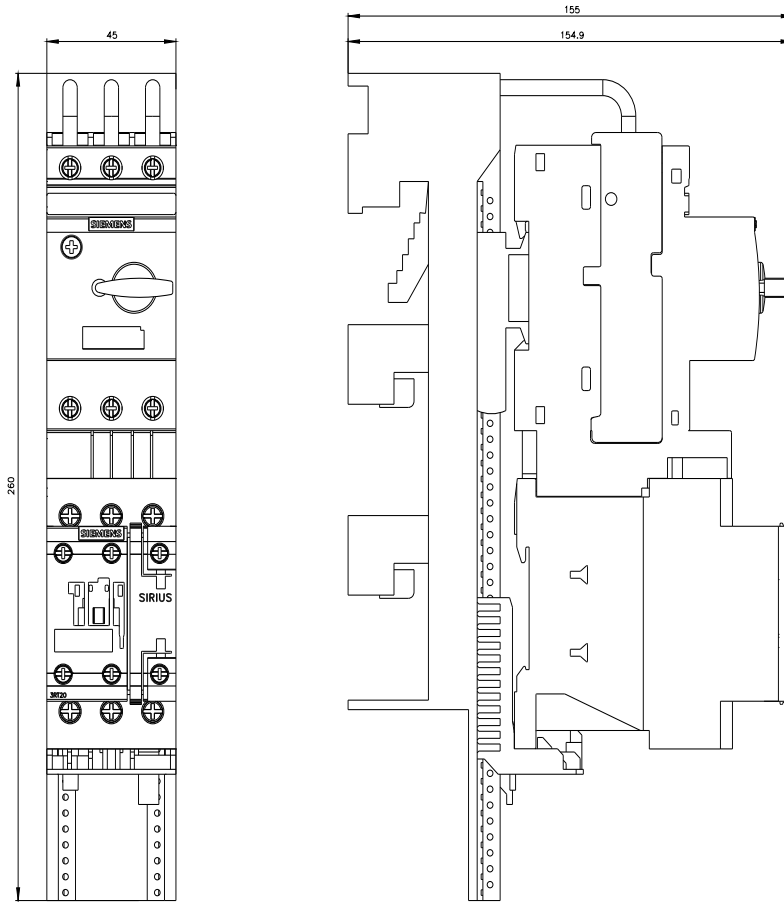
##### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

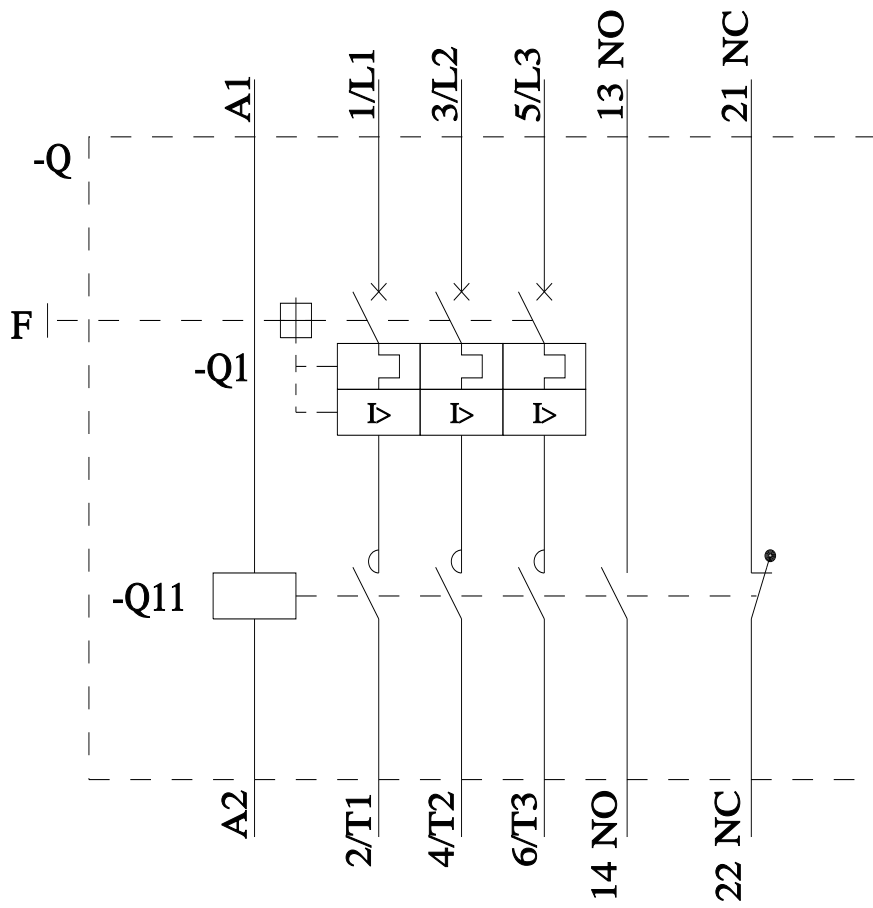
[https://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2120-1KD24-0AP0&lang=en](https://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2120-1KD24-0AP0&lang=en)

##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1KD24-0AP0>

##### Characteristic curves





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