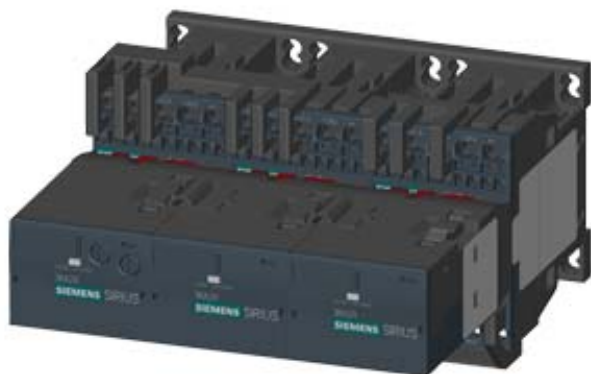


STAR-DELTA COMB. AC3,  
7,5KW/400V AC110V 50HZ/120V 60HZ,  
3-POLE SZ S00,  
SPRING-LOADED TERMINAL ELECTR. AND MECH.  
INTERLOCK 3NO INTEGR.



### General technical data:

|                                                                                                                                                                                                                               |    |                                                                    |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|--------------------------------------------------------------------|
| product brand name                                                                                                                                                                                                            |    | SIRIUS                                                             |
| Product designation                                                                                                                                                                                                           |    | star-delta (wye-delta) contactor assembly 3RA24                    |
| Product function                                                                                                                                                                                                              |    | wye-delta motor start-up                                           |
| Size of the contactor                                                                                                                                                                                                         |    | S00                                                                |
| Protection class IP / on the front                                                                                                                                                                                            |    | IP20                                                               |
| Degree of pollution                                                                                                                                                                                                           |    | 3                                                                  |
| Insulation voltage / with degree of pollution 3 / rated value                                                                                                                                                                 | V  | 690                                                                |
| Installation altitude / at a height over sea level / maximum                                                                                                                                                                  | m  | 2,000                                                              |
| Ambient temperature <ul style="list-style-type: none"> <li>during transport</li> <li>during storage</li> <li>during operating</li> </ul>                                                                                      | °C | -55 ... +80                                                        |
|                                                                                                                                                                                                                               | °C | -55 ... +80                                                        |
|                                                                                                                                                                                                                               | °C | -25 ... +60                                                        |
| Resistance against shock                                                                                                                                                                                                      |    | 9.8g / 5 ms and 5.9g / 10 ms                                       |
| Impulse voltage resistance / rated value                                                                                                                                                                                      | kV | 6                                                                  |
| Active power loss / per conductor / typical                                                                                                                                                                                   | W  | 0.7                                                                |
| Manufacturer article number <ul style="list-style-type: none"> <li>of the function module for for wye-delta circuits included in the scope of supply</li> <li>1 / of the contactor included in the scope of supply</li> </ul> |    | <a href="#">3RA2816-0EW20</a><br><br><a href="#">3RT2017-2AP01</a> |

|                                                                                                                                                                                                                                                                                                                                               |                          |                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>• 2 / of the contactor included in the scope of supply</li> <li>• 3 / of the contactor included in the scope of supply</li> <li>• of the RS applied assembly kit</li> </ul>                                                                                                                            |                          | <a href="#">3RT2017-2AP01</a><br><a href="#">3RT2015-2AP01</a><br><a href="#">3RA2913-2BB2</a> |
| <b>Mechanical operating cycles as operating time</b> <ul style="list-style-type: none"> <li>• of the main contacts / typical</li> <li>• of the auxiliary contacts / typical</li> <li>• of the contactor / typical</li> <li>• of the contactor with added auxiliary switch block / typical</li> </ul>                                          |                          | 10,000,000<br>10,000,000<br>10,000,000<br>10,000,000                                           |
| <b>Communication:</b>                                                                                                                                                                                                                                                                                                                         |                          |                                                                                                |
| <b>Product function</b> <ul style="list-style-type: none"> <li>• bus-communication</li> <li>• control circuit interface with IO link</li> </ul>                                                                                                                                                                                               |                          | No<br>No                                                                                       |
| <b>Protocol / is supported / AS interface protocol</b>                                                                                                                                                                                                                                                                                        |                          | No                                                                                             |
| <b>Main circuit:</b>                                                                                                                                                                                                                                                                                                                          |                          |                                                                                                |
| <b>Number of poles / for main current circuit</b>                                                                                                                                                                                                                                                                                             |                          | 3                                                                                              |
| <b>Number of NC contacts / for main contacts</b>                                                                                                                                                                                                                                                                                              |                          | 0                                                                                              |
| <b>Number of NO contacts / for main contacts</b>                                                                                                                                                                                                                                                                                              |                          | 3                                                                                              |
| <b>Operating voltage / at AC-3 / rated value / maximum</b>                                                                                                                                                                                                                                                                                    | V                        | 690                                                                                            |
| <b>Operating current</b> <ul style="list-style-type: none"> <li>• at AC-1 / at 400 V <ul style="list-style-type: none"> <li>• at 40 °C ambient temperature / rated value</li> <li>• at 60 °C ambient temperature / rated value</li> </ul> </li> <li>• at AC-2 / at 400 V / rated value</li> <li>• at AC-3 / at 400 V / rated value</li> </ul> | A<br>A<br>A<br>A         | 22<br>20<br>16<br>16                                                                           |
| <b>Service power</b> <ul style="list-style-type: none"> <li>• at AC-2 / at 400 V / rated value</li> <li>• at AC-3 <ul style="list-style-type: none"> <li>• at 400 V / rated value</li> <li>• at 500 V / rated value</li> <li>• at 690 V / rated value</li> </ul> </li> </ul>                                                                  | kW<br>kW<br>kW<br>kW     | 7.5<br>7.5<br>10.3<br>9.2                                                                      |
| <b>Off-load operating frequency</b>                                                                                                                                                                                                                                                                                                           | 1/h                      | 1,500                                                                                          |
| <b>Frequency of operation</b> <ul style="list-style-type: none"> <li>• with AC-1 / maximum</li> <li>• with AC-2 / maximum</li> <li>• with AC-3 / maximum</li> <li>• with AC-4 / maximum</li> </ul>                                                                                                                                            | 1/h<br>1/h<br>1/h<br>1/h | 1,000<br>1,000<br>1,000<br>300                                                                 |
| <b>Control circuit:</b>                                                                                                                                                                                                                                                                                                                       |                          |                                                                                                |
| <b>Design of activation</b>                                                                                                                                                                                                                                                                                                                   |                          | conventional                                                                                   |

|                                                                                       |     |              |
|---------------------------------------------------------------------------------------|-----|--------------|
| <b>Voltage type / of control feed voltage</b>                                         |     | AC           |
| <b>Control supply voltage frequency</b>                                               |     |              |
| • 1 / rated value                                                                     | Hz  | 50           |
| • 2 / rated value                                                                     | Hz  | 60           |
| <b>Control supply voltage / 1</b>                                                     |     |              |
| • for AC / at 50 Hz / rated value                                                     | V   | 110          |
| • for AC / at 60 Hz / rated value                                                     | V   | 120          |
| <b>Operating range factor control supply voltage rated value / of the magnet coil</b> |     |              |
| • at 50 Hz / for AC                                                                   |     | 0.8 ... 1.1  |
| • at 60 Hz / for AC                                                                   |     | 0.85 ... 1.1 |
| <b>Apparent pull-in power / of the solenoid / for AC</b>                              | V·A | 27           |
| <b>Apparent holding power / of the solenoid / for AC</b>                              | V·A | 4.2          |
| <b>Inductive power factor</b>                                                         |     |              |
| • with the pull-in power of the coil                                                  |     | 0.8          |
| • with the pull-in power of the coil                                                  |     | 0.25         |

#### Auxiliary circuit:

|                                                        |   |                                            |
|--------------------------------------------------------|---|--------------------------------------------|
| <b>Product extension / auxiliary switch</b>            |   | No                                         |
| <b>Contact reliability / of the auxiliary contacts</b> |   | < 1 error per 100 million operating cycles |
| <b>Number of NC contacts / for auxiliary contacts</b>  |   |                                            |
| • instantaneous switching                              |   | 3                                          |
| • lagging switching                                    |   | 0                                          |
| <b>Number of NO contacts / for auxiliary contacts</b>  |   |                                            |
| • instantaneous switching                              |   | 3                                          |
| • leading switching                                    |   | 0                                          |
| <b>Operating current / of the auxiliary contacts</b>   |   |                                            |
| • at AC-12 / maximum                                   | A | 10                                         |
| • at AC-15                                             |   |                                            |
| • at 230 V                                             | A | 6                                          |
| • at 400 V                                             | A | 3                                          |
| • at DC-12                                             |   |                                            |
| • at 48 V                                              | A | 6                                          |
| • at 60 V                                              | A | 6                                          |
| • at 110 V                                             | A | 3                                          |
| • at 220 V                                             | A | 1                                          |
| • at DC-13                                             |   |                                            |
| • at 24 V                                              | A | 10                                         |
| • at 48 V                                              | A | 2                                          |
| • at 60 V                                              | A | 2                                          |

- at 110 V
- at 220 V

|   |     |
|---|-----|
| A | 1   |
| A | 0.3 |

#### Short-circuit:

##### Design of the fuse link

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

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A  
gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 A  
fuse gL/gG: 10 A

#### Installation/mounting/dimensions:

##### mounting position

+/-180° rotation possible on vertical mounting surface;  
can be tilted forward and backward by +/- 22.5° on  
vertical mounting surface

##### Mounting type

screw and snap-on mounting onto 35 mm standard  
mounting rail

##### Width

mm 135

##### Height

mm 84

##### Depth

mm 145

##### Distance, to be maintained, to the ranks assembly

- forwards
- backwards
- upwards
- downwards
- sideways

mm 6  
mm 0  
mm 6  
mm 6  
mm 6

##### Distance, to be maintained, to earthed part

- forwards
- backwards
- upwards
- downwards
- sideways

mm 6  
mm 0  
mm 6  
mm 6  
mm 6

##### Distance, to be maintained, conductive elements

- forwards
- backwards
- upwards
- downwards
- sideways

mm 6  
mm 0  
mm 6  
mm 6  
mm 6

#### Connections:

##### Design of the electrical connection

- for main current circuit

spring-loaded terminals

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| • for auxiliary and control current circuit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | spring-loaded terminals                                                                                                                                                                  |
| <b>Type of the connectable conductor cross-section</b> <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for main contacts</li> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>• finely stranded <ul style="list-style-type: none"> <li>• with conductor end processing</li> <li>• without conductor final cutting</li> </ul> </li> </ul> </li> <li>• for AWG conductors / for auxiliary contacts</li> </ul> |  | 2x (0.5 ... 2.5 mm <sup>2</sup> )<br>2x (0.5 ... 2.5 mm <sup>2</sup> )<br>1x (20 ... 12)<br><br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (0.5 ... 1.5 mm <sup>2</sup> )<br>2x (20 ... 14) |

#### Certificates/approvals:

##### Verification of suitability

CE / UL / CSA / CCC

##### General Product Approval

##### Declaration of Conformity

##### Test Certificates



[Special Test Certificate](#)

#### Shipping Approval



GL



LRS



PRS

#### Shipping Approval

##### other



RINA



RMRS

[other](#)

[Environmental Confirmations](#)

#### UL/CSA ratings

##### Contact rating designation / for auxiliary contacts / according to UL

A600 / Q600

#### Safety:

##### B10 value / with high demand rate

- according to SN 31920

1,000,000

##### Failure rate [FIT] / with low demand rate

- according to SN 31920

FIT

100

##### Proportion of dangerous failures

- with low demand rate / according to SN 31920
- with high demand rate / according to SN 31920

%

40

%

75

T1 value / for proof test interval or service life

- according to IEC 61508

a

20

Protection against electrical shock

finger-safe

#### Further information:

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

<http://www.siemens.com/industrial-controls/catalogs>

Industry Mall (Online ordering system)

<http://www.siemens.com/industrial-controls/mall>

CAX-Online-Generator

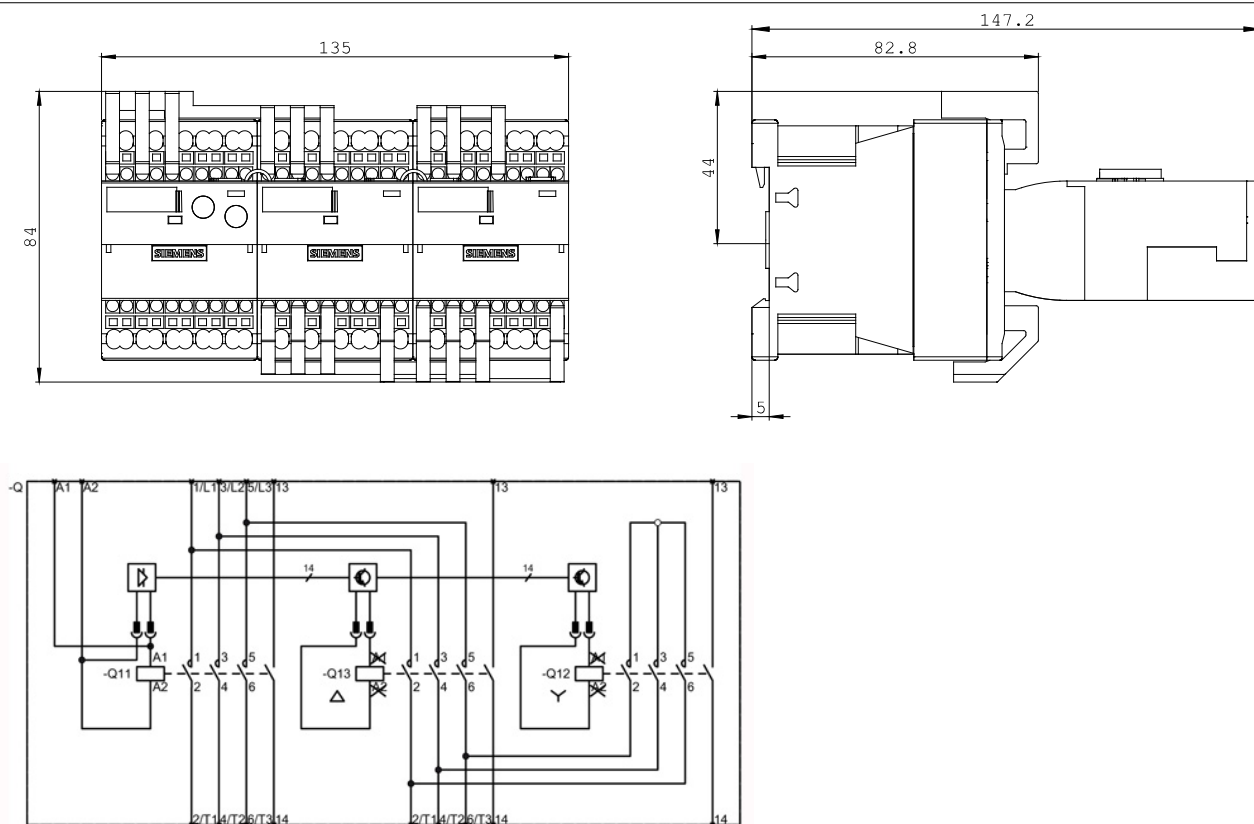
<http://www.siemens.com/cax>

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

<http://support.automation.siemens.com/WW/view/en/3RA2416-8XF31-2AK6/all>

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

[http://www.automation.siemens.com/bilddb/cax\\_en.aspx?mlfb=3RA2416-8XF31-2AK6](http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2416-8XF31-2AK6)



last change:

Aug 4, 2014