SIEMENS

Data sheet 3RT2327-2AL20



contactor AC-1, 50 A, 400 V / 40 °C, 4-pole, 230 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal, size: S0

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

• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	50 A
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	42 A
• at AC-3	
— at 400 V rated value	15.5 A
• at AC-4 at 400 V rated value	15.5 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operating power	
at AC-3 at 400 V rated value	7.5 kW
	7.5 kW
• at AC-4 at 400 V rated value	7.5 KVV
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	Use minimum cross-section acc. to AC-1 rated value
 limited to 5 s switching at zero current maximum 	Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• 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	
• at 50 Hz rated value	230 V
at 60 Hz rated value	230 V
operating range factor control supply voltage rated value of	200 V
magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	81 VA
• at 60 Hz	79 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	0.14
• at 50 Hz	10.5 VA
• at 50 Hz	8.5 VA
	0.0 VA
inductive power factor with the holding power of the coil • at 50 Hz	0.25
	0.25
• at 60 Hz	0.28
closing delay	9. 40 mg
• at AC	8 40 ms
opening delay	
• 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
• attachable	2
instantaneous contact	1
number of NO contacts for auxiliary contacts	1
attachable	2
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	0.1071
at 24 V rated value	10 A
at 48 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
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	gG: 63 A (690 V, 100 kA)
with type of assignment 2 required	gG: 20 A (690 V, 100 kA)
for short-circuit protection of the auxiliary switch required	gG: 10 A (690 V, 1 kA)
Installation/ mounting/ dimensions	g(e
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
mounting position	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	10 mm
— upwards	10 mm
— upwards — downwards	10 mm
— at the side	0 mm
for grounded parts	
	40
— forwards	10 mm
— upwards	10 mm
— upwards	10 mm
— upwards — at the side	10 mm 6 mm
upwardsat the sidedownwards	10 mm 6 mm
— upwards— at the side— downwards● for live parts	10 mm 6 mm 10 mm
 — upwards — at the side — downwards • for live parts — forwards 	10 mm 6 mm 10 mm
 — upwards — at the side — downwards • for live parts — forwards — upwards 	10 mm 6 mm 10 mm 10 mm 10 mm
 — upwards — at the side — downwards • for live parts — forwards — upwards — downwards 	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm
— upwards — at the side — downwards • for live parts — forwards — upwards — downwards — at the side Connections/ Terminals	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm
 — upwards — at the side — downwards • for live parts — forwards — upwards — downwards — at the side 	10 mm 6 mm 10 mm 10 mm 10 mm 6 mm
— upwards — at the side — downwards • for live parts — forwards — upwards — downwards — at the side Connections/ Terminals type of electrical connection • for main current circuit	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm
— upwards — at the side — downwards • for live parts — forwards — upwards — downwards — at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm spring-loaded terminals spring-loaded terminals
- upwards - at the side - downwards • for live parts - forwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm spring-loaded terminals spring-loaded terminals Spring-type terminals
- upwards - at the side - downwards • for live parts - forwards - upwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm 6 mm spring-loaded terminals spring-loaded terminals
- upwards - at the side - downwards • for live parts - forwards - upwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts	10 mm 6 mm 10 mm 10 mm 10 mm 10 mm spring-loaded terminals spring-loaded terminals spring-type terminals

 solid or stranded 	2x (1 10 mm²)	
 finely stranded with core end processing 	2x (1 6 mm²)	
finely stranded without core end processing	2x (1 6 mm²)	
connectable conductor cross-section for main contacts		
• solid	1 10 mm²	
 solid or stranded 	1 10 mm²	
• stranded	1 10 mm²	
 finely stranded with core end processing 	1 6 mm²	
 finely stranded without core end processing 	1 6 mm²	
connectable conductor cross-section for auxiliary contacts		
 solid or stranded 	0.5 2.5 mm²	
 finely stranded with core end processing 	0.5 1.5 mm²	
 finely stranded without core end processing 	0.5 2.5 mm²	
type of connectable conductor cross-sections		
 for auxiliary contacts 		
— solid	2x (0.5 2.5 mm²)	
— solid or stranded	2x (0.5 2.5 mm²)	
 finely stranded with core end processing 	2x (0.5 1.5 mm²)	
 finely stranded without core end processing 	2x (0.5 2.5 mm²)	
for AWG cables for auxiliary contacts	2x (20 14)	
AWG number as coded connectable conductor cross section		
• for main contacts	18 8	
 for auxiliary contacts 	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





Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping













other Railway Environment



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=3RT2327-2AL20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2327-2AL20

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-2AL20

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

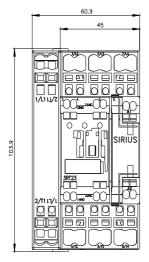
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2327-2AL20&lang=en

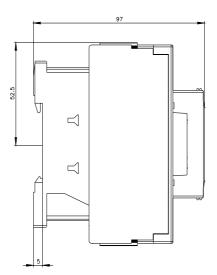
Characteristic: Tripping characteristics, I2t, Let-through current

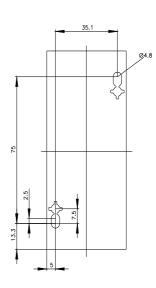
https://support.industry.siemens.com/cs/ww/en/ps/3RT2327-2AL20/char

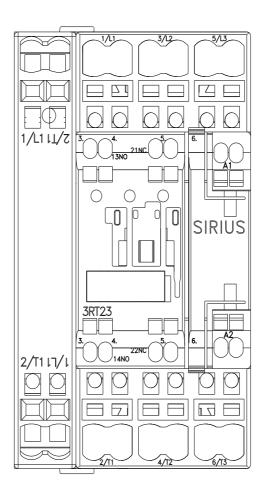
Further characteristics (e.g. electrical endurance, switching frequency)

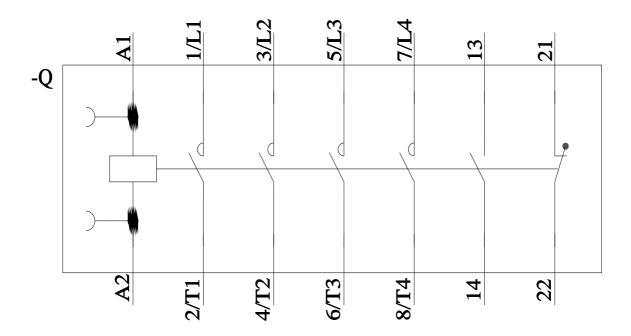
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2327-2AL20&objecttype=14&gridview=view1











last modified: 11/21/2022 🖸