



SOLID-STATE CONTACTOR 3-PH 3RF3 AC53 12.5A
 40 DEGREES C 48-480V / 110-230V AC 2-PH.
 CONTROLLED INSTANTANEOUS SCREW
 TERMINALS

General technical data:

| | | |
|--|----|--|
| product brand name | | SIRIUS |
| Product designation _2 of the accessories that can be ordered | | Connection adapter |
| Product designation _1 of the accessories that can be ordered | | Link module |
| Manufacturer article number | | |
| <ul style="list-style-type: none"> • _1 of the accessories that can be ordered • _2 of the accessories that can be ordered | | 3RA2921-1BA00 3RF3900-0QA88 |
| Protection class IP | | IP20 |
| Insulation voltage Rated value | V | 600 |
| Installation altitude at height above sea level maximum | m | 1 000 |
| Ambient temperature | | |
| <ul style="list-style-type: none"> • during storage • during operation | °C | -55 ... +80 -25 ... +60 |
| Shock resistance acc. to IEC 60068-2-27 | | 15g / 11 ms |
| Vibration resistance acc. to IEC 60068-2-6 | | 2g |
| Surge current resistance Rated value | A | 1 200 |
| Active power loss total typical | W | 22 |
| Equipment marking acc. to DIN 40719 extended according to IEC 204-2 acc. to IEC 750 | | K |
| Equipment marking acc. to DIN EN 61346-2 | | Q |
| Product function | | instantaneous switching |

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 | | 2 |
| Operating frequency Rated value | Hz | 60 ... 50 |
| Operating voltage with AC | | |
| • at 60 Hz Rated value | V | 48 ... 480 |
| • at 50 Hz Rated value | V | 48 ... 480 |
| Operating current | | |
| • minimum | mA | 500 |
| • at AC-3 at 400 V Rated value | A | 12.5 |
| Operating range relative to the operating voltage with AC | | |
| • at 50 Hz | V | 40 ... 506 |
| • at 60 Hz | V | 40 ... 506 |
| Operating power at AC-3 at 400 V Rated value | kW | 5.5 |
| Derating temperature | °C | 40 |
| Symmetrical line frequency tolerance | Hz | 5 |
| Relative symmetrical tolerance of the operating frequency | % | 10 |
| I²t value maximum | A ² ·s | 7 200 |
| Rate of voltage rise at the thyristor for main contacts maximum permissible | V/μs | 1 000 |
| Blocking voltage at the thyristor for main contacts maximum permissible | V | 1 200 |
| Reverse current of the thyristor | mA | 10 |

Control circuit/ Control:

| | | |
|---|----|-----|
| Type of voltage of the control supply voltage | | AC |
| Control supply voltage frequency | | |
| • 1 Rated value | Hz | 50 |
| • 2 Rated value | Hz | 60 |
| Relative symmetrical tolerance | | |
| • of the control supply voltage frequency | % | 10 |
| • of the supply voltage frequency | % | 10 |
| Control supply voltage 1 | | |
| • with AC | | |
| — at 50 Hz Initial rated value | V | 90 |
| — at 50 Hz Final rated value | V | 253 |
| — at 60 Hz Initial rated value | V | 90 |
| — at 60 Hz Final rated value | V | 253 |
| Control supply voltage with AC | | |
| • at 50 Hz Full-scale value for signal<0> recognition | V | 40 |

| | | |
|--|----|--|
| <ul style="list-style-type: none"> • at 60 Hz Full-scale value for signal<0> recognition | V | 40 |
| Control current <ul style="list-style-type: none"> • with AC Rated value • at minimum control supply voltage <ul style="list-style-type: none"> — with AC | mA | 15 |
| switching times <ul style="list-style-type: none"> • ON delay • OFF delay | | 5 ms 30 ms + in addition max. one half-wave |

Auxiliary circuit:

| | | |
|---|--|---|
| Number of NC contacts for auxiliary contacts | | 0 |
| Number of NO contacts for auxiliary contacts | | 0 |
| Number of CO contacts for auxiliary contacts | | 0 |

Installation/ mounting/ dimensions:

| | | |
|--|-----|--|
| mounting position | | vertical |
| Mounting type | | screw and snap-on mounting onto 35 mm standard mounting rail |
| Mounting type Side-by-side mounting | | Yes |
| Tightening torque of the screw for securing the equipment | N·m | 1.5 |
| Design of the thread of the screw for securing the equipment | | M4 |
| Width | mm | 90 |
| Height | mm | 95 |
| Depth | mm | 100.8 |
| Required spacing with side-by-side mounting | | |
| <ul style="list-style-type: none"> • upwards • downwards | mm | 70 50 |

Connections/ Terminals:

| | | |
|---|--|--|
| 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 |
| Design of the thread of the connection screw | | |
| <ul style="list-style-type: none"> • for main contacts • of the auxiliary and control contacts | | M4 M3 |
| Product function removable terminal for auxiliary and control circuit | | Yes |
| Type of connectable conductor cross-section | | |
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — solid — finely stranded — with core end processing | | 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²) |

| | | |
|--|------------------|--|
| <ul style="list-style-type: none"> • for AWG conductors <ul style="list-style-type: none"> — for main contacts — for auxiliary and control contacts • for auxiliary and control contacts <ul style="list-style-type: none"> — solid — finely stranded <ul style="list-style-type: none"> — with core end processing — without core end processing | | 2x (18 ... 14) 1x (AWG 20 ... 12) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) 1x (0.5 ... 2.5 mm ²), 2x (0.5 ... 1.0 mm ²) |
| Tightening torque | | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | N·m N·m | 2 ... 2.5 0.5 ... 0.6 |
| Tightening torque [lbf·in] | | |
| <ul style="list-style-type: none"> • for main contacts with screw-type terminals • for auxiliary and control contacts with screw-type terminals | lbf·in lbf·in | 18 ... 22 7.5 ... 5.3 |
| Wire stripping length of the cable | | |
| <ul style="list-style-type: none"> • for main contacts • for auxiliary and control contacts | mm mm | 7 7 |

Certificates/ approvals:

| | |
|-----------------------------------|---|
| Certificate of suitability | CE / UL / CSA / CCC / C-TICK |
| General Product Approval | EMC Declaration of Conformity |



| | |
|--|---|
| Test Certificates | other |
| Type Test Certificates/Test Report | Environmental Confirmations |

UL/CSA ratings:

| | | |
|--|------------------------------|--------|
| yielded mechanical performance [hp] for three-phase AC motor | | |
| <ul style="list-style-type: none"> • at 200/208 V Rated value • at 220/230 V Rated value | metric hp metric hp | 2 2 |

- at 460/480 V Rated value

| | |
|--------------|-----|
| metric hp | 5 |
| A | 7.6 |

Full-load current (FLA) for three-phase AC motor

- at 480 V Rated value

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

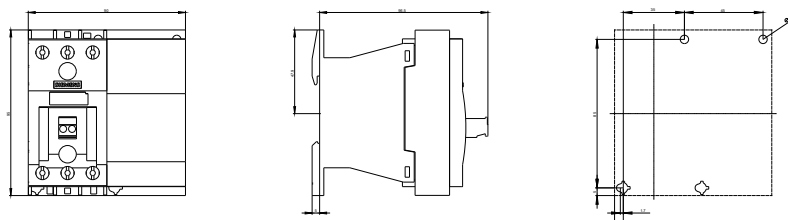
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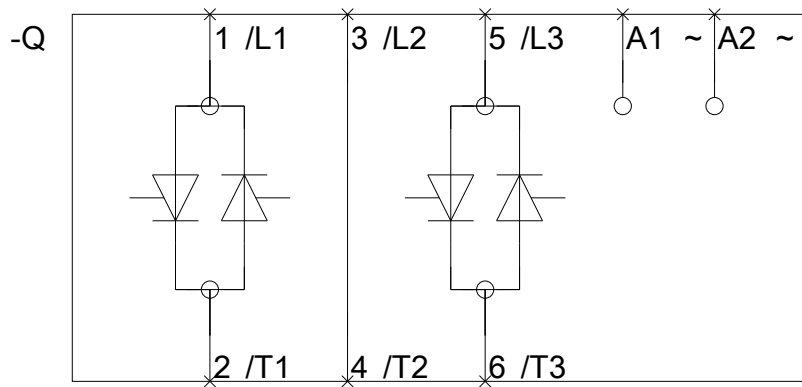
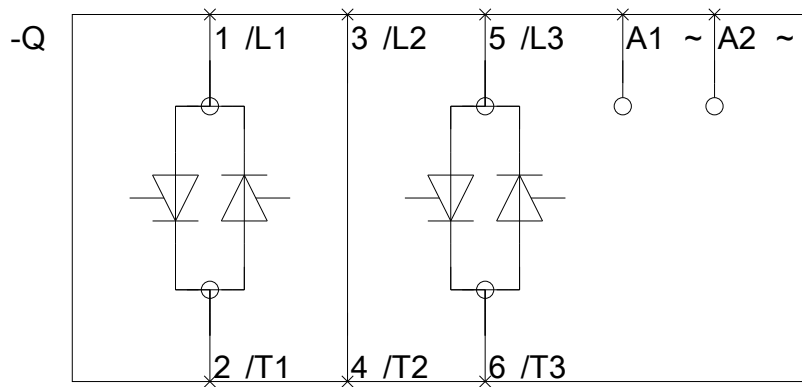
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

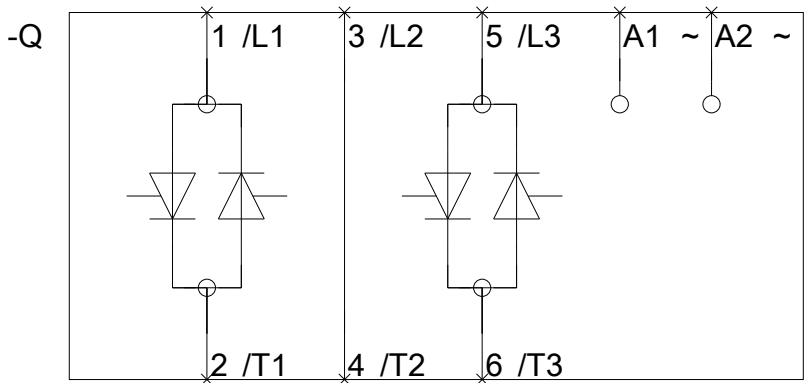
<http://support.automation.siemens.com/WW/view/en/3RF34121BB24/all>

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

<http://www.automation.siemens.com/bilddb/index.aspx?attID9=3RF34121BB24&lang=en>







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