



CONTACTOR, AC-3, 4KW/400V, 1NO, AC110V 50HZ, 120V 60HZ 3-POLE, SZ S00 SCREW TERMINAL

| | | |
|---------------------|--|----------------|
| product brand name | | SIRIUS |
| Product designation | | 3RT2 contactor |

General technical data:

| | | |
|---|----|------------|
| Insulation voltage | | |
| <ul style="list-style-type: none"> 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 | | 30 000 000 |
| <ul style="list-style-type: none"> of the contactor with added electronics-compatible auxiliary switch block typical | | 5 000 000 |
| <ul style="list-style-type: none"> of the contactor with added auxiliary switch block typical | | 10 000 000 |
| Thermal short-time current restricted to 10 s | A | 72 |
| Protection class IP | | |
| <ul style="list-style-type: none"> on the front | | IP20 |
| <ul style="list-style-type: none"> of the terminal | | IP20 |
| Equipment marking | | |
| <ul style="list-style-type: none"> acc. to DIN EN 61346-2 | | Q |
| <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 | 22 |
| — up to 690 V at ambient temperature 40 °C Rated value | A | 22 |
| — up to 690 V at ambient temperature 60 °C Rated value | A | 20 |
| • at AC-2 at 400 V Rated value | A | 9 |
| • at AC-3 | | |
| — at 400 V Rated value | A | 9 |
| — at 500 V Rated value | A | 7.7 |
| — at 690 V Rated value | A | 6.7 |
| • at AC-4 at 400 V Rated value | A | 8.5 |
| Operating current with 1 current path | | |
| • at DC-1 | | |
| — at 24 V Rated value | A | 20 |
| — at 110 V Rated value | A | 2.1 |
| — at 220 V Rated value | A | 0.8 |
| — at 440 V Rated value | A | 0.6 |
| — at 600 V Rated value | A | 0.6 |
| • at DC-3 at DC-5 | | |
| — at 24 V Rated value | A | 20 |
| — at 110 V Rated value | A | 0.1 |
| Operating current with 2 current paths in series | | |
| • at DC-1 | | |
| — at 24 V Rated value | A | 20 |
| — at 110 V Rated value | A | 12 |
| — at 220 V Rated value | A | 1.6 |
| — at 440 V Rated value | A | 0.8 |
| — at 600 V Rated value | A | 0.7 |
| • at DC-3 at DC-5 | | |
| — at 110 V Rated value | A | 0.35 |
| — at 24 V Rated value | A | 20 |
| Operating current with 3 current paths in series | | |
| • at DC-1 | | |
| — at 24 V Rated value | A | 20 |
| — at 110 V Rated value | A | 20 |
| — at 220 V Rated value | A | 20 |
| — at 440 V Rated value | A | 1.3 |
| — at 600 V Rated value | A | 1 |

| | | |
|---|-----|-----|
| <ul style="list-style-type: none"> • at DC-3 at DC-5 <ul style="list-style-type: none"> — at 110 V Rated value — at 220 V Rated value — at 24 V Rated value — at 440 V Rated value — at 600 V Rated value | A | 20 |
| | A | 1.5 |
| | A | 20 |
| | A | 0.2 |
| | A | 0.2 |
| Operating power | | |
| <ul style="list-style-type: none"> • at AC-1 at 400 V Rated value • at AC-2 at 400 V Rated value • at AC-4 at 400 V Rated value | kW | 13 |
| | kW | 4 |
| | kW | 4 |
| Operating power | | |
| <ul style="list-style-type: none"> • at AC-1 <ul style="list-style-type: none"> — at 230 V at 60 °C Rated value — at 230 V Rated value — at 400 V at 60 °C Rated value — at 690 V at 60 °C Rated value — at 690 V Rated value • at AC-3 <ul style="list-style-type: none"> — at 230 V Rated value — at 400 V Rated value — at 690 V Rated value | kW | 7.5 |
| | kW | 7.5 |
| | kW | 13 |
| | kW | 22 |
| | kW | 22 |
| | kW | 2.2 |
| | kW | 4 |
| | kW | 5.5 |
| Operating power for ≥ 200000 operating cycles at AC-4 | | |
| <ul style="list-style-type: none"> • at 400 V Rated value • at 690 V Rated value | kW | 2 |
| | kW | 2.5 |
| Operating frequency | | |
| <ul style="list-style-type: none"> • at AC-3 maximum | 1/h | 750 |

Control circuit/ Control:

| | | |
|--|---|--------------|
| Type of voltage of the control supply voltage | | AC |
| Control supply voltage with AC | | |
| <ul style="list-style-type: none"> • at 50 Hz Rated value • at 60 Hz Rated value | V | 110 |
| | V | 120 |
| Operating range factor control supply voltage rated value of the magnet coil with AC | | |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | | 0.8 ... 1.1 |
| | | 0.85 ... 1.1 |

Auxiliary circuit:

| | | |
|---|--|---|
| Number of NC contacts | | |
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — instantaneous contact | | 0 |
| Number of NO contacts | | |

| | | |
|--|---|---|
| <ul style="list-style-type: none"> • for auxiliary contacts <ul style="list-style-type: none"> — instantaneous contact | | 1 |
| Product expansion Auxiliary switch | | Yes |
| Operating current at AC-15 | | |
| <ul style="list-style-type: none"> • at 230 V Rated value | A | 10 |
| <ul style="list-style-type: none"> • at 400 V Rated value | A | 3 |
| <ul style="list-style-type: none"> • at 690 V Rated value | A | 1 |
| Operating current | | |
| <ul style="list-style-type: none"> • at DC-12 at 125 V Rated value | A | 2 |
| <ul style="list-style-type: none"> • at DC-12 at 220 V Rated value | A | 1 |
| <ul style="list-style-type: none"> • at DC-12 at 600 V Rated value | A | 0.15 |
| <ul style="list-style-type: none"> • at DC-13 at 125 V Rated value | A | 0.9 |
| <ul style="list-style-type: none"> • at DC-13 at 220 V Rated value | A | 0.3 |
| <ul style="list-style-type: none"> • at DC-13 at 600 V Rated value | A | 0.1 |
| Operating current | | |
| <ul style="list-style-type: none"> • at DC-12 <ul style="list-style-type: none"> — at 60 V Rated value — at 110 V Rated value | A | 6 |
| | A | 3 |
| <ul style="list-style-type: none"> • at DC-13 <ul style="list-style-type: none"> — at 24 V Rated value — at 60 V Rated value — at 110 V Rated value | A | 10 |
| | A | 2 |
| | A | 1 |
| Contact reliability of the auxiliary contacts | | 1 faulty switching per 100 million (17 V, 1 mA) |

UL/CSA ratings:

| | | |
|--|--------------|-------------|
| Full-load current (FLA) for three-phase AC motor | | |
| <ul style="list-style-type: none"> • at 480 V Rated value | A | 7.6 |
| <ul style="list-style-type: none"> • at 600 V Rated value | A | 9 |
| yielded mechanical performance [hp] | | |
| <ul style="list-style-type: none"> • for single-phase AC motor at 110/120 V Rated value | metric hp | 0.33 |
| <ul style="list-style-type: none"> • for single-phase AC motor at 230 V Rated value | metric hp | 1 |
| <ul style="list-style-type: none"> • for three-phase AC motor at 200/208 V Rated value | metric hp | 2 |
| <ul style="list-style-type: none"> • for three-phase AC motor at 220/230 V Rated value | metric hp | 3 |
| <ul style="list-style-type: none"> • for three-phase AC motor at 460/480 V Rated value | metric hp | 5 |
| <ul style="list-style-type: none"> • for three-phase AC motor at 575/600 V Rated value | metric hp | 7.5 |
| 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 LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 35 A gL/gG LV HRC 3NA, DIAZED 5SB, NEOZED 5SE: 20 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 and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022 |
| <ul style="list-style-type: none"> • Side-by-side mounting | | Yes |
| Height | mm | 57.5 |
| Width | mm | 45 |
| Depth | mm | 73 |
| 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 | mm | 0 0 0 0 0 0 0 0 6 0 0 0 0 0 6 |

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 |
| Type of connectable conductor cross-section | | |

| | | |
|--|-----|--|
| <ul style="list-style-type: none"> • for main contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • for AWG conductors for main contacts • for auxiliary contacts <ul style="list-style-type: none"> — single or multi-stranded — finely stranded with core end processing • for AWG conductors for auxiliary contacts | | 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12 2x (0,5 ... 1,5 mm ²), 2x (0,75 ... 2,5 mm ²), 2x 4 mm ² 2x (0.5 ... 1.5 mm ²), 2x (0.75 ... 2.5 mm ²) 2x (20 ... 16), 2x (18 ... 14), 2x 12 |
| Apparent pick-up power of the magnet coil with AC | | |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | V·A | 27 |
| | V·A | 24.3 |

Safety related data:

| | | |
|---|-----|-------------|
| B10 value 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] with low demand rate acc. to SN 31920 | FIT | 100 |
| Product function Mirror contact acc. to IEC 60947-4-1 | | Yes |
| <ul style="list-style-type: none"> • Note | | with 3RH29 |
| T1 value for proof test interval or service life acc. to IEC 61508 | y | 20 |
| Protection against electrical shock | | finger-safe |

Mechanical data:

| | | |
|--------------------------|--|-----|
| Size of contactor | | S00 |
|--------------------------|--|-----|

Ambient conditions:

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

Certificates/ approvals:

| | | |
|--------------------------|---------------------------------------|---------------------------|
| General Product Approval | Functional Safety/Safety of Machinery | Declaration of Conformity |
|--------------------------|---------------------------------------|---------------------------|



[Type Examination](#)



| | |
|-------------------|-------------------|
| Test Certificates | Shipping Approval |
|-------------------|-------------------|

[Special Test Certificate](#)



| | |
|-------------------|-------|
| Shipping Approval | other |
|-------------------|-------|



[Environmental Confirmations](#)

[Confirmation](#)



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

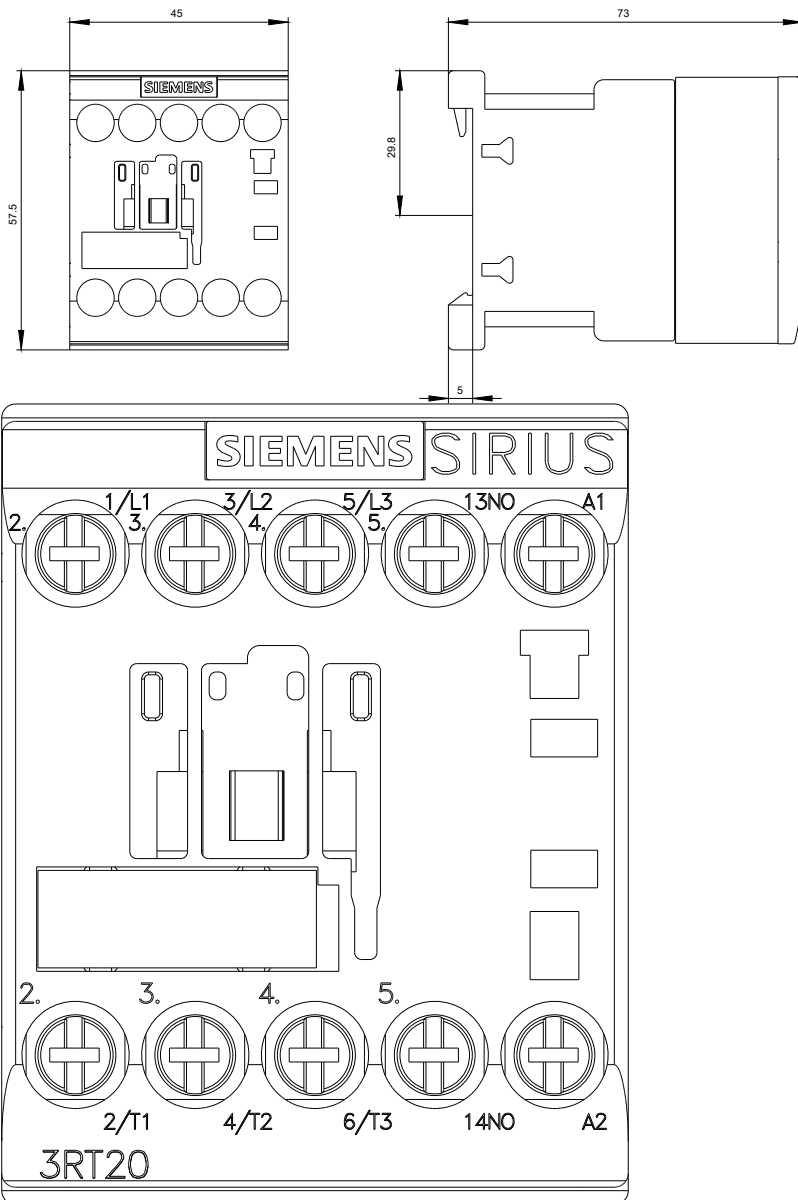
<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT20161AK61>

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

<http://support.automation.siemens.com/WW/view/en/3RT20161AK61/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=3RT20161AK61&lang=en





last modified:

11.03.2015