



Load feeder fuseless, Direct-on-line starting 400 V AC, Size S0 3.50...5.00 A 230 V AC Spring-type 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)

|                                                                                     |                               |
|-------------------------------------------------------------------------------------|-------------------------------|
| product brand name                                                                  | SIRIUS                        |
| product designation                                                                 | Direct (on-line) starter      |
| design of the product                                                               | for 60 mm busbars             |
| product type designation                                                            | 3RA21                         |
| manufacturer's article number                                                       |                               |
| • of the supplied contactor                                                         | <a href="#">3RT2024-2AP00</a> |
| • of the supplied circuit-breakers                                                  | <a href="#">3RV2021-1FA20</a> |
| • of the supplied busbar adapter                                                    | <a href="#">8US1251-5NT11</a> |
| • of the supplied link module                                                       | <a href="#">3RA2921-2AA00</a> |
| <b>General technical data</b>                                                       |                               |
| size of the circuit-breaker                                                         | S0                            |
| size of load feeder                                                                 | S0                            |
| power loss [W] for rated value of the current                                       |                               |
| • at AC in hot operating state per pole                                             | 2.7 W                         |
| • without load current share typical                                                | 7.6 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                          |
| degree of protection NEMA rating                                                    | other                         |
| shock resistance according to IEC 60068-2-27                                        | 6 g / 11 ms                   |
| mechanical service life (operating cycles) of contactor typical                     | 10 000 000                    |
| type of coordination                                                                | 2                             |
| reference code according to IEC 81346-2:2019                                        | Q                             |
| Substance Prohibitance (day/month/year)                                             | 03/01/2017                    |
| SVHC substance name                                                                 | Lead CAS-No. 7439-92-1        |
| Net Weight                                                                          | 1.406 kg                      |
| <b>Ambient conditions</b>                                                           |                               |
| ambient temperature                                                                 |                               |
| • during operation                                                                  | -20 ... +60 °C                |
| • during storage                                                                    | -50 ... +80 °C                |
| • during transport                                                                  | -50 ... +80 °C                |
| temperature compensation                                                            | -20 ... +60 °C                |
| relative humidity during operation                                                  | 10 ... 95 %                   |
| <b>Main circuit</b>                                                                 |                               |
| number of poles for main current circuit                                            | 3                             |
| design of the switching contact                                                     | electromechanical             |
| adjustable current response value current of the current-dependent overload release | 3.5 ... 5 A                   |
| operating voltage                                                                   |                               |

|                                                                                                                                                             |                                        |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|
| <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>                                                                            | 5 A                                    |
| <ul style="list-style-type: none"> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                           | 5 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>                       | 1 500 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>                      | 1 500 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)                   |
| <b>response value current of instantaneous short-circuit trip unit</b>                                                                                      | 65 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>                                                                                    | 5 A                                    |
| <ul style="list-style-type: none"> <li>• at 600 V rated value</li> </ul>                                                                                    | 5 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> | 0.25 hp                                |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 230 V rated value</li> </ul> </li> </ul>                                | 0.5 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>      | 1.5 hp                                 |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 220/230 V rated value</li> </ul> </li> </ul>                            | 1.5 hp                                 |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 460/480 V rated value</li> </ul> </li> </ul>                            | 3 hp                                   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at 575/600 V rated value</li> </ul> </li> </ul>                            | 5 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>                                                                                                                                                | 165 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> <ul style="list-style-type: none"> <li>— backwards</li> </ul> </li> </ul>                                           | 0 mm                                   |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— upwards</li> </ul> </li> </ul>                                             | 50 mm                                  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— at the side</li> </ul> </li> </ul>                                         | 20 mm                                  |
| <ul style="list-style-type: none"> <li> <ul style="list-style-type: none"> <li>— downwards</li> </ul> </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          | spring-loaded terminals |
| • for auxiliary and control circuit | spring-loaded 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 Con-  
firmations](#)



For use in hazard-  
ous locations

Test Certificates

Maritime application



[Special Test Certific-  
ate](#)

[Type Test Certific-  
ates/Test Report](#)



Maritime application

other



[Confirmation](#)

[Confirmation](#)

other

Railway



[Special Test Certific-  
ate](#)

#### 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=3RA2120-1FH24-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2120-1FH24-0AP0>

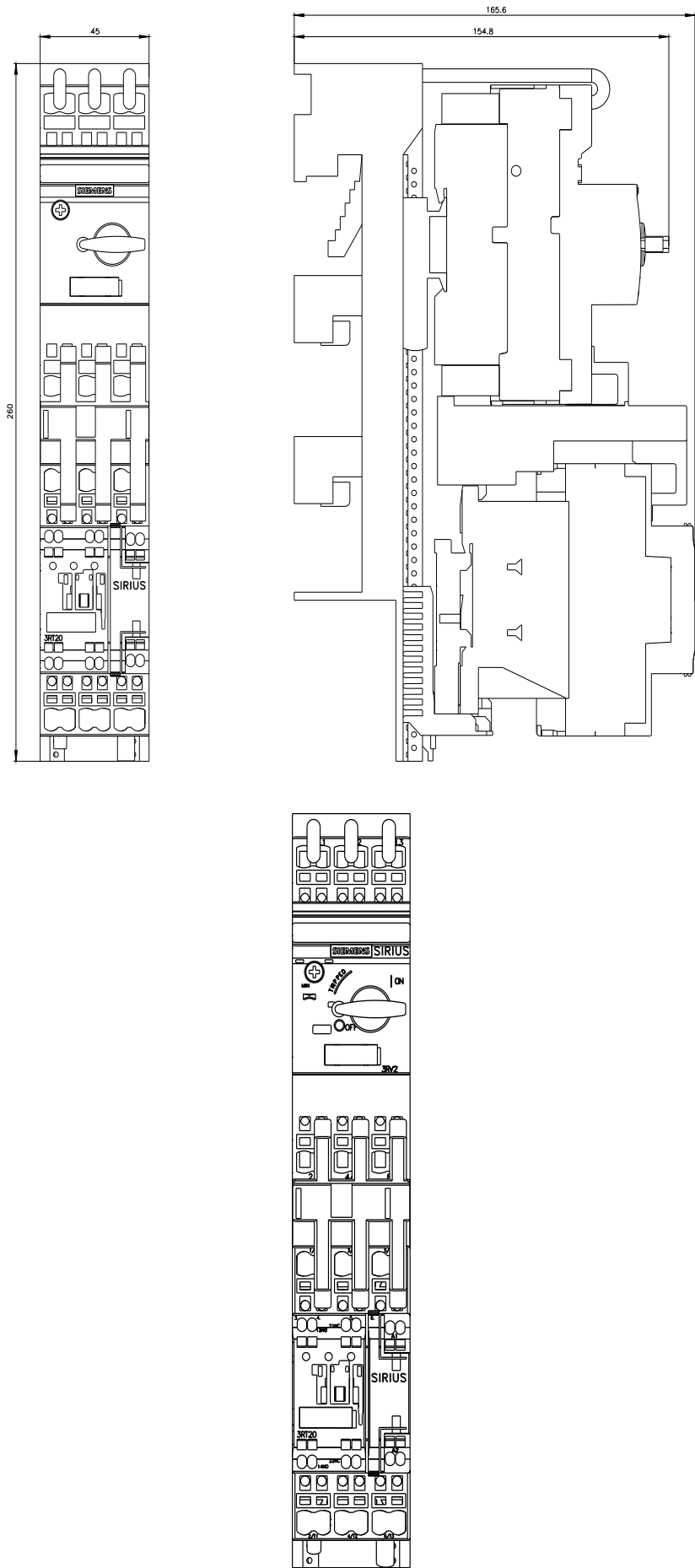
##### Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

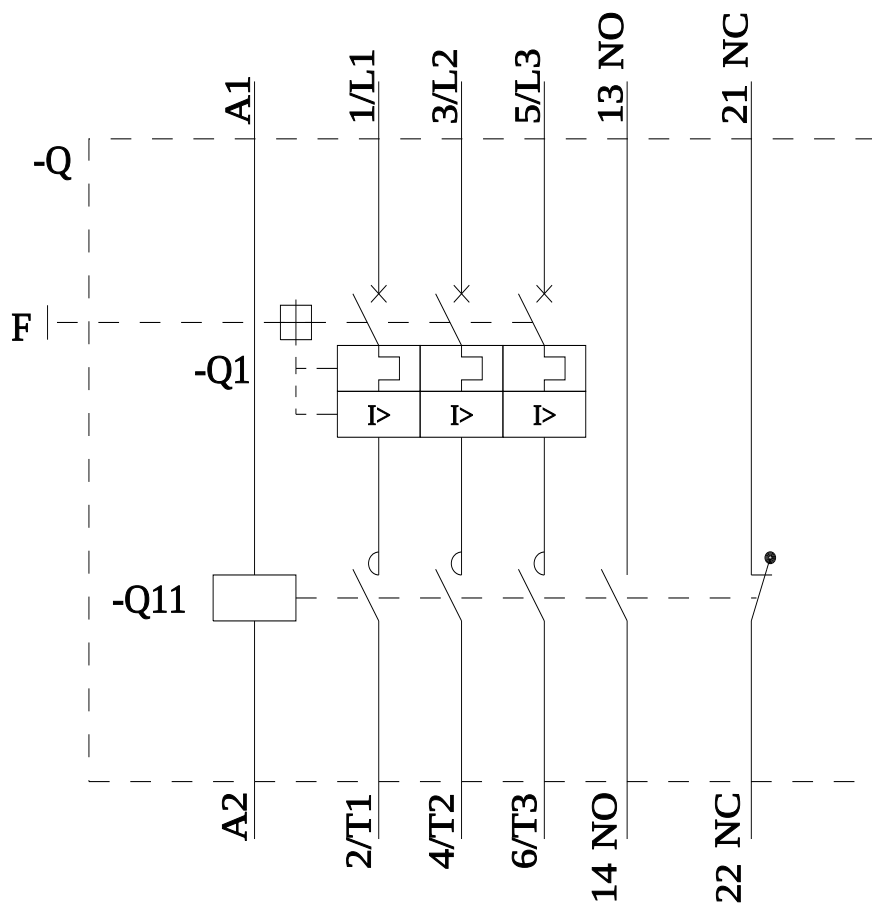
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##### Cax online generator

<https://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2120-1FH24-0AP0>

##### Characteristic curves





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