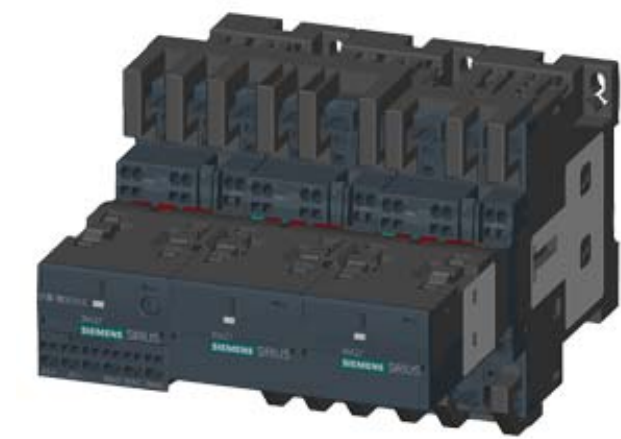


STAR-DELTA COMB. WITH I/O-LINK AC3,  
15/18.5KW/400V DC24V, 3-POLE SZ S0,  
SPRING-LOADED TERMINAL ELECTR. AND MECH.  
INTERLOCK 3NO+3NC INTEGR.



| 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                                                      |    | S0                                              |
| 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                                                        |    |                                                 |
| • during transport                                                         | °C | -55 ... +80                                     |
| • during storage                                                           | °C | -55 ... +80                                     |
| • during operating                                                         | °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  | 0.9                                             |
| Manufacturer article number                                                |    |                                                 |
| • of the function module for communication included in the scope of supply |    | <a href="#">3RA2711-2CA00</a>                   |
| • 1 / of the contactor included in the scope of supply                     |    | <a href="#">3RT2026-2BB40-0CC0</a>              |

|                                                                |  |                               |
|----------------------------------------------------------------|--|-------------------------------|
| • 2 / of the contactor included in the scope of supply         |  | <a href="#">3RT2026-2BB40</a> |
| • 3 / of the contactor included in the scope of supply         |  | <a href="#">3RT2024-2BB40</a> |
| • of the RS applied assembly kit                               |  | <a href="#">3RA2923-2BB2</a>  |
| <b>Mechanical operating cycles as operating time</b>           |  |                               |
| • of the main contacts / typical                               |  | 10,000,000                    |
| • of the auxiliary contacts / typical                          |  | 10,000,000                    |
| • of the contactor / typical                                   |  | 10,000,000                    |
| • of the contactor with added auxiliary switch block / typical |  | 10,000,000                    |

|                                                        |  |     |
|--------------------------------------------------------|--|-----|
| <b>Communication:</b>                                  |  |     |
| <b>Product function</b>                                |  |     |
| • bus-communication                                    |  | Yes |
| • control circuit interface with IO link               |  | Yes |
| <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>                                   |   |     |
| • at AC-1 / at 400 V                                       |   |     |
| • at 40 °C ambient temperature / rated value               | A | 40  |
| • at 60 °C ambient temperature / rated value               | A | 35  |
| • at AC-2 / at 400 V / rated value                         | A | 32  |
| • at AC-3 / at 400 V / rated value                         | A | 40  |
| • with 1 current path / at DC-1                            |   |     |
| • at 24 V / rated value                                    | A | 35  |
| • at 110 V / rated value                                   | A | 4.5 |
| • with 2 current paths in series / at DC-1                 |   |     |
| • at 24 V / rated value                                    | A | 35  |
| • at 110 V / rated value                                   | A | 35  |
| • with 3 current paths in series / at DC-1                 |   |     |
| • at 24 V / rated value                                    | A | 35  |
| • at 110 V / rated value                                   | A | 35  |
| • with 1 current path / at DC-3 / at DC-5                  |   |     |
| • at 24 V / rated value                                    | A | 20  |
| • at 110 V / rated value                                   | A | 2.5 |
| • with 2 current paths in series / at DC-3 / at DC-5       |   |     |
| • at 24 V / rated value                                    | A | 35  |

|                                                      |     |       |
|------------------------------------------------------|-----|-------|
| • at 110 V / rated value                             | A   | 15    |
| • with 3 current paths in series / at DC-3 / at DC-5 |     |       |
| • at 24 V / rated value                              | A   | 35    |
| • at 110 V / rated value                             | A   | 35    |
| <b>Service power</b>                                 |     |       |
| • at AC-2 / at 400 V / rated value                   | kW  | 15    |
| • at AC-3                                            |     |       |
| • at 400 V / rated value                             | kW  | 18.5  |
| • at 500 V / rated value                             | kW  | 19    |
| • at 690 V / rated value                             | kW  | 19    |
| • at AC-4 / at 400 V / rated value                   | kW  | 3.5   |
| <b>Off-load operating frequency</b>                  | 1/h | 1,500 |
| <b>Frequency of operation</b>                        |     |       |
| • with AC-1 / maximum                                | 1/h | 1,000 |
| • with AC-2 / maximum                                | 1/h | 1,000 |
| • with AC-3 / maximum                                | 1/h | 1,000 |
| • with AC-4 / maximum                                | 1/h | 300   |

| Control circuit:                                                                      |    |               |
|---------------------------------------------------------------------------------------|----|---------------|
| <b>Design of activation</b>                                                           |    | conventional  |
| <b>Design of the surge suppressor</b>                                                 |    | with varistor |
| <b>Voltage type / of control feed voltage</b>                                         |    | DC            |
| <b>Control supply voltage frequency</b>                                               |    |               |
| • 1 / rated value                                                                     | Hz | 50            |
| • 2 / rated value                                                                     | Hz | 60            |
| <b>Control supply voltage / 1</b>                                                     |    |               |
| • for DC / rated value                                                                | V  | 24            |
| <b>Operating range factor control supply voltage rated value / of the magnet coil</b> |    |               |
| • for DC                                                                              |    | 0.8 ... 1.1   |
| <b>Pull-in power / of the solenoid / for DC</b>                                       | W  | 5.9           |
| <b>Holding power / of the solenoid / for DC</b>                                       | W  | 5.9           |
| <b>Resistive loss / of the magnet coil / for DC</b>                                   |    |               |
| • typical                                                                             | W  | 5.9           |

| 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                                            | A | 1   |
| • at 220 V                                            | 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: 63 A

gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 25 A

fuse gL/gG: 10 A

#### Installation/mounting/dimensions:

|                                                          |    |                                                                                                                                         |
|----------------------------------------------------------|----|-----------------------------------------------------------------------------------------------------------------------------------------|
| <b>mounting position</b>                                 |    | +/-180° rotation possible on vertical mounting surface;<br>can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| <b>Mounting type</b>                                     |    | screw and snap-on mounting onto 35 mm standard mounting rail                                                                            |
| <b>Width</b>                                             | mm | 135                                                                                                                                     |
| <b>Height</b>                                            | mm | 114                                                                                                                                     |
| <b>Depth</b>                                             | mm | 181                                                                                                                                     |
| <b>Distance, to be maintained, to the ranks assembly</b> |    |                                                                                                                                         |
| • forwards                                               | mm | 6                                                                                                                                       |
| • backwards                                              | mm | 0                                                                                                                                       |
| • upwards                                                | mm | 6                                                                                                                                       |

|                                                        |    |   |
|--------------------------------------------------------|----|---|
| • downwards                                            | mm | 6 |
| • sideways                                             | mm | 6 |
| <b>Distance, to be maintained, to earthed part</b>     |    |   |
| • forwards                                             | mm | 6 |
| • backwards                                            | mm | 0 |
| • upwards                                              | mm | 6 |
| • downwards                                            | mm | 6 |
| • sideways                                             | mm | 6 |
| <b>Distance, to be maintained, conductive elements</b> |    |   |
| • forwards                                             | mm | 6 |
| • backwards                                            | mm | 0 |
| • upwards                                              | mm | 6 |
| • downwards                                            | mm | 6 |
| • sideways                                             | mm | 6 |

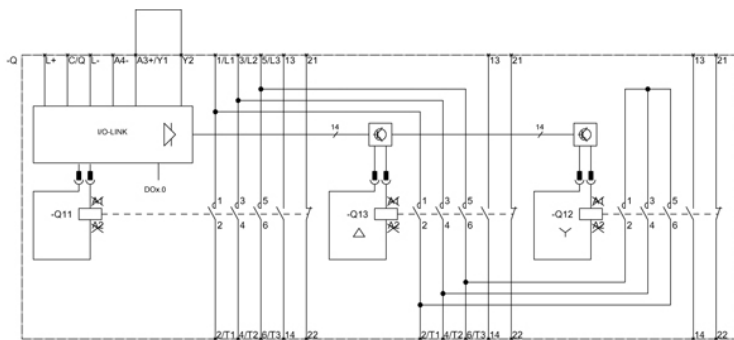
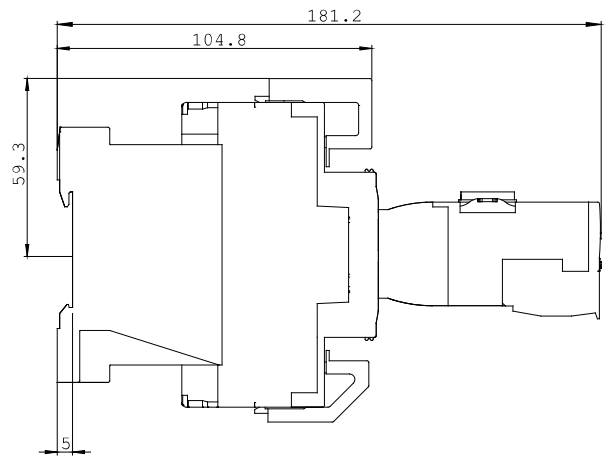
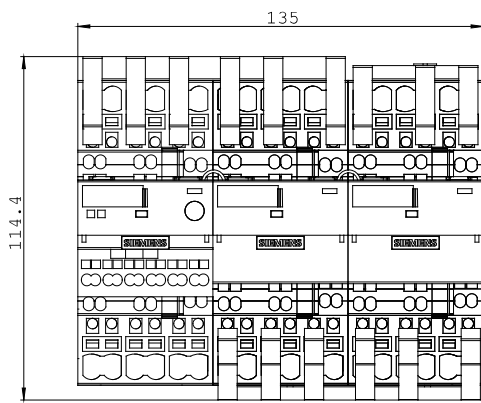
#### Connections:

|                                                        |  |                                   |
|--------------------------------------------------------|--|-----------------------------------|
| <b>Design of the electrical connection</b>             |  |                                   |
| • 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> |  |                                   |
| • for main contacts                                    |  |                                   |
| • finely stranded                                      |  |                                   |
| • with conductor end processing                        |  | 2x (1 ... 6 mm <sup>2</sup> )     |
| • without conductor final cutting                      |  | 2x (1 ... 6 mm <sup>2</sup> )     |
| • for AWG conductors / for main contacts               |  | 1x (18 ... 8)                     |
| • for auxiliary contacts                               |  |                                   |
| • finely stranded                                      |  |                                   |
| • with conductor end processing                        |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| • without conductor final cutting                      |  | 2x (0.5 ... 1.5 mm <sup>2</sup> ) |
| • for AWG conductors / for auxiliary contacts          |  | 2x (20 ... 14)                    |

#### Certificates/approvals:

|                                    |                     |
|------------------------------------|---------------------|
| <b>Verification of suitability</b> | CE / UL / CSA / CCC |
|------------------------------------|---------------------|

|                                                                                                                                                                                                                                                                            |  |                                                                                                     |                                                                                           |                                                                                            |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|--|
| General Product Approval                                                                                                                                                                                                                                                   |  | Declaration of Conformity                                                                           |                                                                                           | Test Certificates                                                                          |  |
|                                                                                                                                                                                           |  | <br>EG-Konf.       |                                                                                           | <a href="#">Special Test Certificate</a>                                                   |  |
| Shipping Approval                                                                                                                                                                                                                                                          |  |                                                                                                     |                                                                                           |                                                                                            |  |
| <br>ABS                                                                                                                                                                                   |  | <br>BUREAU VERITAS |                                                                                           | <br>DNV   |  |
|                                                                                                                                                                                                                                                                            |  |                                                                                                     |                                                                                           | <br>GL    |  |
|                                                                                                                                                                                                                                                                            |  |                                                                                                     |                                                                                           | <br>LRS |  |
|                                                                                                                                                                                                                                                                            |  |                                                                                                     |                                                                                           | <br>PRS |  |
| Shipping Approval                                                                                                                                                                                                                                                          |  |                                                                                                     | other                                                                                     |                                                                                            |  |
| <br>RINA                                                                                                                                                                                  |  |                                                                                                     | <br>RMRS |                                                                                            |  |
|                                                                                                                                                                                                                                                                            |  |                                                                                                     | <a href="#">other</a>                                                                     |                                                                                            |  |
|                                                                                                                                                                                                                                                                            |  |                                                                                                     | <a href="#">Environmental Confirmations</a>                                               |                                                                                            |  |
| 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                                                                                                                                                                                                                             |  |                                                                                                     |                                                                                           | % 40                                                                                       |  |
| • with high demand rate / according to SN 31920                                                                                                                                                                                                                            |  |                                                                                                     |                                                                                           | % 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,...)<br><a href="http://www.siemens.com/industrial-controls/catalogs">http://www.siemens.com/industrial-controls/catalogs</a>                                                                                         |  |                                                                                                     |                                                                                           |                                                                                            |  |
| Industry Mall (Online ordering system)<br><a href="http://www.siemens.com/industrial-controls/mall">http://www.siemens.com/industrial-controls/mall</a>                                                                                                                    |  |                                                                                                     |                                                                                           |                                                                                            |  |
| CAx-Online-Generator<br><a href="http://www.siemens.com/cax">http://www.siemens.com/cax</a>                                                                                                                                                                                |  |                                                                                                     |                                                                                           |                                                                                            |  |
| Service&Support (Manuals, Certificates, Characteristics, FAQs,...)<br><a href="http://support.automation.siemens.com/WW/view/en/3RA2425-8XE32-2BB4/all">http://support.automation.siemens.com/WW/view/en/3RA2425-8XE32-2BB4/all</a>                                        |  |                                                                                                     |                                                                                           |                                                                                            |  |
| Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, ...)<br><a href="http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2425-8XE32-2BB4">http://www.automation.siemens.com/bilddb/cax_en.aspx?mlfb=3RA2425-8XE32-2BB4</a> |  |                                                                                                     |                                                                                           |                                                                                            |  |



last change:

Aug 4, 2014