



contactor AC-1, 50 A, 400 V / 40 °C, 4-pole, 24 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal

| | |
|--------------------------|-----------|
| product brand name | SIRIUS |
| product designation | Contactor |
| product type designation | 3RT23 |

General technical data

| | |
|---|----------------------------|
| size of contactor | S0 |
| product extension | |
| • function module for communication | No |
| • auxiliary switch | Yes |
| power loss [W] for rated value of the current | |
| • at AC in hot operating state | 12 W |
| • at AC in hot operating state per pole | 3 W |
| insulation voltage | |
| • of main circuit with degree of pollution 3 rated value | 690 V |
| • of the auxiliary and control 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 |
| shock resistance at rectangular impulse | |
| • at AC | 8,3g / 5 ms, 5,3g / 10 ms |
| shock resistance with sine pulse | |
| • at AC | 13,5g / 5 ms, 8,3g / 10 ms |
| mechanical service life (operating cycles) | |
| • of contactor typical | 10 000 000 |
| • of the contactor with added auxiliary switch block typical | 10 000 000 |
| 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 | 4 |
| number of NO contacts for main contacts | 4 |
| operational current | |
| • at AC-1 at 400 V at ambient temperature 40 °C rated value | 50 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 • at AC-3 <ul style="list-style-type: none"> — at 400 V rated value • at AC-4 at 400 V rated value | 50 A |
| minimum cross-section in main circuit at maximum AC-1 rated value | 42 A |
| operating power | |
| <ul style="list-style-type: none"> • at AC-3 at 400 V rated value • at AC-4 at 400 V rated value | 15.5 A |
| short-time withstand current in cold operating state up to 40 °C | 15.5 A |
| <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 | 10 mm ² |
| no-load switching frequency | |
| <ul style="list-style-type: none"> • at AC | 7.5 kW |
| operating frequency at AC-1 maximum | 7.5 kW |

Use minimum cross-section acc. to AC-1 rated value
Use minimum cross-section acc. to AC-1 rated value
Use minimum cross-section acc. to AC-1 rated value
Use minimum cross-section acc. to AC-1 rated value
Use minimum cross-section acc. to AC-1 rated value

Control circuit/ Control

| | |
|--|------------------|
| type of voltage | AC |
| type of voltage of the control supply voltage | AC |
| control supply voltage at AC | |
| <ul style="list-style-type: none"> • at 50 Hz rated value • at 60 Hz rated value | 24 V |
| operating range factor control supply voltage rated value of magnet coil at AC | 24 V |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | 0.8 ... 1.1 |
| apparent pick-up power of magnet coil at AC | 0.85 ... 1.1 |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | 81 VA |
| inductive power factor with closing power of the coil | 79 VA |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | 0.72 |
| apparent holding power of magnet coil at AC | 0.74 |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | 10.5 VA |
| inductive power factor with the holding power of the coil | 8.5 VA |
| <ul style="list-style-type: none"> • at 50 Hz • at 60 Hz | 0.25 |
| closing delay | 0.28 |
| <ul style="list-style-type: none"> • at AC | 8 ... 40 ms |
| opening delay | |
| <ul style="list-style-type: none"> • at AC | 4 ... 16 ms |
| arcing time | 10 ... 10 ms |
| control version of the switch operating mechanism | Standard A1 - A2 |

Auxiliary circuit

| | |
|--|------|
| number of NC contacts for auxiliary contacts | 1 |
| <ul style="list-style-type: none"> • attachable • instantaneous contact | 2 |
| number of NO contacts for auxiliary contacts | 1 |
| <ul style="list-style-type: none"> • attachable • instantaneous contact | 1 |
| operational current at AC-12 maximum | 2 |
| operational current at AC-15 | 1 |
| <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 | 10 A |
| | 10 A |
| | 3 A |
| | 2 A |
| | 1 A |

operational current at DC-12

- at 24 V rated value
- at 48 V rated value
- at 60 V rated value
- at 110 V rated value
- at 125 V rated value
- at 220 V rated value
- at 600 V rated value

10 A
6 A
6 A
3 A
2 A
1 A
0.15 A

operational current at DC-13

- at 24 V rated value
- at 48 V rated value
- at 110 V rated value
- at 125 V rated value
- at 220 V rated value
- at 600 V rated value

10 A
2 A
1 A
0.9 A
0.3 A
0.1 A

design of the miniature circuit breaker for short-circuit protection of the auxiliary switch required

gG: 10 A (230 V, 400 A)

contact reliability of auxiliary contacts

1 faulty switching per 100 million (17 V, 1 mA)

UL/CSA ratings**contact rating of auxiliary contacts according to UL**

A600 / Q600

Short-circuit protection**product function short circuit protection**

No

design of the fuse link

- 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: 63 A (690 V, 100 kA)
gG: 20 A (690 V, 100 kA)
gG: 10 A (690 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

102 mm

width

60 mm

depth

97 mm

required spacing

- with side-by-side mounting
 - forwards
 - upwards
 - downwards
 - at the side
- for grounded parts
 - forwards
 - upwards
 - at the side
 - downwards
- for live parts
 - forwards
 - upwards
 - downwards
 - at the side

10 mm
10 mm
10 mm
0 mm

10 mm
10 mm
6 mm
10 mm

10 mm
10 mm
10 mm
6 mm

Connections/ Terminals**type of electrical connection**











































- for main current circuit
- for auxiliary and control circuit
- at contactor for auxiliary contacts
- of magnet coil

spring-loaded terminals
spring-loaded terminals
Spring-type terminals
Spring-type terminals

type of connectable conductor cross-sections for main contacts

- solid
- solid or stranded
- finely stranded with core end processing

2x (1 ... 10 mm²)
2x (1 ... 10 mm²)
2x (1 ... 6 mm²)

| | | | | | | | | | | | | | |
|---|---|---|--|---|---|---|---|---|--|---|---|---|---|
| <ul style="list-style-type: none">finely stranded without core end processing connectable conductor cross-section for main contacts <ul style="list-style-type: none">solidsolid or strandedstrandedfinely stranded with core end processingfinely stranded without core end processing connectable conductor cross-section for auxiliary contacts <ul style="list-style-type: none">solid or strandedfinely stranded with core end processingfinely stranded without core end processing type of connectable conductor cross-sections <ul style="list-style-type: none">for auxiliary contacts<ul style="list-style-type: none">solidsolid or strandedfinely stranded with core end processingfinely stranded without core end processingat AWG cables for auxiliary contacts AWG number as coded connectable conductor cross section <ul style="list-style-type: none">for main contactsfor auxiliary contacts | 2x (1 ... 6 mm ²) 1 ... 10 mm ² 1 ... 10 mm ² 1 ... 10 mm ² 1 ... 6 mm ² 1 ... 6 mm ² 0.5 ... 2.5 mm ² 0.5 ... 1.5 mm ² 0.5 ... 2.5 mm ² 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (0.5 ... 1.5 mm ²) 2x (0.5 ... 2.5 mm ²) 2x (20 ... 14) 18 ... 8 20 ... 14 | | | | | | | | | | | | |
| Safety related data | | | | | | | | | | | | | |
| product function <ul style="list-style-type: none">mirror contact according to IEC 60947-4-1 T1 value for proof test interval or service life according to IEC 61508 protection class IP on the front according to IEC 60529 touch protection on the front according to IEC 60529 | Yes 20 a IP20 finger-safe, for vertical contact from the front | | | | | | | | | | | | |
| Communication/ Protocol | | | | | | | | | | | | | |
| product function bus communication | No | | | | | | | | | | | | |
| Certificates/ approvals | | | | | | | | | | | | | |
| <table><tr><td colspan="5">General Product Approval</td><td>EMC</td></tr><tr><td></td><td>Confirmation</td><td></td><td></td><td></td><td></td></tr></table> | | General Product Approval | | | | | EMC |  | Confirmation |  |  |  |  |
| General Product Approval | | | | | EMC | | | | | | | | |
|  | Confirmation |  |  |  |  | | | | | | | | |
| <table><tr><td>Functional Safety/Safety of Machinery</td><td>Declaration of Conformity</td><td>Test Certificates</td><td>Marine / Shipping</td></tr><tr><td>Type Examination Certificate</td><td></td><td>Type Test Certificates/Test Report</td><td>Special Test Certificate</td></tr></table> | | Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | Marine / Shipping | Type Examination Certificate |   | Type Test Certificates/Test Report | Special Test Certificate  | | | | |
| Functional Safety/Safety of Machinery | Declaration of Conformity | Test Certificates | Marine / Shipping | | | | | | | | | | |
| Type Examination Certificate |   | Type Test Certificates/Test Report | Special Test Certificate  | | | | | | | | | | |
| Marine / Shipping | | | | | | | | | | | | | |
| <table><tr><td></td><td></td><td></td><td></td><td></td><td></td></tr></table> | |  |  |  |  |  |  | | | | | | |
|  |  |  |  |  |  | | | | | | | | |
| <table><tr><td>other</td><td>Railway</td></tr></table> | | other | Railway | | | | | | | | | | |
| other | Railway | | | | | | | | | | | | |



Further information

Siemens has decided to exit the Russian market (see here).

<https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business>

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

<https://support.industry.siemens.com/cs/ww/en/view/109813875>

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=3RT2327-2AC20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2327-2AC20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-2AC20>

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

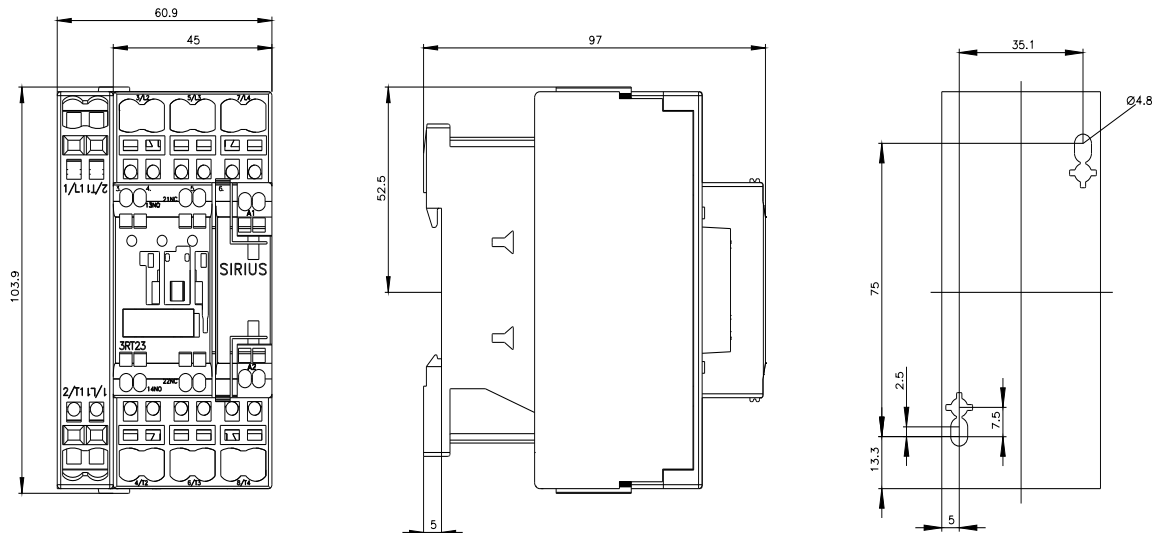
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2327-2AC20&lang=en

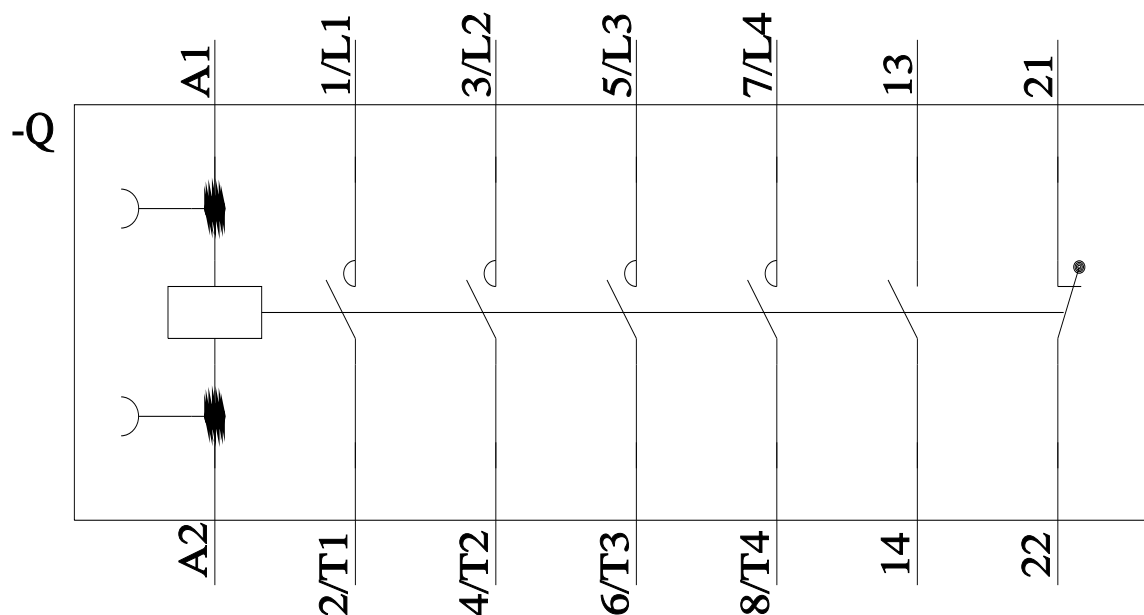
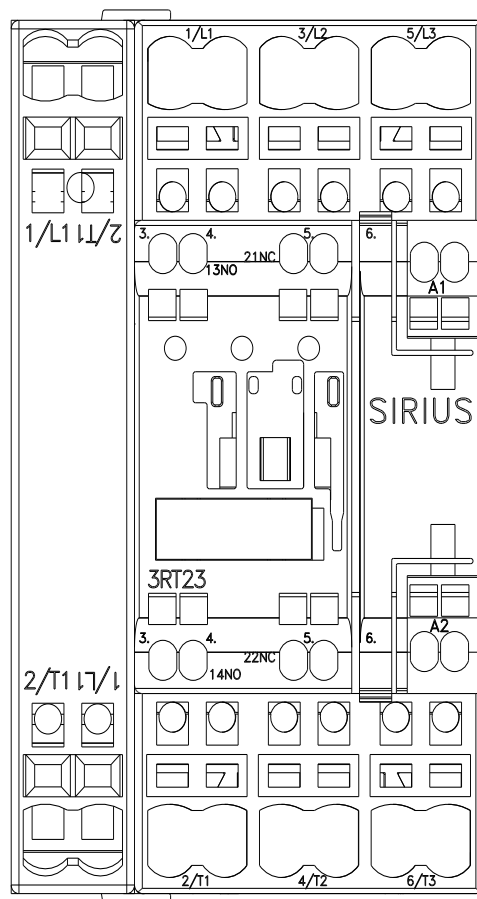
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-2AC20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2327-2AC20&objecttype=14&gridview=view1>





last modified:

11/21/2022