

Contactor assembly for star-delta (wye-delta) start I/O-Link AC-3,  
22/30 kW/400 V, 20-33 V AC/DC 3-pole, Size S2 Screw terminal  
Electrical and mechanical interlock 3 NO + 3 NC integrated



|                                                                                                  |                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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="#">3RT2035-1NB30-0CC0</a></li> <li>• 2 of the supplied contactor <a href="#">3RT2035-1NB30</a></li> <li>• 3 of the supplied contactor <a href="#">3RT2026-1BB40</a></li> <li>• of the supplied RS assembly kit <a href="#">3RA2933-2C</a></li> <li>• of the supplied function module for communication <a href="#">3RA2711-1CA00</a></li> </ul> |
| General technical data                                                                           |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Size of contactor                                                                                | S2                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Product extension                                                                                | No                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <ul style="list-style-type: none"> <li>• Auxiliary switch</li> </ul>                             |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Insulation voltage                                                                               | 690 V                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <ul style="list-style-type: none"> <li>• with degree of pollution 3 at AC rated value</li> </ul> |                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Degree of pollution                                                                              | 3                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Surge voltage resistance rated value                                                             | 6 kV                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Protection class IP                                                                              |                                                                                                                                                                                                                                                                                                                                                                                                                               |

|                                                              |                           |
|--------------------------------------------------------------|---------------------------|
| • on the front                                               | IP20                      |
| <b>Shock resistance at rectangular impulse</b>               |                           |
| • at DC                                                      | 7.7g / 5 ms, 4.5g / 10 ms |
| <b>Shock resistance with sine pulse</b>                      |                           |
| • at DC                                                      | 12g / 5 ms, 7g / 10 ms    |
| <b>Mechanical service life (switching cycles)</b>            |                           |
| • of contactor typical                                       | 10 000 000                |
| • of the contactor with added auxiliary switch block typical | 10 000 000                |
| <b>Reference code acc. to DIN EN 81346-2</b>                 | Q                         |

#### Ambient conditions

|                                                        |                |
|--------------------------------------------------------|----------------|
| <b>Installation altitude at height above sea level</b> |                |
| • maximum                                              | 2 000 m        |
| <b>Ambient temperature</b>                             |                |
| • during operation                                     | -25 ... +60 °C |
| • during storage                                       | -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>                        |           |
| • at AC-3 rated value maximum                   | 690 V     |
| <b>Operating current</b>                        |           |
| • at AC-1 at 400 V                              |           |
| — at ambient temperature 40 °C rated value      | 65 A      |
| — at ambient temperature 60 °C rated value      | 60 A      |
| • at AC-2 at 400 V rated value                  | 50 A      |
| • at AC-3                                       |           |
| — at 400 V rated value                          | 65 A      |
| <b>Operating power</b>                          |           |
| • at AC-2 at 400 V rated value                  | 22 kW     |
| • at AC-3                                       |           |
| — at 400 V rated value                          | 22 kW     |
| • at AC-4 at 400 V rated value                  | 38 kW     |
| <b>No-load switching frequency</b>              | 1 500 1/h |
| <b>Operating frequency</b>                      |           |
| • at AC-1 maximum                               | 1 000 1/h |
| • at AC-2 maximum                               | 750 1/h   |
| • at AC-3 maximum                               | 1 000 1/h |
| • at AC-4 maximum                               | 300 1/h   |

#### Control circuit/ Control

|                                                           |               |
|-----------------------------------------------------------|---------------|
| Type of voltage of the control supply voltage             | AC/DC         |
| Control supply voltage 1 at AC                            |               |
| • at 50 Hz                                                | 20 ... 33 V   |
| • at 60 Hz                                                | 20 ... 33 V   |
| Control supply voltage 1                                  |               |
| • at DC                                                   | 20 ... 33 V   |
| Design of the surge suppressor                            | with varistor |
| Apparent pick-up power of magnet coil at AC               |               |
| • at 50 Hz                                                | 82 V·A        |
| • at 60 Hz                                                | 82 V·A        |
| Inductive power factor with closing power of the coil     |               |
| • at 50 Hz                                                | 0.64          |
| • at 60 Hz                                                | 0.5           |
| Apparent holding power of magnet coil at AC               |               |
| • at 50 Hz                                                | 6 V·A         |
| • at 60 Hz                                                | 6 V·A         |
| Inductive power factor with the holding power of the coil |               |
| • at 50 Hz                                                | 0.36          |
| • at 60 Hz                                                | 0.39          |
| Closing power of magnet coil at DC                        | 28 W          |
| Holding power of magnet coil at DC                        | 4 W           |

#### Auxiliary circuit

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

#### UL/CSA ratings

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

#### Short-circuit protection

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                          |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Design of the fuse link</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                          |
| <ul style="list-style-type: none"> <li>• for short-circuit protection of the main circuit <ul style="list-style-type: none"> <li>— with type of coordination 1 required</li> <li>— with type of assignment 2 required</li> </ul> </li> <li>• for short-circuit protection of the auxiliary switch required</li> </ul>                                                                                                                                                                                                                                                                        | gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A<br>gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 80 A<br>fuse gG: 10 A                                     |
| <b>Installation/ mounting/ dimensions</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                          |
| <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 fixing                                                                                                                             |
| <b>Height</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 142 mm                                                                                                                                   |
| <b>Width</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 177.5 mm                                                                                                                                 |
| <b>Depth</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 223 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</li> <li>— Backwards</li> <li>— upwards</li> <li>— downwards</li> <li>— at the side</li> </ul> </li> <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> <li>— downwards</li> <li>— at the side</li> </ul> </li> </ul> | 10 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm<br><br>10 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm<br><br>10 mm<br>0 mm<br>10 mm<br>10 mm<br>10 mm |
| <b>Connections/ Terminals</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |                                                                                                                                          |
| <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>                                                                                                                                                                                                                                                                                                                                                                                                                                                            | screw-type terminals<br>screw-type 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</li> <li>— single or multi-stranded</li> </ul> </li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                         | 2x (1 ... 35 mm²), 1x (1 ... 50 mm²)<br>2x (1 ... 35 mm²), 1x (1 ... 50 mm²)                                                             |

|                                                     |                                                                       |
|-----------------------------------------------------|-----------------------------------------------------------------------|
| — finely stranded with core end processing          | 2x (1 ... 25 mm <sup>2</sup> ), 1x (1 ... 35 mm <sup>2</sup> )        |
| • at AWG conductors for main contacts               | 2x (18 ... 2), 1x (18 ... 1)                                          |
| <b>Type of connectable conductor cross-sections</b> |                                                                       |
| • for auxiliary contacts                            |                                                                       |
| — single or multi-stranded                          | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) |
| — finely stranded with core end processing          | 2x (0,5 ... 1,5 mm <sup>2</sup> ), 2x (0,75 ... 2,5 mm <sup>2</sup> ) |
| • at AWG conductors for auxiliary contacts          | 2x (20 ... 16), 2x (18 ... 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                                  | 73 %      |
| <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  |
| <b>Product function Control circuit interface with IO link</b> | Yes |

#### Certificates/ approvals

| General Product Approval | Declaration of Conformity | Test Certificates | Marine / Shipping | other |
|--------------------------|---------------------------|-------------------|-------------------|-------|
|--------------------------|---------------------------|-------------------|-------------------|-------|



[Miscellaneous](#)

[Type Test Certificates/Test Report](#)



[Confirmation](#)

#### Further information

**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=3RA2434-8XE32-1NB3>

**Cax online generator**

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2434-8XE32-1NB3>

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

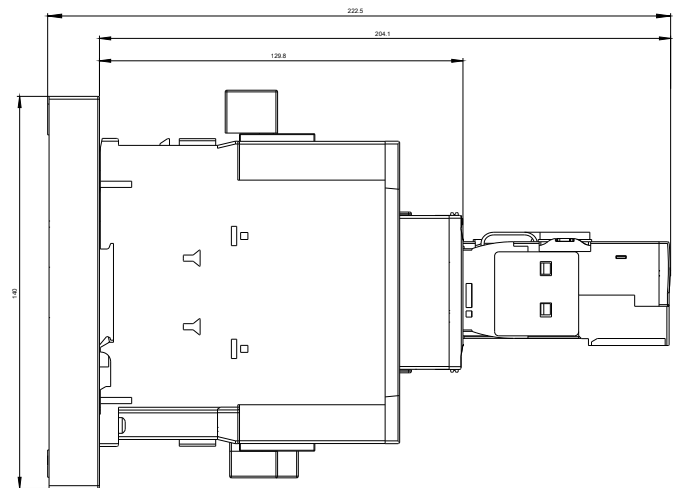
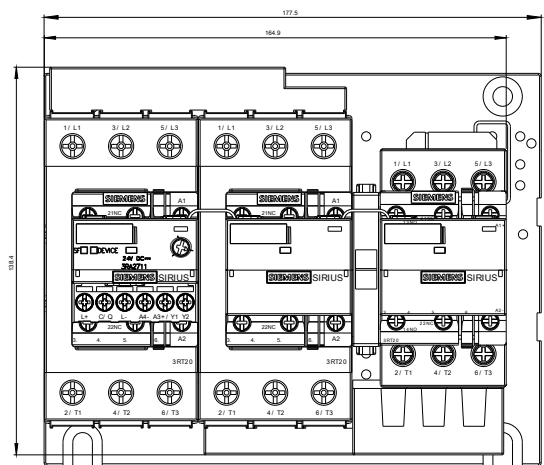
<http://support.industry.siemens.com/cs/ww/en/ps/3RA2434-8XE32-1NB3>

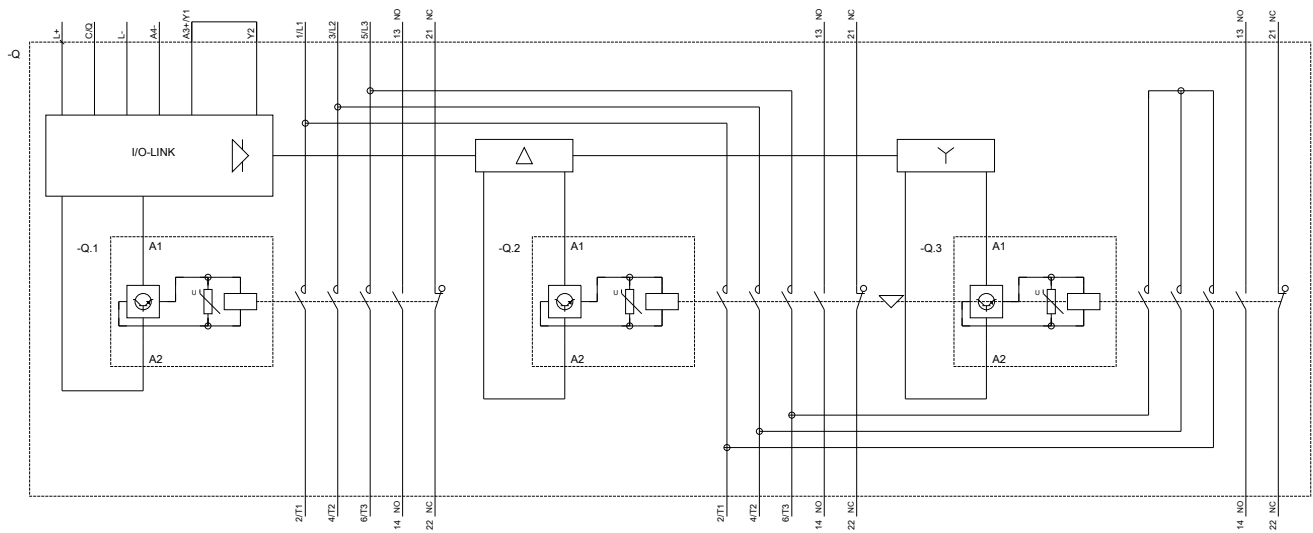
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**

[http://www.automation.siemens.com/bilddb/cax\\_de.aspx?mlfb=3RA2434-8XE32-1NB3&lang=en](http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2434-8XE32-1NB3&lang=en)

**Characteristic: Tripping characteristics, I<sub>t</sub>, Let-through current**

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2434-8XE32-1NB3/char>





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