SIEMENS

## Data sheet 3RA2415-8XF31-2AB0

Contactor assembly for star-delta (wye-delta) start AC-3, 5.5 kW/400 V, 24 V AC 50/60 Hz, 3-pole, Size S00 Spring-type terminals electrical and mechanical interlock 3 NO integrated

| | |
|---|---|
| **Product brand name** | SIRIUS |
| **Product designation** | Contactor assembly for star-delta (wye-delta) start |
| **Product type designation** | 3RA24 |
| **Manufacturer's article number** | |
| • 1 of the supplied contactor | 3RT2015-2AB01 |
| • 2 of the supplied contactor | 3RT2015-2AB01 |
| • 3 of the supplied contactor | 3RT2015-2AB01 |
| • of the supplied RS assembly kit | 3RA2913-2BB2 |
| • of the supplied function module for wye-delta circuits | 3RA2816-0EW20 |

### General technical data

| | |
|---|---|
| **Size of contactor** | S00 |
| **Product extension** | |
| • Auxiliary switch | No |
| **Insulation voltage** | |
| • with degree of pollution 3 at AC rated value | 690 V |
| **Degree of pollution** | 3 |
| **Surge voltage resistance rated value** | 6 kV |
| **Protection class IP** | |

| | |
|---|---|
| • on the front | IP20 |
| **Shock resistance** | 9.8g / 5 ms and 5.9g / 10 ms |
| **Shock resistance at rectangular impulse** | |
| • at AC | 6,7g / 5 ms, 4,2g / 10 ms |
| • at DC | 6,7g / 5 ms, 4,2g / 10 ms |
| **Shock resistance with sine pulse** | |
| • at AC | 10,5g / 5 ms, 6,6g / 10 ms |
| • at DC | 10,5g / 5 ms, 6,6g / 10 ms |
| **Mechanical service life (switching cycles)** | |
| • of contactor typical | 10 000 000 |
| • of the contactor with added auxiliary switch block typical | 10 000 000 |
| **Reference code acc. to DIN EN 81346-2** | Q |

## Ambient conditions

| | |
|---|---|
| **Installation altitude at height above sea level** | |
| • maximum | 2 000 m |
| **Ambient temperature** | |
| • during operation | -25 ... +60 °C |
| • during storage | -55 ... +80 °C |

## Main circuit

| | |
|---|---|
| **Number of poles for main current circuit** | 3 |
| **Number of NO contacts for main contacts** | 3 |
| **Number of NC contacts for main contacts** | 0 |
| **Operating voltage** | |
| • at AC-3 rated value maximum | 690 V |
| **Operating current** | |
| • at AC-1 at 400 V | |
| — at ambient temperature 40 °C rated value | 18 A |
| — at ambient temperature 60 °C rated value | 16 A |
| • at AC-2 at 400 V rated value | 12 A |
| • at AC-3 | |
| — at 400 V rated value | 12 A |
| **Operating power** | |
| • at AC-2 at 400 V rated value | 5.5 kW |
| • at AC-3 | |
| — at 400 V rated value | 5.5 kW |
| — at 500 V rated value | 7.2 kW |
| — at 690 V rated value | 9.2 kW |
| **No-load switching frequency** | 1 500 1/h |
| **Operating frequency** | |
| • at AC-1 maximum | 1 000 1/h |

| | |
|---|---|
| • at AC-2 maximum | 1 000 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 |
| **Control supply voltage 1 at AC** | |
| • at 50 Hz rated value | 24 V |
| • at 60 Hz rated value | 24 V |
| **Operating range factor control supply voltage rated value of magnet coil at AC** | |
| • at 50 Hz | 0.8 ... 1.1 |
| • at 60 Hz | 0.85 ... 1.1 |
| **Apparent pick-up power of magnet coil at AC** | |
| • at 50 Hz | 56 V·A |
| • at 60 Hz | 51 V·A |
| **Inductive power factor with closing power of the coil** | |
| • at 50 Hz | 0.8 |
| • at 60 Hz | 0.75 |
| **Apparent holding power of magnet coil at AC** | |
| • at 50 Hz | 10.4 V·A |
| • at 60 Hz | 8.6 V·A |
| **Inductive power factor with the holding power of the coil** | |
| • at 50 Hz | 0.25 |
| • at 60 Hz | 0.25 |

| Auxiliary circuit | |
|---|---|
| **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 | |
|---|---|
| **Design of the fuse link** | |
| • for short-circuit protection of the main circuit | |
| — with type of coordination 1 required | gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 35 A |
| — with type of assignment 2 required | gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 20 A |
| • for short-circuit protection of the auxiliary switch required | fuse gG: 10 A |

| Installation/ mounting/ dimensions | |
|---|---|
| **Mounting position** | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| **Mounting type** | screw and snap-on mounting onto 35 mm standard mounting rail |
| **Height** | 84 mm |
| **Width** | 135 mm |
| **Depth** | 145 mm |
| **Required spacing** | |
| • with side-by-side mounting | |
| — forwards | 6 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — downwards | 6 mm |
| — at the side | 6 mm |
| • for grounded parts | |
| — forwards | 6 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — at the side | 6 mm |
| — downwards | 6 mm |
| • for live parts | |
| — forwards | 6 mm |
| — Backwards | 0 mm |
| — upwards | 6 mm |
| — downwards | 6 mm |
| — at the side | 6 mm |

| Connections/ Terminals | |
|---|---|
| **Type of electrical connection** | |
| • for main current circuit | spring-loaded terminals |
| • for auxiliary and control current circuit | spring-loaded terminals |
| **Type of connectable conductor cross-sections** | |
| • for main contacts | |
| — solid | 2x (0.5 ... 4 mm²) |

| | |
|---|---|
| — single or multi-stranded | 2x (0,5 ... 4 mm²) |
| — finely stranded with core end processing | 2x (0.5 ... 2.5 mm²) |
| — finely stranded without core end processing | 2x (0.5 ... 2.5 mm²) |
| • at AWG conductors for main contacts | 1x (20 ... 12) |
| **Type of connectable conductor cross-sections** | |
| • for auxiliary contacts | |
| — single or multi-stranded | 2x (0,5 ... 2,5 mm²) |
| — finely stranded with core end processing | 2x (0.5 ... 1.5 mm²) |
| — finely stranded without core end processing | 2x (0.5 ... 1.5 mm²) |
| • at AWG conductors for auxiliary contacts | 2x (20 ... 14) |

## Safety related data

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

## Communication/ Protocol

| | |
|---|---|
| **Product function Bus communication** | No |
| **Protocol is supported** | |
| • AS-Interface protocol | No |
| Product function Control circuit interface with IO link | No |

## Certificates/ approvals

| General Product Approval | Declaration of Conformity | | Test Certificates | | Marine / Shipping |
|---|---|---|---|---|---|
| EAC | CE EG-Konf. | Miscellaneous | Special Test Certificate | Type Test Certificates/Test Report | ABS |

| Marine / Shipping | | | | | |
|---|---|---|---|---|---|
| BUREAU VERITAS | LRS | PRS | RINA | RMRS | DNV·GL |

| other | Railway |
|---|---|
| Confirmation | Vibration and Shock |

## 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=3RA2415-8XF31-2AB0

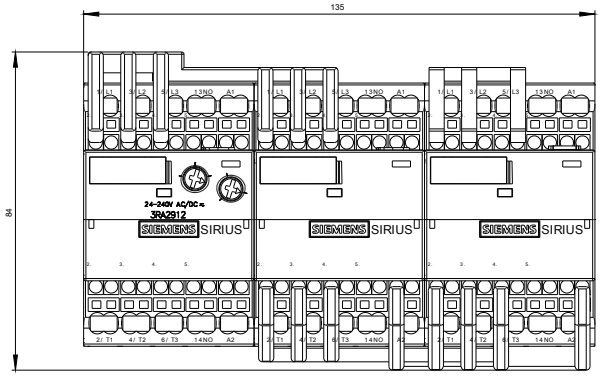
**Cax online generator**
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2415-8XF31-2AB0

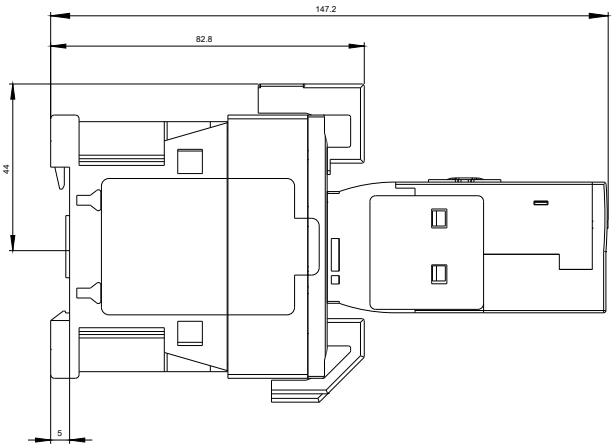
**Service&Support (Manuals, Certificates, Characteristics, FAQs,...)**
https://support.industry.siemens.com/cs/ww/en/ps/3RA2415-8XF31-2AB0

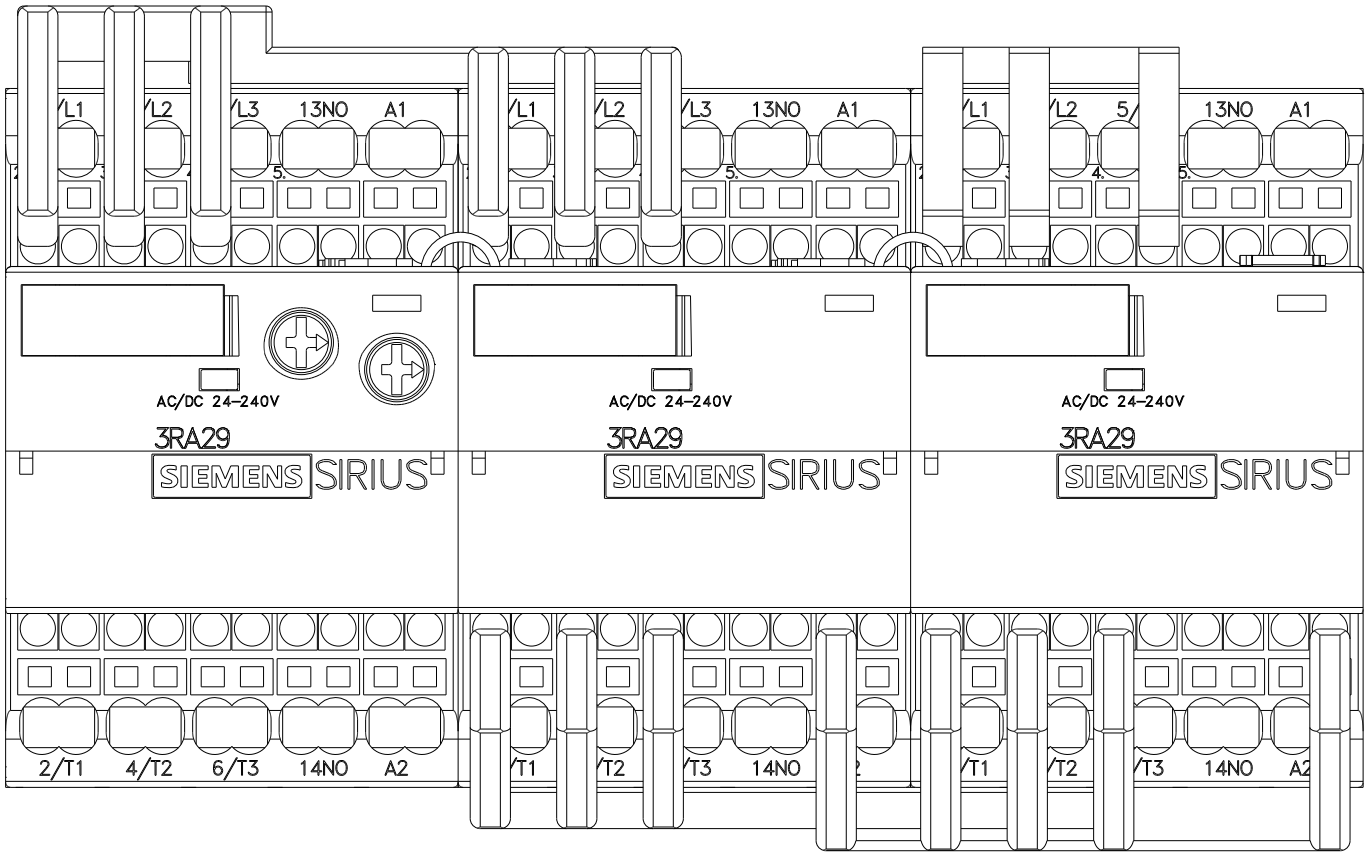
**Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)**
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2415-8XF31-2AB0&lang=en

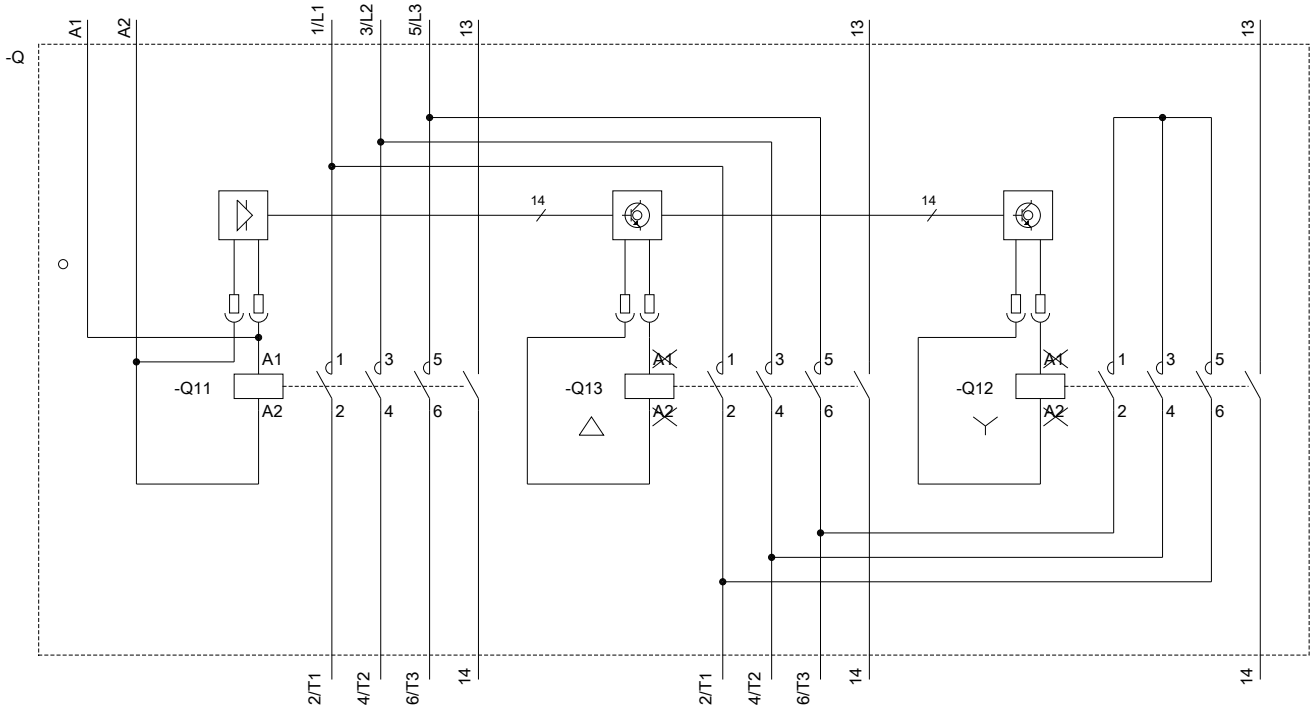
**Characteristic: Tripping characteristics, $I^2t$, Let-through current**
https://support.industry.siemens.com/cs/ww/en/ps/3RA2415-8XF31-2AB0/char

**Further characteristics (e.g. electrical endurance, switching frequency)**
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2415-8XF31-2AB0&objecttype=14&gridview=view1





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