



power contactor, AC-3e/AC-3, 7 A, 3 kW / 400 V, 1 NO, 24 V DC, 0.85-1.85*US with integrated suppressor diode frame size S00, screw terminal

| | |
|--------------------------|--------------------|
| product brand name | SIRIUS |
| product designation | Coupling contactor |
| product type designation | 3RT2 |

General technical data

| | |
|---|----------------------------|
| size of contactor | S00 |
| product extension | |
| • function module for communication | No |
| • auxiliary switch | No |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state | 0.6 W |
| • at AC in hot operating state per pole | 0.2 W |
| • without load current share typical | 1.6 W |
| insulation voltage | |
| • of main circuit with degree of pollution 3 rated value | 690 V |
| • of auxiliary circuit with degree of pollution 3 rated value | 690 V |
| surge voltage resistance | |
| • of main circuit rated value | 6 kV |
| • of auxiliary circuit rated value | 6 kV |
| maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1 | 400 V |
| shock resistance at rectangular impulse | |
| • at DC | 6,7g / 5 ms, 4,2g / 10 ms |
| shock resistance with sine pulse | |
| • at DC | 10,5g / 5 ms, 6,6g / 10 ms |
| mechanical service life (switching cycles) | |
| • of contactor typical | 30 000 000 |
| reference code according to IEC 81346-2 | Q |
| Substance Prohibitance (Date) | 10/01/2009 |

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 |
| relative humidity minimum | 10 % |
| relative humidity at 55 °C according to IEC 60068-2-30 maximum | 95 % |

Main circuit

| | |
|--|-------|
| number of poles for main current circuit | 3 |
| number of NO contacts for main contacts | 3 |
| operating voltage | |
| • at AC-3 rated value maximum | 690 V |

| | |
|--|--|
| <ul style="list-style-type: none"> ● at AC-3e rated value maximum | 690 V |
| operational current | |
| <ul style="list-style-type: none"> ● at AC-1 at 400 V at ambient temperature 40 °C rated value | 18 A |
| <ul style="list-style-type: none"> ● at AC-1 <ul style="list-style-type: none"> — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value | 18 A 16 A |
| <ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value | 7 A 6 A 4.9 A |
| <ul style="list-style-type: none"> ● at AC-3e <ul style="list-style-type: none"> — at 400 V rated value — at 500 V rated value — at 690 V rated value | 7 A 6 A 4.9 A |
| <ul style="list-style-type: none"> ● at AC-4 at 400 V rated value | 6.5 A |
| <ul style="list-style-type: none"> ● at AC-5a up to 690 V rated value | 15.8 A |
| <ul style="list-style-type: none"> ● at AC-5b up to 400 V rated value | 5.8 A |
| <ul style="list-style-type: none"> ● at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=20 rated value — up to 400 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value | 4 A 4 A 3.8 A 3.6 A |
| <ul style="list-style-type: none"> ● at AC-6a <ul style="list-style-type: none"> — up to 230 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value | 2.7 A 2.7 A 2.5 A 2.4 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 2.5 mm ² |
| operational current for approx. 200000 operating cycles at AC-4 | |
| <ul style="list-style-type: none"> ● at 400 V rated value | 2.6 A |
| <ul style="list-style-type: none"> ● at 690 V rated value | 1.8 A |
| operational current | |
| <ul style="list-style-type: none"> ● at 1 current path at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value | 15 A 1.5 A 0.6 A 0.42 A 0.42 A |
| <ul style="list-style-type: none"> ● with 2 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value | 15 A 8.4 A 1.2 A 0.6 A 0.5 A |
| <ul style="list-style-type: none"> ● with 3 current paths in series at DC-1 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value | 15 A 15 A 15 A 0.9 A 0.7 A |
| <ul style="list-style-type: none"> ● at 1 current path at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value | 15 A |
| <ul style="list-style-type: none"> ● with 2 current paths in series at DC-3 at DC-5 | |

| | |
|---|---|
| <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value | 15 A 0.25 A |
| <ul style="list-style-type: none"> ● with 3 current paths in series at DC-3 at DC-5 <ul style="list-style-type: none"> — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value | 15 A 15 A 1.2 A 0.14 A 0.14 A |
| operating power | |
| <ul style="list-style-type: none"> ● at AC-3 <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value ● at AC-3e <ul style="list-style-type: none"> — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value | 1.5 kW 3 kW 3 kW 4 kW 1.5 kW 3 kW 3 kW 4 kW |
| operating power for approx. 200000 operating cycles at AC-4 | |
| <ul style="list-style-type: none"> ● at 400 V rated value ● at 690 V rated value | 1.15 kW 1.15 kW |
| operating apparent power at AC-6a | |
| <ul style="list-style-type: none"> ● up to 230 V for current peak value n=20 rated value ● up to 400 V for current peak value n=20 rated value ● up to 500 V for current peak value n=20 rated value ● up to 690 V for current peak value n=20 rated value | 1.5 kVA 2.7 kVA 3.3 kVA 4.3 kVA |
| operating apparent power at AC-6a | |
| <ul style="list-style-type: none"> ● up to 230 V for current peak value n=30 rated value ● up to 400 V for current peak value n=30 rated value ● up to 500 V for current peak value n=30 rated value ● up to 690 V for current peak value n=30 rated value | 1 kVA 1.8 kVA 2.2 kVA 2.9 kVA |
| short-time withstand current in cold operating state up to 40 °C | |
| <ul style="list-style-type: none"> ● limited to 1 s switching at zero current maximum ● limited to 5 s switching at zero current maximum ● limited to 10 s switching at zero current maximum ● limited to 30 s switching at zero current maximum ● limited to 60 s switching at zero current maximum | 120 A; Use minimum cross-section acc. to AC-1 rated value 86 A; Use minimum cross-section acc. to AC-1 rated value 67 A; Use minimum cross-section acc. to AC-1 rated value 52 A; Use minimum cross-section acc. to AC-1 rated value 43 A; Use minimum cross-section acc. to AC-1 rated value |
| no-load switching frequency | |
| <ul style="list-style-type: none"> ● at DC | 10 000 1/h |
| operating frequency | |
| <ul style="list-style-type: none"> ● at AC-1 maximum ● at AC-2 maximum ● at AC-3 maximum ● at AC-3e maximum ● at AC-4 maximum | 1 000 1/h 750 1/h 750 1/h 750 1/h 250 1/h |
| Control circuit/ Control | |
| type of voltage of the control supply voltage | DC |
| control supply voltage at DC | |
| <ul style="list-style-type: none"> ● rated value | 24 V |
| operating range factor control supply voltage rated value of magnet coil at DC | |
| <ul style="list-style-type: none"> ● initial value ● full-scale value | 0.85 1.85 |
| design of the surge suppressor | suppressor diode |
| closing power of magnet coil at DC | 1.6 W |
| holding power of magnet coil at DC | 1.6 W |
| closing delay | |
| <ul style="list-style-type: none"> ● at DC | 25 ... 120 ms |
| opening delay | |
| <ul style="list-style-type: none"> ● at DC | 5 ... 20 ms |
| arcing time | 10 ... 15 ms |

control version of the switch operating mechanism

Standard A1 - A2

Auxiliary circuit

| | |
|---|---|
| number of NO contacts for auxiliary contacts instantaneous contact | 1 |
| operational current at AC-12 maximum | 10 A |
| operational current at AC-15 | |
| • at 230 V rated value | 10 A |
| • at 400 V rated value | 3 A |
| • at 500 V rated value | 2 A |
| • at 690 V rated value | 1 A |
| operational current at DC-12 | |
| • at 24 V rated value | 10 A |
| • at 48 V rated value | 6 A |
| • at 60 V rated value | 6 A |
| • at 110 V rated value | 3 A |
| • at 125 V rated value | 2 A |
| • at 220 V rated value | 1 A |
| • at 600 V rated value | 0.15 A |
| operational current at DC-13 | |
| • at 24 V rated value | 10 A |
| • at 48 V rated value | 2 A |
| • at 60 V rated value | 2 A |
| • at 110 V rated value | 1 A |
| • at 125 V rated value | 0.9 A |
| • at 220 V rated value | 0.3 A |
| • at 600 V rated value | 0.1 A |
| contact reliability of auxiliary contacts | 1 faulty switching per 100 million (17 V, 1 mA) |

UL/CSA ratings

| | |
|---|-------------|
| full-load current (FLA) for 3-phase AC motor | |
| • at 480 V rated value | 4.8 A |
| • at 600 V rated value | 6.1 A |
| yielded mechanical performance [hp] | |
| • for single-phase AC motor | |
| — at 110/120 V rated value | 0.25 hp |
| — at 230 V rated value | 0.75 hp |
| • for 3-phase AC motor | |
| — at 200/208 V rated value | 1.5 hp |
| — at 220/230 V rated value | 2 hp |
| — at 460/480 V rated value | 3 hp |
| — at 575/600 V rated value | 5 hp |
| 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: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA) |
| — with type of assignment 2 required | gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V, 80kA) |
| • for short-circuit protection of the auxiliary switch required | gG: 10 A (500 V, 1 kA) |

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 |
| fastening method | screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 |
| • side-by-side mounting | Yes |
| height | 58 mm |
| width | 45 mm |
| depth | 73 mm |
| required spacing | |
| • with side-by-side mounting | |
| — forwards | 10 mm |
| — upwards | 10 mm |
| — downwards | 10 mm |
| — at the side | 0 mm |

- for grounded parts
 - forwards 10 mm
 - upwards 10 mm
 - at the side 6 mm
 - downwards 10 mm
- for live parts
 - forwards 10 mm
 - upwards 10 mm
 - downwards 10 mm
 - at the side 6 mm

Connections/ Terminals

type of electrical connection

- for main current circuit screw-type terminals
- for auxiliary and control circuit screw-type terminals
- at contactor for auxiliary contacts Screw-type terminals
- of magnet coil Screw-type terminals

type of connectable conductor cross-sections

- for main contacts
 - solid 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
 - solid or stranded 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
 - finely stranded with core end processing 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
- at AWG cables for main contacts 2x (20 ... 16), 2x (18 ... 14), 2x 12

connectable conductor cross-section for main contacts

- solid 0.5 ... 4 mm²
- stranded 0.5 ... 4 mm²
- finely stranded with core end processing 0.5 ... 2.5 mm²

connectable conductor cross-section for auxiliary contacts

- solid or stranded 0.5 ... 4 mm²
- finely stranded with core end processing 0.5 ... 2.5 mm²

type of connectable conductor cross-sections

- for auxiliary contacts
 - solid or stranded 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), 2x 4 mm²
 - finely stranded with core end processing 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
- at AWG cables for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14), 2x 12

AWG number as coded connectable conductor cross section

- for main contacts 20 ... 12
- for auxiliary contacts 20 ... 12

Safety related data

product function

- mirror contact according to IEC 60947-4-1 No
- B10 value with high demand rate according to SN 31920 1 000 000

proportion of dangerous failures

- with low demand rate according to SN 31920 40 %
- with high demand rate according to SN 31920 73 %

failure rate [FIT] with low demand rate according to SN 31920 100 FIT

T1 value for proof test interval or service life according to IEC 61508 20 y

protection class IP on the front according to IEC 60529 IP20

touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front

suitability for use

- safety-related switching OFF Yes

Certificates/ approvals

General Product Approval



[Confirmation](#)



[KC](#)



| EMC | Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates |
|-----|---------------------------------------|---------------------------|-------------------|
|-----|---------------------------------------|---------------------------|-------------------|



[Type Examination Certificate](#)



[Type Test Certificates/Test Report](#)

[Special Test Certificate](#)

Marine / Shipping



Marine / Shipping

other

Railway

Dangerous Good



[Confirmation](#)



[Vibration and Shock](#)

[Transport Information](#)

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=3RT2015-1SB41>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2015-1SB41>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1SB41>

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

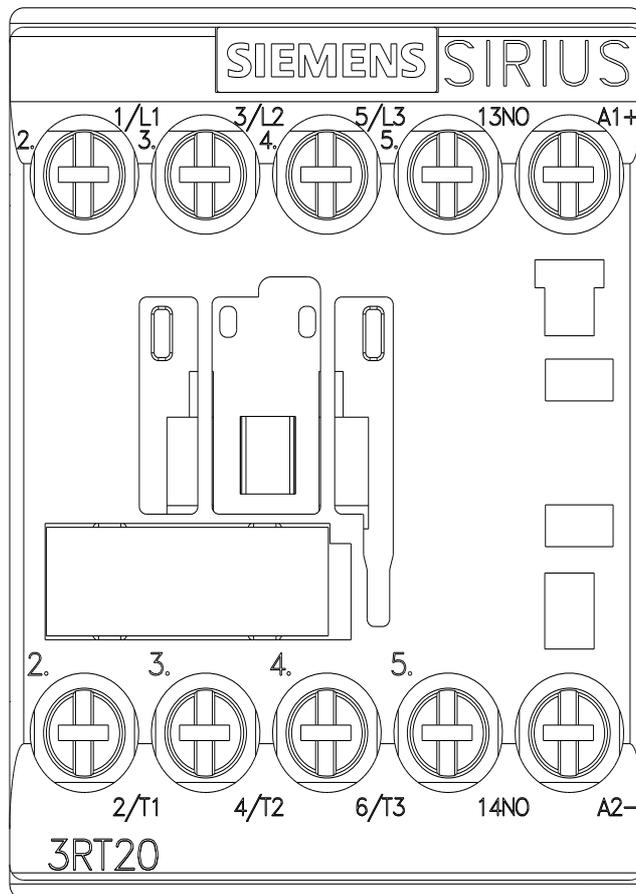
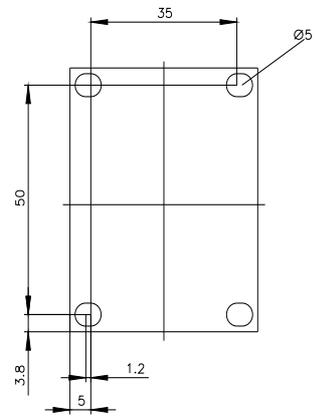
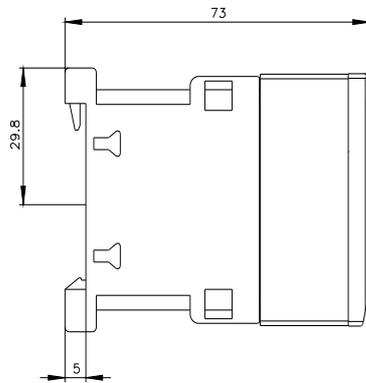
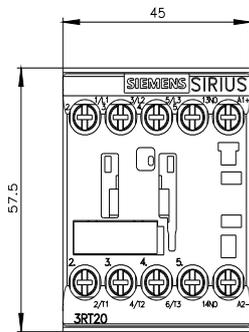
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2015-1SB41&lang=en

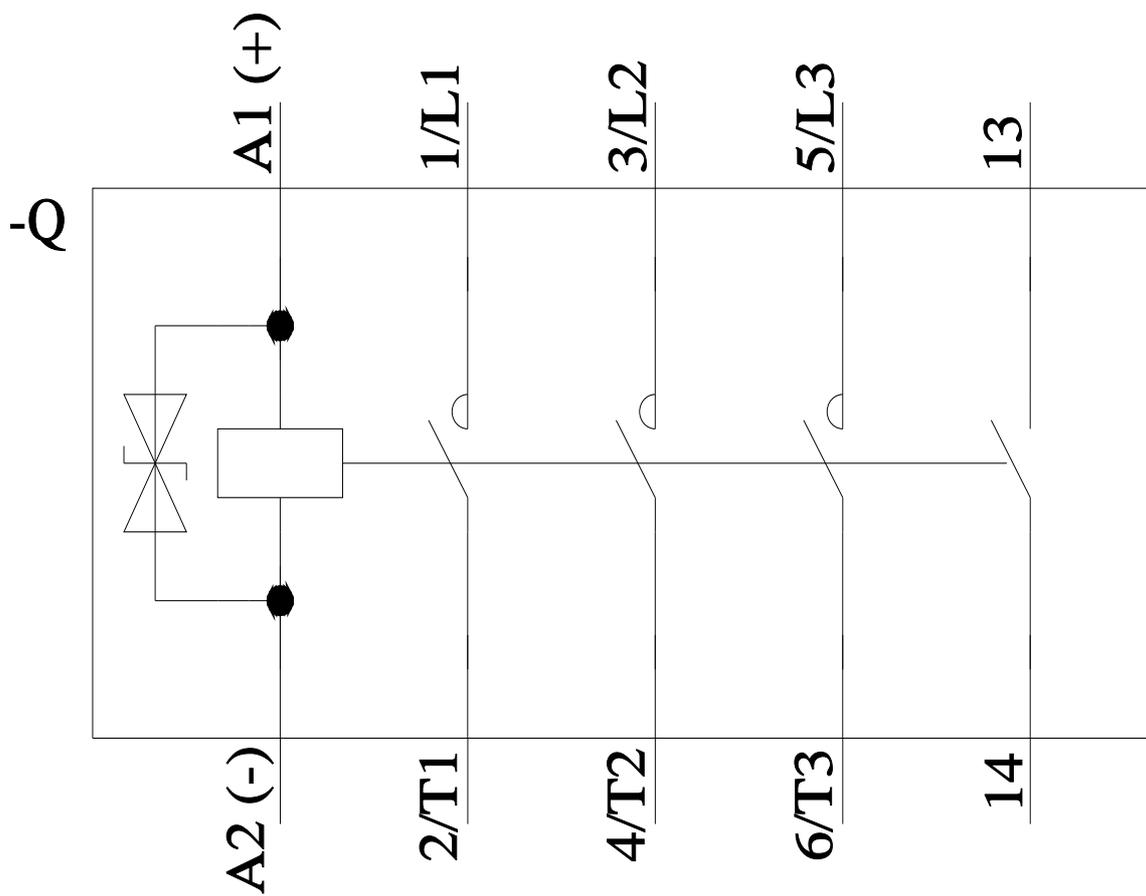
Characteristic: Tripping characteristics, I²t, Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2015-1SB41/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2015-1SB41&objecttype=14&gridview=view1>





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