



Load feeder fuseless, Reversing duty 400 V AC, Size S0 5.50...8.00 A 230 V AC  
Spring-type terminal for installation on standard mounting rail with standard  
mounting rail adapter (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                                                                 | Reversing starter              |
| design of the product                                                               | for DIN-rail or screw mounting |
| product type designation                                                            | 3RA22                          |
| manufacturer's article number                                                       |                                |
| • of the supplied contactor                                                         | <a href="#">3RT2024-2AP00</a>  |
| • of the supplied circuit-breakers                                                  | <a href="#">3RV2021-1HA20</a>  |
| • of the supplied RH assembly kit                                                   | <a href="#">3RA2923-1BB2</a>   |
| • of the supplied link module                                                       | <a href="#">3RA2921-2AA00</a>  |
| • of the supplied DIN-rail adapter                                                  | <a href="#">3RA2922-1AA00</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                                             | 3.4 W                          |
| • without load current share typical                                                | 7.6 W                          |
| 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                                        | 6g / 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 (Date)                                                       | 03/01/2017                     |
| SVHC substance name                                                                 | Lead - 7439-92-1               |
| Weight                                                                              | 2.07 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 | 5.5 ... 8 A                    |
| operating voltage                                                                   |                                |
| • rated value                                                                       | 690 V                          |

|                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> <li>• at AC-3e rated value maximum</li> </ul>                                                                                                                                                                                                                                                                                               | 690 V<br>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> <li>• at AC-3e at 400 V rated value</li> </ul>                                                                                                                                                                                                                                                                                             | 8 A<br>8 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> <li>• at AC-3e <ul style="list-style-type: none"> <li>— at 400 V rated value</li> </ul> </li> </ul>                                                                                                                                                                                   | 3 000 W<br>3 000 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>                                                                                                                                                                                                                                                                                                                                                | 104 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> <li>• at 600 V rated value</li> </ul>                                                                                                                                                                                                                                                                                                              | 8 A<br>8 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> <li>— at 230 V rated value</li> </ul> </li> <li>• for 3-phase AC motor <ul style="list-style-type: none"> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> <li>— at 575/600 V rated value</li> </ul> </li> </ul> | 0.33 hp<br>1 hp<br>2 hp<br>3 hp<br>5 hp<br>7.5 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>                                                                                                                                                                                                                                                                                                                                                                                               | On adapter for screw and snap-on mounting on 35 mm DIN rail        |
| <b>height</b>                                                                                                                                                                                                                                                                                                                                                                                                         | 269 mm                                                             |
| <b>width</b>                                                                                                                                                                                                                                                                                                                                                                                                          | 90 mm                                                              |
| <b>depth</b>                                                                                                                                                                                                                                                                                                                                                                                                          | 130 mm                                                             |
| <b>required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                               |                                                                    |
| <ul style="list-style-type: none"> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> <li>— at the side</li> <li>— downwards</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards</li> <li>— backwards</li> <li>— upwards</li> </ul> </li> </ul>                                                              | 32 mm<br>0 mm<br>50 mm<br>10 mm<br>10 mm<br>32 mm<br>0 mm<br>50 mm |

|               |       |
|---------------|-------|
| — downwards   | 10 mm |
| — at the side | 10 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

##### General Product Approval

##### For use in hazard- ous locations

##### Test Certificates



[Special Test Certificate](#)

##### Test Certificates

##### Maritime application

[Type Test Certificates/Test Report](#)



##### Maritime application

##### other

##### Railway

##### Environment



[Confirmation](#)

[Special Test Certificate](#)

[Environmental Confirmations](#)

#### Further information

##### Information on the packaging

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

##### 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=3RA2220-1HF24-0AP0>

##### Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2220-1HF24-0AP0>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2220-1HF24-0AP0>

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

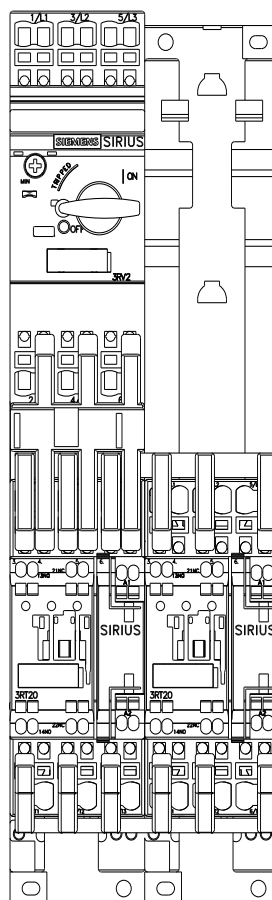
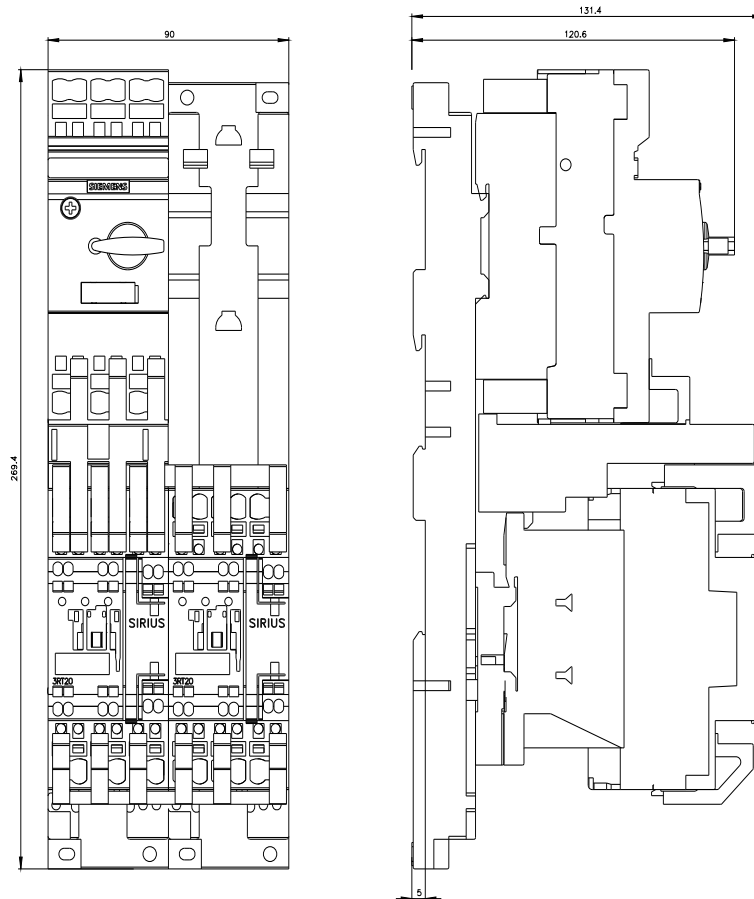
[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2220-1HF24-0AP0&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2220-1HF24-0AP0&lang=en)

##### Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2220-1HF24-0AP0/char>

##### Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2220-1HF24-0AP0&objecttype=14&gridview=view1>





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