

STAR-DELTA COMB. AC3, 15/18.5KW/400V AC24V, 50/60HZ, 3-  
POLE, SZ S0, SPRING-LOADED TERMINAL ELECTR. AND MECH.  
INTERLOCK 3NO+3NC INTEGR.



|                               |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product brand name            | SIRIUS                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Product designation           | Contactor assembly for star-delta (wye-delta) start                                                                                                                                                                                                                                                                                                                                                                       |
| Product type designation      | 3RA24                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Manufacturer's article number | <ul style="list-style-type: none"><li>• 1 of the supplied contactor <a href="#">3RT2026-2AC20</a></li><li>• 2 of the supplied contactor <a href="#">3RT2026-2AC20</a></li><li>• 3 of the supplied contactor <a href="#">3RT2024-2AC20</a></li><li>• of the supplied RS assembly kit <a href="#">3RA2923-2BB2</a></li><li>• of the supplied function module for wye-delta circuits <a href="#">3RA2816-0EW20</a></li></ul> |

| General technical data                   |       |
|------------------------------------------|-------|
| Size of contactor                        | S0    |
| Product extension                        | No    |
| Insulation voltage                       |       |
| • with degree of pollution 3 rated value | 690 V |
| Degree of pollution                      | 3     |
| Surge voltage resistance rated value     | 6 kV  |
| Protection class IP                      |       |

|                                                                                                                |                            |
|----------------------------------------------------------------------------------------------------------------|----------------------------|
| <ul style="list-style-type: none"> <li>• on the front</li> </ul>                                               | IP20                       |
| <b>Shock resistance at rectangular impulse</b>                                                                 |                            |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                      | 7,5g / 5 ms, 4,7g / 10 ms  |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                      | 10g / 5 ms, 7,5g / 10 ms   |
| <b>Shock resistance with sine pulse</b>                                                                        |                            |
| <ul style="list-style-type: none"> <li>• at AC</li> </ul>                                                      | 11,8g / 5 ms, 7,4g / 10 ms |
| <ul style="list-style-type: none"> <li>• at DC</li> </ul>                                                      | 15g / 5 ms, 10g / 10 ms    |
| <b>Mechanical service life (switching cycles)</b>                                                              |                            |
| <ul style="list-style-type: none"> <li>• of contactor typical</li> </ul>                                       | 10 000 000                 |
| <ul style="list-style-type: none"> <li>• of the contactor with added auxiliary switch block typical</li> </ul> | 10 000 000                 |
| <b>Equipment marking</b>                                                                                       |                            |
| <ul style="list-style-type: none"> <li>• acc. to DIN EN 81346-2</li> </ul>                                     | Q                          |

#### Ambient conditions

|                                                                      |                |
|----------------------------------------------------------------------|----------------|
| <b>Ambient temperature</b>                                           |                |
| <ul style="list-style-type: none"> <li>• during operation</li> </ul> | -25 ... +60 °C |
| <ul style="list-style-type: none"> <li>• during storage</li> </ul>   | -55 ... +80 °C |

#### Main circuit

|                                                                                                                                                                                                                        |              |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|
| <b>Number of poles for main current circuit</b>                                                                                                                                                                        | 3            |
| <b>Number of NO contacts for main contacts</b>                                                                                                                                                                         | 3            |
| <b>Number of NC contacts for main contacts</b>                                                                                                                                                                         | 0            |
| <b>Operating voltage</b>                                                                                                                                                                                               |              |
| <ul style="list-style-type: none"> <li>• at AC-3 rated value maximum</li> </ul>                                                                                                                                        | 690 V        |
| <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 ambient temperature 40 °C rated value</li> <li>— at ambient temperature 60 °C rated value</li> </ul> </li> </ul> | 40 A<br>35 A |
| <ul style="list-style-type: none"> <li>• at AC-2 at 400 V rated value</li> </ul>                                                                                                                                       | 32 A         |
| <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>                                                                                  | 40 A         |
| <b>No-load switching frequency</b>                                                                                                                                                                                     | 1 500 1/h    |
| <b>Operating frequency</b>                                                                                                                                                                                             |              |
| <ul style="list-style-type: none"> <li>• at AC-1 maximum</li> </ul>                                                                                                                                                    | 1 000 1/h    |
| <ul style="list-style-type: none"> <li>• at AC-2 maximum</li> </ul>                                                                                                                                                    | 1 000 1/h    |
| <ul style="list-style-type: none"> <li>• at AC-3 maximum</li> </ul>                                                                                                                                                    | 1 000 1/h    |
| <ul style="list-style-type: none"> <li>• at AC-4 maximum</li> </ul>                                                                                                                                                    | 300 1/h      |

#### Control circuit/ Control

|                                                                          |      |
|--------------------------------------------------------------------------|------|
| <b>Type of voltage of the control supply voltage</b>                     | AC   |
| <b>Control supply voltage 1 at AC</b>                                    |      |
| <ul style="list-style-type: none"> <li>• at 50 Hz rated value</li> </ul> | 24 V |
| <ul style="list-style-type: none"> <li>• at 60 Hz rated value</li> </ul> | 24 V |

|                                                                                       |             |
|---------------------------------------------------------------------------------------|-------------|
| <b>Operating range factor control supply voltage rated value of magnet coil at AC</b> |             |
| • at 50 Hz                                                                            | 0.8 ... 1.1 |
| • at 60 Hz                                                                            | 0.8 ... 1.1 |
| <b>Apparent pick-up power of magnet coil at AC</b>                                    |             |
| • at 50 Hz                                                                            | 65 V·A      |
| <b>Inductive power factor with closing power of the coil</b>                          |             |
| • at 50 Hz                                                                            | 0.82        |
| <b>Apparent holding power of magnet coil at AC</b>                                    |             |
| • at 50 Hz                                                                            | 8.5 V·A     |
| <b>Inductive power factor with the holding power of the coil</b>                      |             |
| • at 50 Hz                                                                            | 0.25        |

#### Auxiliary circuit

|                                                                 |                                            |
|-----------------------------------------------------------------|--------------------------------------------|
| <b>Number of NC contacts</b>                                    |                                            |
| • for auxiliary contacts                                        |                                            |
| — instantaneous contact                                         | 3                                          |
| <b>Number of NO contacts</b>                                    |                                            |
| • for auxiliary contacts                                        |                                            |
| — instantaneous contact                                         | 3                                          |
| <b>Operating current of auxiliary contacts at AC-12 maximum</b> | 10 A                                       |
| <b>Operating current of auxiliary contacts at AC-15</b>         |                                            |
| • at 230 V                                                      | 6 A                                        |
| • at 400 V                                                      | 3 A                                        |
| <b>Operating current of auxiliary contacts at DC-13</b>         |                                            |
| • at 24 V                                                       | 10 A                                       |
| • at 60 V                                                       | 2 A                                        |
| • at 110 V                                                      | 1 A                                        |
| • at 220 V                                                      | 0.3 A                                      |
| <b>Contact reliability of auxiliary contacts</b>                | < 1 error per 100 million operating cycles |

#### UL/CSA ratings

|                                                             |             |
|-------------------------------------------------------------|-------------|
| <b>Contact rating of auxiliary contacts according to UL</b> | A600 / Q600 |
|-------------------------------------------------------------|-------------|

#### Short-circuit protection

|                                                                 |                                                 |
|-----------------------------------------------------------------|-------------------------------------------------|
| <b>Design of the fuse link</b>                                  |                                                 |
| • for short-circuit protection of the main circuit              |                                                 |
| — with type of coordination 1 required                          | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 100 A |
| — with type of assignment 2 required                            | gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A  |
| • for short-circuit protection of the auxiliary switch required | fuse gL/gG: 10 A                                |

#### Installation/ mounting/ dimensions

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------|
| <b>Mounting position</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | +/-180° rotation possible on vertical mounting surface; 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>Height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 114 mm                                                                                                                               |
| <b>Width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 135 mm                                                                                                                               |
| <b>Depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 171 mm                                                                                                                               |
| <b>Required spacing</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                      |
| <ul style="list-style-type: none"> <li>• with side-by-side mounting <ul style="list-style-type: none"> <li>— forwards 6 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 6 mm</li> <li>— downwards 6 mm</li> <li>— at the side 6 mm</li> </ul> </li> <li>• for grounded parts <ul style="list-style-type: none"> <li>— forwards 6 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 6 mm</li> <li>— at the side 6 mm</li> <li>— downwards 6 mm</li> </ul> </li> <li>• for live parts <ul style="list-style-type: none"> <li>— forwards 6 mm</li> <li>— Backwards 0 mm</li> <li>— upwards 6 mm</li> <li>— downwards 6 mm</li> <li>— at the side 6 mm</li> </ul> </li> </ul> |                                                                                                                                      |

## Connections/Terminals

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------|
| <b>Type of electrical connection</b>                                                                                                                                                                                                                                                                                                                                                                                                                           |                                                    |
| <ul style="list-style-type: none"> <li>• for main current circuit</li> <li>• for auxiliary and control current circuit</li> </ul>                                                                                                                                                                                                                                                                                                                              | spring-loaded terminals<br>spring-loaded terminals |
| <b>Type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                            |                                                    |
| <ul style="list-style-type: none"> <li>• for main contacts <ul style="list-style-type: none"> <li>— solid 2x (1 ... 10 mm<sup>2</sup>)</li> <li>— single or multi-stranded 2x (1 ... 10 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (1 ... 6 mm<sup>2</sup>)</li> <li>— finely stranded without core end processing 2x (1 ... 6 mm<sup>2</sup>)</li> </ul> </li> <li>• at AWG conductors for main contacts 1x (18 ... 8)</li> </ul> |                                                    |
| <b>Type of connectable conductor cross-sections</b>                                                                                                                                                                                                                                                                                                                                                                                                            |                                                    |
| <ul style="list-style-type: none"> <li>• for auxiliary contacts <ul style="list-style-type: none"> <li>— single or multi-stranded 2x (0,5 ... 2,5 mm<sup>2</sup>)</li> <li>— finely stranded with core end processing 2x (0.5 ... 1.5 mm<sup>2</sup>)</li> </ul> </li> </ul>                                                                                                                                                                                   |                                                    |

- finely stranded without core end processing
- at AWG conductors for auxiliary contacts

2x (0.5 ... 1.5 mm²)

2x (20 ... 14)

#### Safety related data

|                                                                           |           |
|---------------------------------------------------------------------------|-----------|
| <b>B10 value</b>                                                          |           |
| • with high demand rate acc. to SN 31920                                  | 1 000 000 |
| <b>Proportion of dangerous failures</b>                                   |           |
| • with low demand rate acc. to SN 31920                                   | 40 %      |
| • with high demand rate acc. to SN 31920                                  | 75 %      |
| <b>Failure rate [FIT]</b>                                                 |           |
| • with low demand rate acc. to SN 31920                                   | 100 FIT   |
| <b>T1 value for proof test interval or service life acc. to IEC 61508</b> | 20 y      |

#### Communication/ Protocol

|                                           |    |
|-------------------------------------------|----|
| <b>Product function Bus communication</b> | No |
| <b>Protocol is supported</b>              |    |
| • AS-interface protocol                   | No |

#### Certificates/approvals

| General Product Approval                                                            | Declaration of Conformity                                                                       | Test Certificates                        | Marine / Shipping                                                                                                                                                                                                                                                                              |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <br>EG-Konf. | <a href="#">Special Test Certificate</a> | <br>ABS <br>BUREAU VERITAS <br>GL |

| Marine / Shipping                                                                                                                                                                                                                                                                                                                                                                                                                                                             | other                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| <br>LRS <br>PRS <br>RINA <br>RMRS <br>DNV GL | <a href="#">Environmental Confirmations</a> |

| other                        | Railway                             |
|------------------------------|-------------------------------------|
| <a href="#">Confirmation</a> | <a href="#">Vibration and Shock</a> |

#### Further information

**Information- and Downloadcenter (Catalogs, Brochures,...)**  
<http://www.siemens.com/industrial-controls/catalogs>

**Industry Mall (Online ordering system)**

<https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RA2425-8XF32-2AC2>

**Cax online generator**

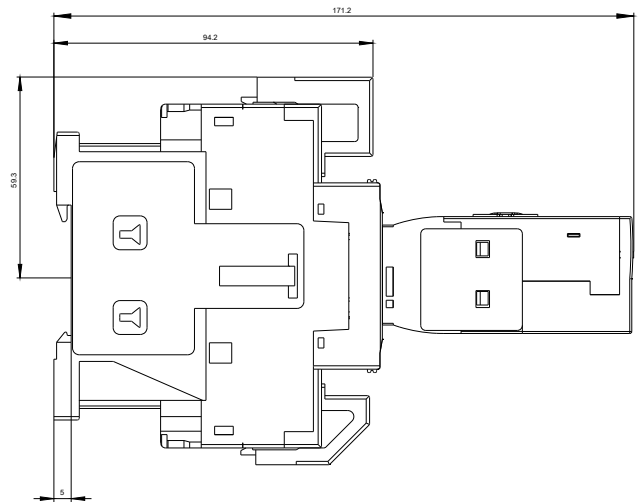
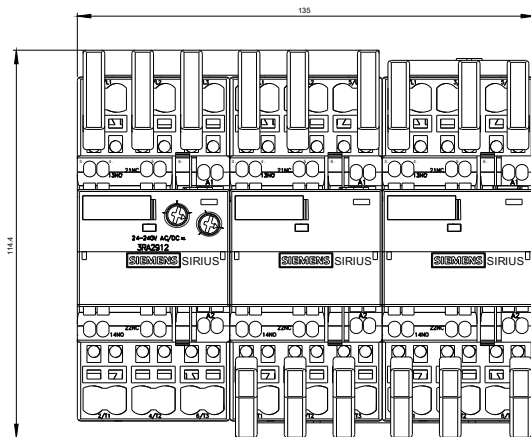
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2425-8XF32-2AC2>

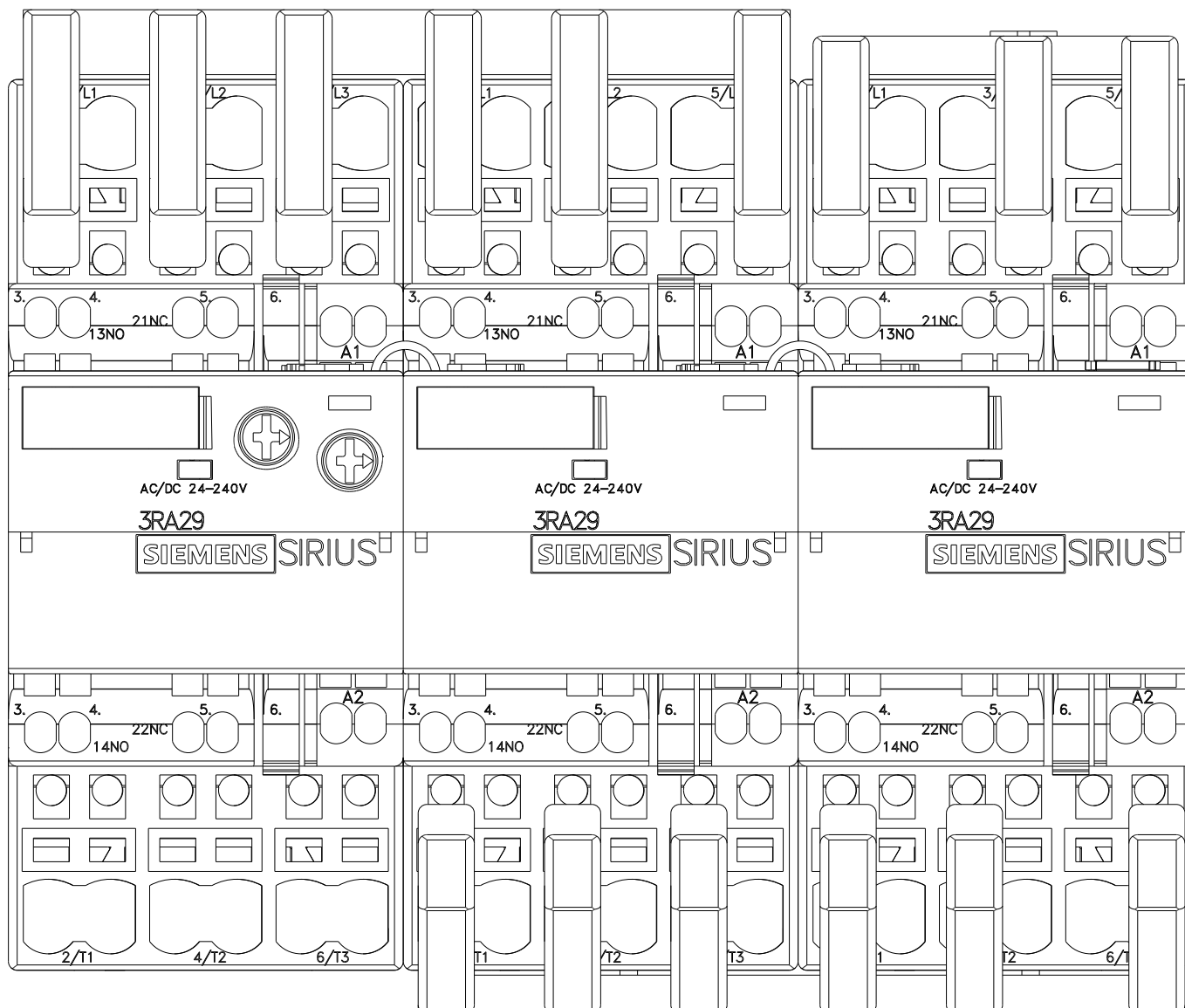
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**

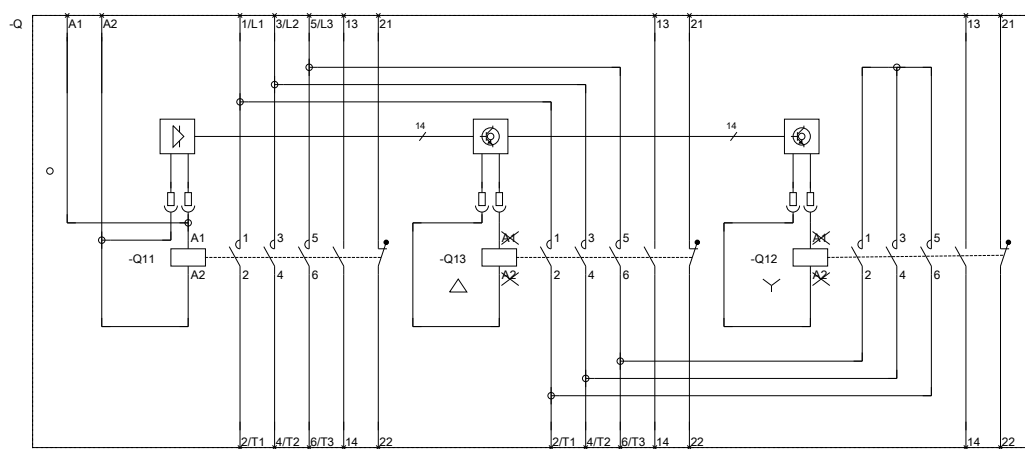
<https://support.industry.siemens.com/cs/ww/en/ps/3RA2425-8XF32-2AC2>

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

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2425-8XF32-2AC2&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2425-8XF32-2AC2&lang=en)







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