SIEMENS

Data sheet 3RT1034-1AL20

Power contactor, AC-3 32 A, 15 kW / 400 V 230 V AC, 50 / 60 Hz, 3-pole, Size S2, Screw terminal !!! Phased-out product !!! Successor is SIRIUS 3RT2 Preferred successor type is >>3RT2027-1AL20<<



Product brand name	SIRIUS		
Product designation	power contactor	power contactor	
General technical data			
Size of contactor	S2		

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

block typical			
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 °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	45 A		

— at 110 V rated value	25 A
with 3 current paths in series at DC-1	
— at 24 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	2.5 A
 with 2 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	45 A
— at 110 V rated value	25 A
 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
No-load switching frequency	
• at AC	5 000 1/h
Operating frequency	
• at AC-1 maximum	1 200 1/h
• at AC-2 maximum	750 1/h
• at AC-3 maximum	1 000 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
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 at 60 Hz rated value	230 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
● at 60 Hz	0.85 1.1
Apparent pick-up power of magnet coil at AC	127 V·A
Inductive power factor with closing power of the coil	0.73
Apparent holding power of magnet coil at AC	11.3 V·A
Inductive power factor with the holding power of the coil	0.41
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
Chart size it weeks time	
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

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 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 	2x (0.75 16 mm²)
 finely stranded without core end 	2x (0.75 16 mm²)
processing	
 at AWG conductors for main contacts 	2x (18 2)
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

EMC

Functional Safety/Safety of Machinery











Type Examination Certificate

Declaration of	Conformity	Test Certificates		Marine / Ship- ping	
(6	Miscellaneous	Type Test Certificates/Test Report	Special Test Certi- ficate	Miscellaneous	CAN BUREAU

Marine / Shipping

other



EG-Konf.







Confirmation

Miscellaneous

ABS

Railway

Special Test Certificate

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=3RT1034-1AL20

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT1034-1AL20

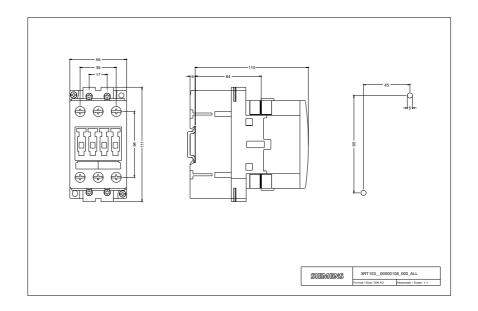
Service&Support (Manuals, Certificates, Characteristics, FAQs,...)

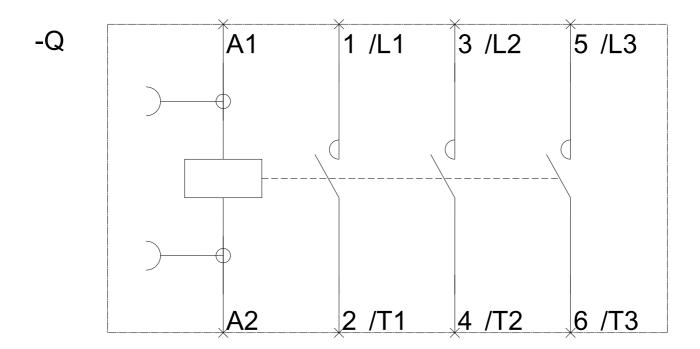
https://support.industry.siemens.com/cs/ww/en/ps/3RT1034-1AL20

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) $\underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1034-1AL20\&lang=en.pdf} \\ \underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT1034-1AL20\&lang=en.pdf} \\ \underline{\text{http://www.automation.siemens.com/bilddb/cax_de.aspx.pdf} \\ \underline{\text{http://www.automation.siemens.co$

Characteristic: Tripping characteristics, I2t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT1034-1AL20/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT1034-1AL20&objecttype=14&gridview=view1





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