SIEMENS

Data sheet 3RT1034-1AL00

> Power contactor, AC-3 32 A, 15 kW / 400 V 125 V AC, 50 Hz 3-pole, Size S2, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2



Figure similar

Product brand name	SIRIUS
Product designation	power contactor
General technical data	
Size of contactor	S2
Insulation voltage	
rated value	690 V
Degree of pollution	3
Surge voltage resistance rated value	6 kV
maximum permissible voltage for safe isolation	
 between coil and main contacts acc. to EN 	400 V
60947-1	
Protection class IP	
• on the front	IP20
• of the terminal	IP00
Shock resistance at rectangular impulse	
• at AC	10g / 5 ms, 5g / 10 ms
Shock resistance with sine pulse	

• at AC	15g / 5 ms, 8g / 10 ms
Mechanical service life (switching cycles)	
of contactor typical	10 000 000
 of the contactor with added electronics- compatible auxiliary switch block typical 	5 000 000
 of the contactor with added auxiliary switch block typical 	10 000 000
Reference code acc. to DIN EN 81346-2	Q
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
Main circuit	
Number of poles for main current circuit	3
Number of NO contacts for main contacts	3
Number of NC contacts for main contacts	0
Operating 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	45 A
• at AC-3	
— at 400 V rated value	32 A
— at 690 V rated value	20 A
• at AC-4 at 400 V rated value	29 A
Connectable conductor cross-section in main circuit at AC-1	
• at 60 °C minimum permissible	10 mm²
• at 40 °C minimum permissible	16 mm²
Operating current for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	15.6 A
• at 690 V rated value	11 A
Operating current	
• at 1 current path at DC-1	
— at 24 V rated value	45 A
— at 110 V rated value	4.5 A

• with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value 45 A — at 110 V rated value 45 A Operating current • at 1 current path at DC-3 at DC-5 — at 24 V rated value 35 A — at 110 V rated value 35 A • with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value 45 A • with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value 45 A 2.5 A
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- at 110 V rated value Operating current • at 1 current path at DC-3 at DC-5 - at 24 V rated value at 110 V rated value viith 2 current paths in series at DC-3 at DC-5 - at 24 V rated value at 110 V rated value 45 A 2.5 A • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 45 A 25 A
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 with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value 25 A
 at 24 V rated value at 110 V rated value 25 A
— at 110 V rated value 25 A
• with 2 gurrent noths in parise at DC 2 at DC 5
• with 3 current paths in series at DC-3 at DC-5
— at 24 V rated value 45 A
— at 110 V rated value 45 A
Operating power
• at AC-1
— at 230 V at 60 °C rated value 18 kW
— at 400 V rated value 31 kW
— at 690 V rated value 54 kW
— at 690 V at 60 °C rated value 54 kW
• at AC-2 at 400 V rated value 15 kW
• at AC-3
— at 230 V rated value 7.5 kW
— at 400 V rated value 15 kW
— at 500 V rated value 18.5 kW
— at 690 V rated value 18.5 kW
Operating power for approx. 200000 operating cycles at AC-4
• at 400 V rated value 8.2 kW
• at 690 V rated value 10 kW
Thermal short-time current limited to 10 s 320 A
Power loss [W] at AC-3 at 400 V for rated value of 1.8 W
the operating current per conductor
No-load switching frequency
No-load switching frequency ● at AC 5 000 1/h
No-load switching frequency ● at AC 5 000 1/h Operating frequency
No-load switching frequency • at AC Operating frequency • at AC-1 maximum 1 200 1/h
No-load switching frequency • at AC Operating frequency • at AC-1 maximum • at AC-2 maximum 750 1/h
No-load switching frequency • at AC Operating frequency • at AC-1 maximum 1 200 1/h

Control circuit/ Control	
Type of voltage of the control supply voltage	AC
Control supply voltage at AC	
• at 50 Hz rated value	125 V
Control supply voltage frequency	
• 1 rated value	50 Hz
2 rated value	60 Hz
Operating range factor control supply voltage rated	
value of magnet coil at AC	
● at 50 Hz	0.8 1.1
Apparent pick-up power of magnet coil at AC	104 V·A
Inductive power factor with closing power of the coil	0.78
Apparent holding power of magnet coil at AC	9.7 V·A
Inductive power factor with the holding power of the coil	0.42
Closing delay	
• at AC	11 30 ms
Opening delay	
• at AC	7 20 ms
Arcing time	10 15 ms
Auxiliary circuit	
Number of NC contacts for auxiliary contacts	
• instantaneous contact	0
Number of NO contacts for auxiliary contacts	
• instantaneous contact	0
Operating current at AC-12 maximum	10 A
Operating current at AC-15	
• at 230 V rated value	6 A
• at 400 V rated value	3 A
Operating current at DC-12	
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 220 V rated value	1 A
Operating current at DC-13	
• at 24 V rated value	10 A
● at 60 V rated value	2 A
● at 110 V rated value	1 A
at 220 V rated value	0.3 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

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

fuse gL/gG: 125 A

fuse gL/gG: 63 A

fuse gL/gG: 10 A

Installation/ mounting/ dimensions	mounting/ dimensions	
Mounting type	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 50022	
 Side-by-side mounting 	Yes	
Height	112 mm	
Width	55 mm	
Depth	115 mm	
Required spacing		
• for grounded parts		
— at the side	6 mm	

Connections/Terminals
Type of electrical connect

pe of electrical connection	
• for main current circuit	screw-type terminals
for auxiliary and control current circuit	screw-type terminals

Type of connectable conductor cross-sections

• for main contacts

— solid 2x (0.75 ... 16 mm²)

— stranded 2x (0.75 ... 25 mm²)

— single or multi-stranded 2x (0,75 ... 16 mm²)

finely stranded with core end processing
 finely stranded without core end
 2x (0.75 ... 16 mm²)
 2x (0.75 ... 16 mm²)

processing
t AWG conductors for main contacts 2x (18 ... 2)

• at AWG conductors for main contacts Type of connectable conductor cross-sections

for auxiliary contacts

— solid 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²), max. 2x (0.75 ... 4 mm²)

— finely stranded with core end processing 2x (0.5 ... 1.5 mm²), 2x (0.75 ... 2.5 mm²)

• at AWG conductors for auxiliary contacts 2x (20 ... 16), 2x (18 ... 14), 1x 12

Certificates/approvals

General Product Approval

Functional Safety/Safety of Machinery

Declaration of Conformity









Type Examination Certificate



Test Certificates

Marine / Shipping

Type Test Certificates/Test Report

Special Test Certificate

Miscellaneous







Marine / Shipping

other



Confirmation

Miscellaneous

Further information

Information- and Downloadcenter (Catalogs, Brochures,...)

http://www.siemens.com/industrial-controls/catalogs

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT1034-1AL00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1034-1AL00

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

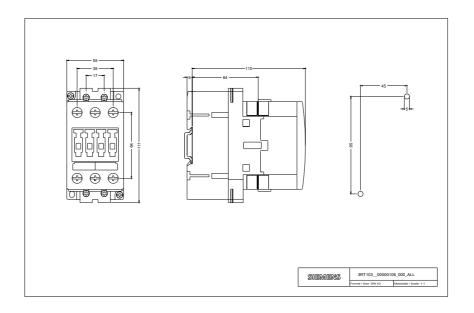
https://support.industry.siemens.com/cs/ww/en/ps/3RT1034-1AL00

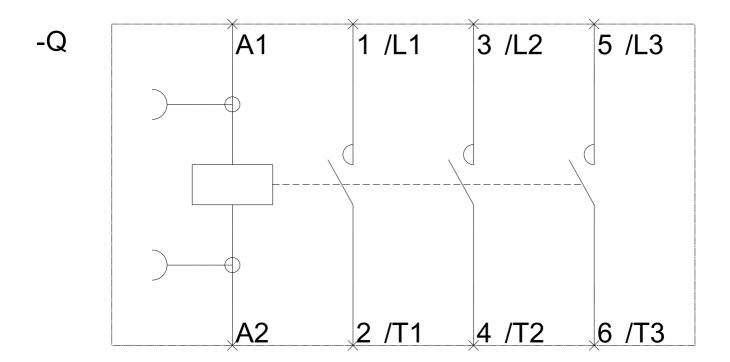
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1034-1AL00&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT1034-1AL00/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1034-1AL00&objecttype=14&gridview=view1





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