



contactor AC-1, 50 A, 400 V / 40 °C, 4-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw 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 42 A 15.5 A 15.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
operating power	
<ul style="list-style-type: none"> • at AC-3 at 400 V rated value • at AC-4 at 400 V rated value 	7.5 kW 7.5 kW
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 	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
no-load switching frequency	
<ul style="list-style-type: none"> • at AC 	5 000 1/h
operating frequency at AC-1 maximum	1 000 1/h

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 	230 V 230 V
operating range factor control supply voltage rated value of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.8 ... 1.1 0.85 ... 1.1
apparent pick-up power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	81 VA 79 VA
inductive power factor with closing power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.72 0.74
apparent holding power of magnet coil at AC	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	10.5 VA 8.5 VA
inductive power factor with the holding power of the coil	
<ul style="list-style-type: none"> • at 50 Hz • at 60 Hz 	0.25 0.28
closing delay	
<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 1
number of NO contacts for auxiliary contacts	1
<ul style="list-style-type: none"> • attachable • instantaneous contact 	2 1
operational current at AC-12 maximum	10 A
operational current at AC-15	
<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 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

85 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

screw-type terminals

screw-type terminals

Screw-type terminals

Screw-type terminals

type of connectable conductor cross-sections for main contacts

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

2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)

2x (1 ... 2.5 mm²), 2x (2.5 ... 10 mm²)

2x (1 ... 2.5 mm²), 2x (2.5 ... 6 mm²), 1x 10 mm²

connectable conductor cross-section for main contacts

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

1 ... 10 mm²
 1 ... 10 mm²
 1 ... 10 mm²
 1 ... 10 mm²

connectable conductor cross-section for auxiliary contacts

- solid or stranded
- finely stranded with core end processing

0.5 ... 2.5 mm²
 0.5 ... 2.5 mm²

type of connectable conductor cross-sections

- for auxiliary contacts
 - solid
 - solid or stranded
 - finely stranded with core end processing
- at AWG cables for auxiliary contacts

2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)
 2x (20 ... 16), 2x (18 ... 14)

AWG number as coded connectable conductor cross section

- for main contacts
- for auxiliary contacts

16 ... 8
 20 ... 14

Safety related data

product function

- mirror contact according to IEC 60947-4-1

Yes

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

20 a

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

Communication/ Protocol

product function bus communication

No

Certificates/ approvals

General Product Approval

EMC



[Confirmation](#)



Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

[Type Examination Certificate](#)



[Special Test Certificate](#)

[Type Test Certificates/Test Report](#)



Marine / Shipping

other



[Confirmation](#)

other

Railway



[Vibration and Shock](#)

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=3RT2327-1AL20>

Cax online generator

<http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2327-1AL20>

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

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-1AL20>

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

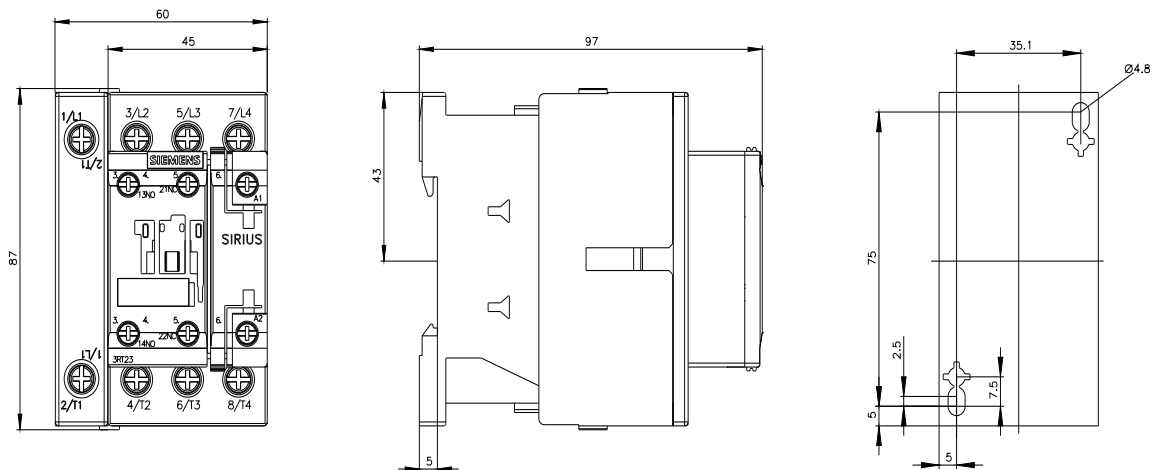
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2327-1AL20&lang=en

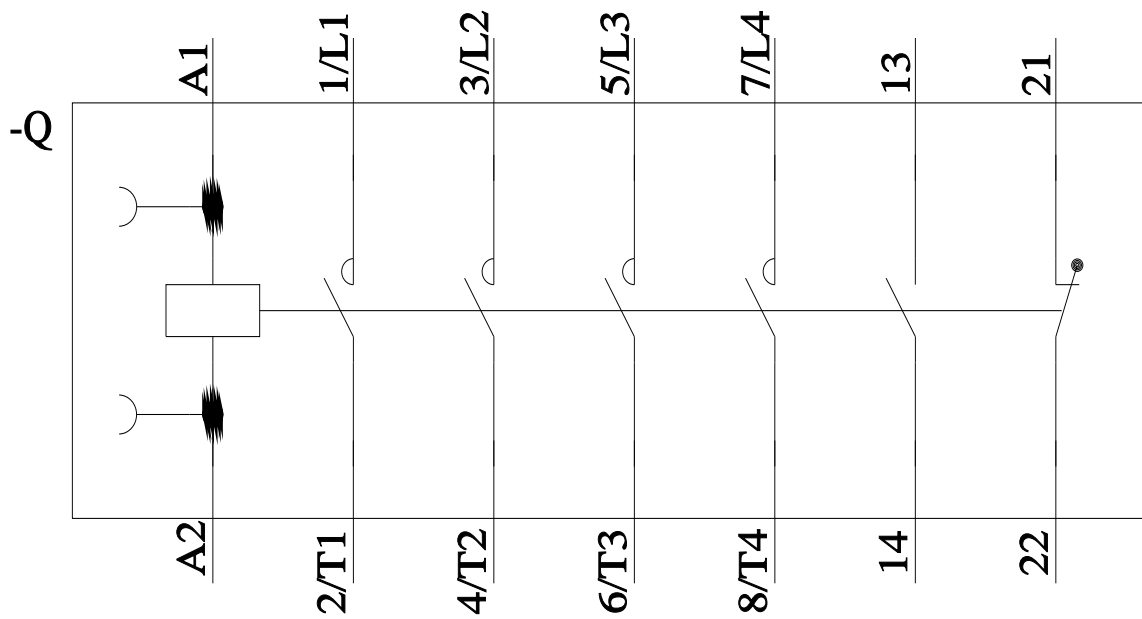
Characteristic: Tripping characteristics, I^2t , Let-through current

<https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-1AL20/char>

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

<http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2327-1AL20&objecttype=14&gridview=view1>





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