

STAR-DELTA (WYE-D.) COMBINATION
 AC3:55KW/400V 230V AC 50/60 HZ SIZE S2, SCREW
 CONNECTION ELECTR. AND MECH. INTERLOCK
 3NO+3NC INTEGR.,



Figure similar

| | |
|--|--|
| product brand name | SIRIUS |
| Product designation | star-delta (wye-delta) contactor assembly 3RA24 |
| Manufacturer article number | |
| <ul style="list-style-type: none"> • 1 of the supplied contactor • 2 of the supplied contactor • 3 of the supplied contactor • of the supplied RS assembly kit • of the supplied function module for wye-delta circuits | 3RT2037-1AL20 3RT2037-1AL20 3RT2035-1AL20 3RA2934-2BB1 3RA2816-0EW20 |

General technical data:

| | | |
|--|----|--------------------------|
| Insulation voltage | | |
| <ul style="list-style-type: none"> • with degree of pollution 3 Rated value | V | 690 |
| Degree of pollution | | 3 |
| Surge voltage resistance Rated value | kV | 6 |
| Mechanical service life (switching cycles) | | |
| <ul style="list-style-type: none"> • of the contactor typical • of the contactor with added auxiliary switch block typical | | 10 000 000 10 000 000 |
| Protection class IP | | |
| <ul style="list-style-type: none"> • on the front | | IP20 |
| Equipment marking | | |
| <ul style="list-style-type: none"> • acc. to DIN EN 81346-2 | | Q |

Main circuit:

| | | |
|---|--|---|
| Number of poles for main current circuit | | 3 |
| Number of NC contacts for main contacts | | 0 |

| | | |
|--|-----|-------|
| Number of NO contacts for main contacts | | 3 |
| Operating voltage | | |
| • at AC-3 Rated value maximum | V | 690 |
| Operating current | | |
| • at AC-1 | | |
| — at 400 V at ambient temperature 40 °C Rated value | A | 80 |
| — at 400 V at ambient temperature 60 °C Rated value | A | 70 |
| • at AC-2 at 400 V Rated value | A | 115 |
| • at AC-3 | | |
| — at 400 V Rated value | A | 115 |
| Operating power | | |
| • at AC-2 at 400 V Rated value | kW | 55 |
| • at AC-4 at 400 V Rated value | kW | 48.5 |
| Operating power | | |
| • at AC-3 | | |
| — at 400 V Rated value | kW | 55 |
| Operating frequency | | |
| • at AC-3 maximum | 1/h | 700 |
| No-load switching frequency | 1/h | 1 500 |

Control circuit/ Control:

| | | |
|---|---|--------------|
| Type of voltage of the control supply voltage | | AC |
| Control supply voltage 1 with AC | | |
| • at 50 Hz Rated value | V | 230 |
| • at 60 Hz Rated value | V | 230 |
| Operating range factor control supply voltage rated value of the magnet coil with AC | | |
| • at 50 Hz | | 0.8 ... 1.1 |
| • at 60 Hz | | 0.85 ... 1.1 |

Auxiliary circuit:

| | | |
|---|---|----|
| Number of NC contacts | | |
| • for auxiliary contacts | | |
| — instantaneous contact | | 3 |
| — lagging switching | | 0 |
| Number of NO contacts | | |
| • for auxiliary contacts | | |
| — instantaneous contact | | 3 |
| — leading contact | | 0 |
| Product expansion Auxiliary switch | | No |
| Operating current of the auxiliary contacts at AC-12 maximum | A | 10 |

| | | |
|---|---|--|
| Operating current of the auxiliary contacts at AC-15 | | |
| • at 230 V | A | 6 |
| • at 400 V | A | 3 |
| Operating current of the auxiliary contacts at DC-13 | | |
| • at 24 V | A | 10 |
| • at 60 V | A | 2 |
| • at 110 V | A | 1 |
| • at 220 V | A | 0.3 |
| Contact reliability of the auxiliary contacts | | < 1 error per 100 million operating cycles |

UL/CSA ratings:

| | |
|--|-------------|
| Contact rating of the auxiliary contacts acc. to UL | A600 / Q600 |
|--|-------------|

Short-circuit:

| | | |
|---|--|--|
| Design of the fuse link | | |
| <ul style="list-style-type: none"> • for short-circuit protection of the main circuit <ul style="list-style-type: none"> — with type of assignment 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required | | gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A gL/gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 160 A fuse gL/gG: 10 A |

Installation/ mounting/ dimensions:

| | | |
|--|----|--|
| mounting position | | +/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface |
| Mounting type | | screw fixing |
| Height | mm | 142 |
| Width | mm | 177.5 |
| Depth | mm | 223 |
| Required spacing | | |
| <ul style="list-style-type: none"> • with side-by-side mounting <ul style="list-style-type: none"> — forwards — Backwards — upwards — downwards — at the side • for grounded parts <ul style="list-style-type: none"> — forwards — Backwards — upwards — at the side — downwards • for live parts <ul style="list-style-type: none"> — forwards | mm | 10 0 10 10 10 10 10 0 10 10 10 |

| | | |
|---------------|----|----|
| — Backwards | mm | 0 |
| — upwards | mm | 10 |
| — downwards | mm | 10 |
| — at the side | mm | 10 |

Connections/ Terminals:

| | | |
|--|-----|---|
| Type of electrical connection | | |
| • for main current circuit | | screw-type terminals |
| • for auxiliary and control current circuit | | screw-type terminals |
| Type of connectable conductor cross-section | | |
| • for main contacts | | |
| — single or multi-stranded | | 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) |
| — finely stranded with core end processing | | 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) |
| • for AWG conductors for main contacts | | 2x (18 ... 2), 1x (18 ... 1) |
| • for auxiliary contacts | | |
| — single or multi-stranded | | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) |
| — finely stranded with core end processing | | 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) |
| • for AWG conductors for auxiliary contacts | | 2x (20 ... 16), 2x (18 ... 14) |
| Apparent pick-up power of the magnet coil with AC | | |
| • at 50 Hz | V·A | 210 |
| • at 60 Hz | V·A | 188 |

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 | % | 73 |
| Failure rate [FIT] with low demand rate acc. to SN 31920 | FIT | 100 |
| T1 value for proof test interval or service life acc. to IEC 61508 | y | 20 |
| Protection against electrical shock | | finger-safe when touched vertically from front acc. to IEC 60529 |

Mechanical data:

| | | |
|--------------------------|--|----|
| Size of contactor | | S2 |
|--------------------------|--|----|

Communication/ Protocol:

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

Ambient conditions:

| | | |
|--|---|-------|
| Installation altitude at height above sea level maximum | m | 2 000 |
|--|---|-------|

Ambient temperature

- during operation
- during storage

| | |
|----|-------------|
| °C | -25 ... +60 |
| °C | -55 ... +80 |

Certificates/ approvals:

| General Product Approval | Declaration of Conformity | other |
|--------------------------|---------------------------|-------|
|--------------------------|---------------------------|-------|



[Environmental Confirmations](#)

Further information

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

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

Industry Mall (Online ordering system)

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

Cax online generator

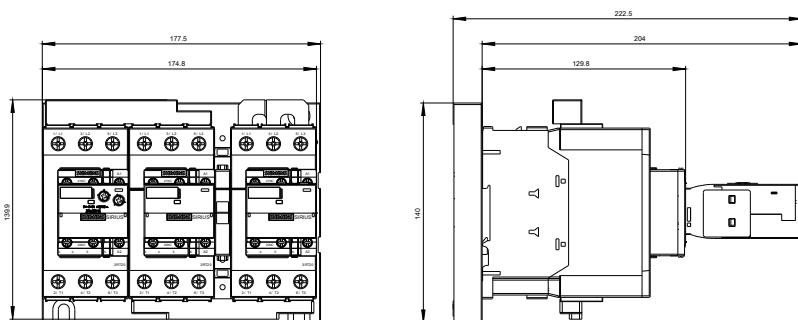
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA24378XF321AL2>

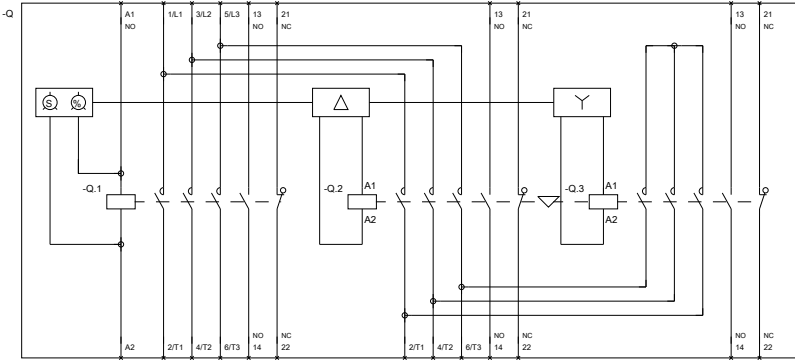
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

<http://support.automation.siemens.com/WW/view/en/3RA24378XF321AL2/all>

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

http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA24378XF321AL2&lang=en





last modified:

11.03.2015