

Contactor assembly for star-delta (wye-delta) start AC-3, 55 kW/400 V, 230 V AC 50/60 Hz, 3-pole, size S2 screw terminals 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"> • 1 of the supplied contactor 3RT2037-1AL20 • 2 of the supplied contactor 3RT2037-1AL20 • 3 of the supplied contactor 3RT2035-1AL20 • of the supplied RS assembly kit 3RA2933-2BB1 • of the supplied function module for wye-delta circuits 3RA2816-0EW20 |

| General technical data | |
|--|-------|
| Size of contactor | S2 |
| Product extension | No |
| <ul style="list-style-type: none"> • Auxiliary switch | |
| Insulation voltage | 690 V |
| <ul style="list-style-type: none"> • with degree of pollution 3 at AC rated value | |
| Degree of pollution | 3 |
| Surge voltage resistance rated value | 6 kV |
| Protection class IP | |

| | |
|--|-----------------------------|
| <ul style="list-style-type: none"> • on the front | IP20 |
| Shock resistance at rectangular impulse | |
| <ul style="list-style-type: none"> • at AC | 11.8g / 5 ms, 7.4g / 10 ms |
| Shock resistance with sine pulse | |
| <ul style="list-style-type: none"> • at AC | 18.5g / 5 ms, 11.6g / 10 ms |
| Mechanical service life (switching cycles) | |
| <ul style="list-style-type: none"> • of contactor typical | 10 000 000 |
| <ul style="list-style-type: none"> • of the contactor with added auxiliary switch block typical | 10 000 000 |
| Reference code acc. to DIN EN 81346-2 | Q |

Ambient conditions

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| Installation altitude at height above sea level | |
| <ul style="list-style-type: none"> • maximum | 2 000 m |
| Ambient temperature | |
| <ul style="list-style-type: none"> • during operation | -25 ... +60 °C |
| <ul style="list-style-type: none"> • during storage | -55 ... +80 °C |

Main circuit

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|---|--|
| 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 | |
| <ul style="list-style-type: none"> • at AC-3 rated value maximum | 690 V |
| Operating current | |
| <ul style="list-style-type: none"> • at AC-1 at 400 V <ul style="list-style-type: none"> — at ambient temperature 40 °C rated value — at ambient temperature 60 °C rated value • at AC-2 at 400 V rated value • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value | 115 A 100 A 115 A 115 A |
| Operating power | |
| <ul style="list-style-type: none"> • at AC-2 at 400 V rated value • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value • at AC-4 at 400 V rated value | 55 kW 55 kW 48.5 kW |
| No-load switching frequency | 1 500 1/h |
| Operating frequency | |
| <ul style="list-style-type: none"> • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum | 800 1/h 400 1/h 700 1/h 200 1/h |

Control circuit/ Control

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| Type of voltage of the control supply voltage | AC |
| Control supply voltage 1 at AC | |
| • at 50 Hz rated value | 230 V |
| • at 60 Hz rated value | 230 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 | 422 V·A |
| • at 60 Hz | 378 V·A |
| Inductive power factor with closing power of the coil | |
| • at 50 Hz | 0.69 |
| • at 60 Hz | 0.65 |
| Apparent holding power of magnet coil at AC | |
| • at 50 Hz | 36.4 V·A |
| • at 60 Hz | 35 V·A |
| Inductive power factor with the holding power of the coil | |
| • at 50 Hz | 0.36 |
| • at 60 Hz | 0.39 |

Auxiliary circuit

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| 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

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

Short-circuit protection

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| Design of the fuse link | |
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- for short-circuit protection of the main circuit
 - with type of coordination 1 required
 - with type of assignment 2 required
- for short-circuit protection of the auxiliary switch required

gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 250 A
 gG NH 3NA, DIAZED 5SB, NEOZED 5SE: 125 A
 fuse gG: 10 A

Installation/ mounting/ dimensions

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| 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 | 142 mm |
| Width | 177.5 mm |
| Depth | 223 mm |
| 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 — Backwards — upwards — downwards — at the side | 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm |

Connections/ Terminals

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|--|--|
| Type of electrical connection | |
| <ul style="list-style-type: none"> • for main current circuit • for auxiliary and control current circuit | screw-type terminals screw-type terminals |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — single or multi-stranded — finely stranded with core end processing | 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 35 mm ²), 1x (1 ... 50 mm ²) 2x (1 ... 25 mm ²), 1x (1 ... 35 mm ²) |

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|--|--|
| <ul style="list-style-type: none"> • at AWG conductors for main contacts | 2x (18 ... 2), 1x (18 ... 1) |
| Type of connectable conductor cross-sections | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • at AWG conductors for auxiliary contacts | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²) 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14) |





Safety related data

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| B10 value | |
| <ul style="list-style-type: none"> • with high demand rate acc. to SN 31920 | 1 000 000 |
| Proportion of dangerous failures | |
| <ul style="list-style-type: none"> • with low demand rate acc. to SN 31920 • with high demand rate acc. to SN 31920 | 40 % 73 % |
| Failure rate [FIT] | |
| <ul style="list-style-type: none"> • 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

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|---|----|
| Product function Bus communication | No |
| Protocol is supported | |
| <ul style="list-style-type: none"> • 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 |
|---|---|---|--|
|  |  EG-Konf. | Miscellaneous Type Test Certificates/Test Report |   |
| other | | | |
| 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=3RA2437-8XF32-1AL2>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RA2437-8XF32-1AL2>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2437-8XF32-1AL2>

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

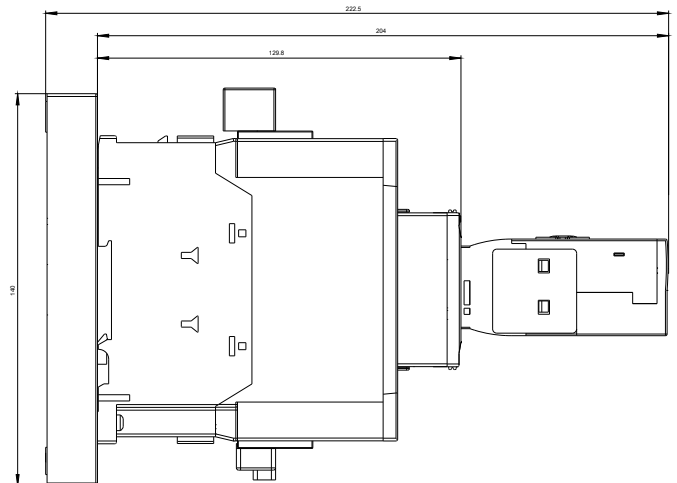
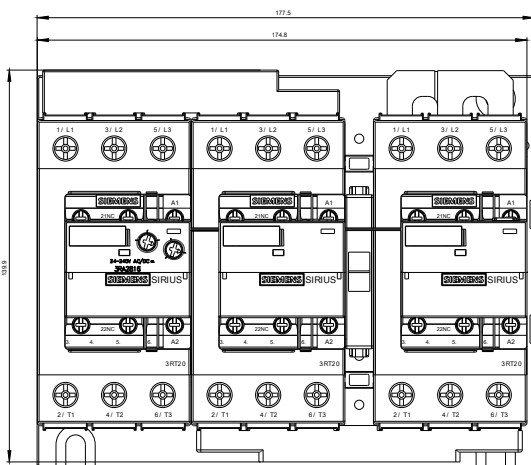
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RA2437-8XF32-1AL2&lang=en

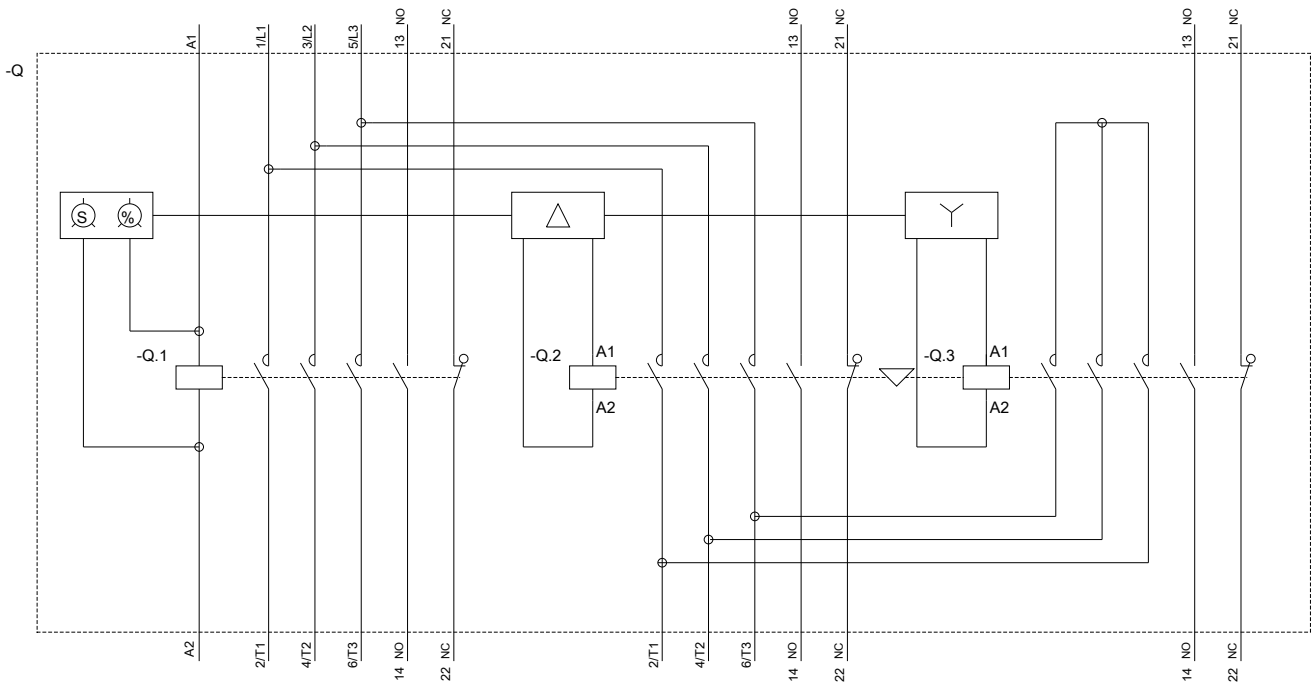
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RA2437-8XF32-1AL2/char>

Further characteristics (e.g. electrical endurance, switching frequency)

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RA2437-8XF32-1AL2&objecttype=14&gridview=view1>





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