SIEMENS

Data sheet 3RT2038-1AB04



Power contactor, AC-3 80 A, 37 kW / 400 V 2 NO + 2 NC, 24 V AC, 50 Hz 3-pole, size S2 screw terminals

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S2
product extension	
 function module for communication 	No
auxiliary switch	No
power loss [W] for rated value of the current at AC in hot operating state	17.1 W
• per pole	5.7 W
power loss [W] for rated value of the current without load current share typical	16 W
surge voltage resistance	
 of main circuit rated value 	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	9.8g / 5 ms, 6.5g / 10 ms
shock resistance with sine pulse	
• at AC	15.3g / 5 ms, 10.1g / 10 ms
mechanical service life (switching cycles)	
 of contactor typical 	10 000 000
 of the contactor with added electronically optimized auxiliary switch block typical 	5 000 000
of the contactor with added auxiliary switch block typical	10 000 000
reference code acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2014 00:00:00
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
operating voltage at AC-3 rated value maximum	690 V

operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value 	90 A
• at AC-1	
 up to 690 V at ambient temperature 40 °C rated value 	90 A
 — up to 690 V at ambient temperature 60 °C rated value 	80 A
• at AC-3	
— at 400 V rated value	80 A
— at 500 V rated value	80 A
— at 690 V rated value	58 A
 at AC-4 at 400 V rated value 	55 A
 at AC-5a up to 690 V rated value 	79.2 A
 at AC-5b up to 400 V rated value 	66.4 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	70 A
 up to 400 V for current peak value n=20 rated value 	70 A
 up to 500 V for current peak value n=20 rated value 	70 A
 up to 690 V for current peak value n=20 rated value at AC-6a 	58 A
up to 230 V for current peak value n=30 rated value	46.7 A
 up to 400 V for current peak value n=30 rated value 	46.7 A
 up to 500 V for current peak value n=30 rated value 	46.7 A
— up to 690 V for current peak value n=30 rated value	46.7 A
minimum cross-section in main circuit at maximum AC-1 rated value	35 mm ²
operational current for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	30 A
at 690 V rated value	24 A
operational current	
 at 1 current path at DC-1 	
— at 24 V rated value	55 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
with 2 current paths in series at DC-1	55.4
— at 24 V rated value	55 A
— at 110 V rated value	45 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
with 3 current paths in series at DC-1 at 24 V roted value.	55 A
— at 24 V rated value	55 A
— at 110 V rated value	55 A 45 A
— at 220 V rated value	
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
operational current	
at 1 current path at DC-3 at DC-5— at 24 V rated value	35 A
— at 24 v rateu value	00 A

at 110 V rated value		
all 440 V rated value all 500 V rated value all 220 V rated value all 500 V rated va	— at 110 V rated value	2.5 A
	— at 220 V rated value	1 A
with 2 current paths in series at DC-3 at DC-5	— at 440 V rated value	0.1 A
	— at 600 V rated value	0.06 A
at 110 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 220 V rated value at 100 V rated value at 100 V rated value at 220 V rated value at 220 V rated value at 220 V rated value at 440 V rated value at 4500 V rated value at 4500 V rated value at 220 V rated value at 220 V rated value at 220 V rated value at 600 value at 600 V rated value at 600 V rated value at 600 value -	 with 2 current paths in series at DC-3 at DC-5 	
- at 220 V rated value	— at 24 V rated value	55 A
	— at 110 V rated value	25 A
at 600 V rated value at 110 V rated value at 120 V rated value at 220 V rated value at 440 V rated value at 440 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 230 V rated value at 500 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 500 V rated value at 500 V rated value at 600 V rated value at 500 V rated value at 500 V rated value at 600 V rated value at 600 V rated value	— at 220 V rated value	5 A
• with 3 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 140 V rated value — at 220 V rated value — at 460 V rated value — at 600 V rated value • at AC-2 at 400 V rated value • at AC-2 at 400 V rated value — at 400 V rated value — at 400 V rated value — at 600 V rated value — operating power for approx. 200000 operating cycles at AC-4 • (at 000 V rated value • (at 690 V rated value • (at 600 V for current peak value n=20 rated value • (at 600 V for current peak value n=20 rated value • (at 600 V for current peak value n=20 rated value • (at 600 V for current peak value n=20 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak value n=30 rated value • (at 600 V for current peak	— at 440 V rated value	0.27 A
at 24 V rated value	— at 600 V rated value	0.16 A
	 with 3 current paths in series at DC-3 at DC-5 	
at 220 V rated value	— at 24 V rated value	55 A
	— at 110 V rated value	55 A
operating power ■ at AC-2 at 400 V rated value ■ at AC-3 at 400 V rated value ■ at 400 V rated value ■ at 400 V rated value ■ at 900 V rated value ■ up to 300 V for current peak value n=20 rated value ■ up to 400 V for current peak value n=20 rated value ■ up to 400 V for current peak value n=20 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ up to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated value ■ to 500 V for current peak value n=30 rated val	— at 220 V rated value	25 A
operating power	— at 440 V rated value	0.6 A
operating power	— at 600 V rated value	0.35 A
• at AC-2 at 400 V rated value • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value Operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value 15.8 kW Operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current in cold operating state • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current in cold operating state • up to 500 V for current maximum • limited to 1s switching at zero current maximum • limited to 1s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero curre		
- at 230 V rated value		37 kW
		22 kW
- at 500 V rated value		
operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 100 s switching at zero current maximum • limited		
operating power for approx. 200000 operating cycles at AC-4		
at AC-4 • at 400 V rated value • at 690 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 600 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 300 V for current peak value n=30 rated value 1 298 A; Use minimum cross-section acc. to AC-1 rated value 440 A; Use minimum cross-section acc. to AC-1 rated value 5 33 A; Use minimum cross-section acc. to AC-1 rated value 1 44 A; Use minimum cross-section acc. to AC-1 rated value 1 45 000 I/h • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at		io kii
e at 690 V rated value operating apparent power at AC-6a up to 200 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C 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 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limite		
operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • 18.6 kV-A • 23.8 kV-A • 40.4 kV-A • 25.8 kV-A • 40.4 kV-A • 298 A; Use minimum cross-section acc. to AC-1 rated value • 1298 A; Use minimum cross-section acc. to AC-1 rated value • 1298 A; Use minimum cross-section acc. to AC-1 rated value • 1298 A; Use minimum cross-section acc. to AC-1 rated value • 1298 A; Use minimum cross-section acc. to AC-1 rated value • 1298 A; Use minimum cross-section acc. to AC-1 rated value • 1298 A; Use minimum cross-section acc. to AC-1 rated val	at 400 V rated value	15.8 kW
• up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero c	• at 690 V rated value	21.8 kW
• up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 40 °C • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current m	operating apparent power at AC-6a	
• up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • at AC-1 maximum • at AC-1 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-5 maximum • at AC-5 maximum • at AC-5 maximum • at AC-6 maximum • at AC-7 maximum • at AC-8 maximum • at AC-9 maximum • at AC-1 maximum	 up to 230 V for current peak value n=20 rated value 	27.8 kV·A
• up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 40 °C • 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 60 s switching at zero current maximum switching st	• up to 400 V for current peak value n=20 rated value	48.4 kV·A
operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value • up to 590 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C • 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 • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60 s switching at zero current maximum olimited to 60	• up to 500 V for current peak value n=20 rated value	60.6 kV·A
up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C 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 simited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum simited to 60 s switching at zero current maximum at AC-2 maximum at AC-2 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum tooltoicircuit/ Control type of voltage of the control supply voltage at 50 Hz at 50 Hz 18.6 kV-A 32.3 kV-A 40.4 kV-A 55.8 kV-A 55.8 kV-A 55.8 kV-A 55.8 kV-A 1 298 A; Use minimum cross-section acc. to AC-1 rated value as 88 A; Use minimum cross-section acc. to AC-1 rated value at 44 A; Use minimum cross-section acc. to AC-1 rated value at 44 A; Use minimum cross-section acc. to AC-1 rated value at 44 A; Use minimum cross-section acc. to AC-1 rated value at 45 O MC 5000 1/h 61 AC-2 maximum 5500 1/h 62 AC 62 AC 62 AC 64 V 65 BV-A 64 BV-A 65 BV-	• up to 690 V for current peak value n=20 rated value	69.3 kV·A
up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C 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 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 80 s switching at zero current maximum slimited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum slimited to 60 s switching at zero current maximum no-load switching frequency at AC operating frequency at AC-1 maximum at AC-2 maximum at AC-2 maximum st AC-4 maximum st AC-4 maximum type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz operating range factor control supply voltage rated value of magnet coil at AC other incident value 1 298 A; Use minimum cross-section acc. to AC-1 rated value 414 A; Use minimum cross-section acc. to AC-1 rated value 414 A; Use minimum cross-section acc. to AC-1 rated value 415 0 000 1/h 333 A; Use minimum cross-section acc. to AC-1 rated value 414 A; Use minimum cross-section acc. to AC-1 rated value 415 0 000 1/h 336 1/h 350 1/h 360	operating apparent power at AC-6a	
up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C 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 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum alimited to 60 s switching at zero current maximum slimited to 60 s switching at zero current maximum alimited to 60 s switching at zero current maxim	 up to 230 V for current peak value n=30 rated value 	18.6 kV·A
• up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C • 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 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 • limited to 60 s switching at zero current maximum no-load switching frequency • at AC operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum • at AC-5 maximum • at AC-5 maximum • at AC-4 maximum • at AC-5 maximum • at AC-5 maximum • at AC-6 maximum • at AC-7 maximum • at AC-8 maximum • at AC-9 maximum • at AC-9 maximum • at AC-4 maximum • at AC-5 maximum • at AC-6 maximum • at AC-7 maximum • at AC-8 maximum • at AC-9 m	 up to 400 V for current peak value n=30 rated value 	32.3 kV·A
short-time withstand current in cold operating state up to 40 °C • 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • loot as sw	 up to 500 V for current peak value n=30 rated value 	40.4 kV·A
up to 40 °C • 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 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 • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum no-load switching frequency • at AC operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum • at AC-5 maximum • at AC-4 maximum • at AC-4 maximum • at AC-5 maximum • at AC-5 maximum • at AC-6 maximum • at 50 Hz rated value • at 50 Hz	 up to 690 V for current peak value n=30 rated value 	55.8 kV·A
 Ilimited to 5 s switching at zero current maximum Ilimited to 10 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum <l< td=""><td>· · · · · · · · · · · · · · · · · · ·</td><td></td></l<>	· · · · · · · · · · · · · · · · · · ·	
 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 limited to 60 s switching at zero current maximum no-load switching frequency at AC ot AC-1 rated value operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum at AC-4 maximum type of voltage of the control supply voltage at 50 Hz rated value Operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz 	 limited to 1 s switching at zero current maximum 	1 298 A; Use minimum cross-section acc. to AC-1 rated value
 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 limited to 60 s switching at zero current maximum no-load switching frequency at AC ot AC-1 rated value operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum at AC-4 maximum type of voltage of the control supply voltage at 50 Hz rated value Operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz 	• limited to 5 s switching at zero current maximum	898 A; Use minimum cross-section acc. to AC-1 rated value
Imited to 30 s switching at zero current maximum Imited to 60 s switching at zero current maximum Imited to 60 s switching at zero current maximum Imited to 60 s switching at zero current maximu	 limited to 10 s switching at zero current maximum 	640 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	_	414 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency • at AC operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum type of voltage of the control supply voltage type of voltage at AC • at 50 Hz rated value • at 50 Hz • at 50 Hz 0.8 1.1		
 at AC operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum 500 1/h at AC-4 maximum 150 1/h Control circuit/ Control type of voltage of the control supply voltage AC control supply voltage at AC at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz 		
 at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum type of voltage of the control supply voltage at 50 Hz rated value at 50 Hz <l< td=""><td></td><td>5 000 1/h</td></l<>		5 000 1/h
 at AC-2 maximum at AC-3 maximum at AC-4 maximum 150 1/h Control circuit/ Control type of voltage of the control supply voltage AC control supply voltage at AC at 50 Hz rated value at 50 Hz at 50 Hz at 50 Hz Onerating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz 0.8 1.1	operating frequency	
at AC-3 maximum at AC-4 maximum 150 1/h Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value 24 V operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz 0.8 1.1	• at AC-1 maximum	700 1/h
at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 50 Hz at 50 Hz at 50 Hz at 50 Hz Control supply voltage rated value at 50 Hz Control supply voltage rated value Control supply voltage rated value of magnet coil at AC at 50 Hz Control supply voltage rated value of magnet coil at AC Control supply voltage rated value of magnet coil at AC Control supply voltage rated value Control supply voltage at AC Control supply voltage at	• at AC-2 maximum	350 1/h
type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 50 Hz	• at AC-3 maximum	500 1/h
type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz onumber AC 24 V 0.8 1.1	• at AC-4 maximum	150 1/h
type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz onumber AC 24 V 0.8 1.1	Control circuit/ Control	
control supply voltage at AC • at 50 Hz rated value operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz 0.8 1.1		AC
operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz 0.8 1.1		
value of magnet coil at AC ● at 50 Hz 0.8 1.1	at 50 Hz rated value	24 V
apparent pick-up power of magnet coil at AC	● at 50 Hz	0.8 1.1
	apparent pick-up power of magnet coil at AC	

● at 50 Hz	190 V·A
inductive power factor with closing power of the coil	100 V A
	0.72
• at 50 Hz	0.72
apparent holding power of magnet coil at AC	16 V·A
• at 50 Hz	10 V·A
inductive power factor with the holding power of the coil	
• at 50 Hz	0.37
closing delay	
• at AC	10 80 ms
opening delay	
• at AC	10 18 ms
arcing time	10 20 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	2
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
 at 230 V rated value 	6 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	
at 24 V rated value	6 A
at 48 V rated value	2 A
at 60 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
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	65 A
at 600 V rated value	62 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	5 hp
— at 230 V rated value	15 hp
 for 3-phase AC motor 	
— at 200/208 V rated value	20 hp
— at 220/230 V rated value	25 hp
— at 460/480 V rated value	50 hp
— at 575/600 V rated value	60 hp
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 	

product function mirror contact acc. to IEC 60947-4-1	Yes
Safety related data	
for auxiliary contacts	20 14
• for main contacts	18 1
section	
AWG number as coded connectable conductor cross	, , ,
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
• for auxiliary contacts	
finely stranded with core end processing type of connectable conductor cross-sections	0.5 2.3 IIIIII
	0.5 2.5 mm ²
contacts • solid or stranded	0.5 2.5 mm²
connectable conductor cross-section for auxiliary	
finely stranded with core end processing	1 35 mm²
contacts	
connectable conductor cross-section for main	(· ···· = /, ··· (· - ··· · /,
at AWG cables for main contacts	2x (18 2), 1x (18 1)
— finely stranded with core end processing	2x (1 35 mm²), 1x (1 35 mm²)
solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)
type of connectable conductor cross-sections • for main contacts	
of magnet coil type of connectable conductor cross sections	Screw-type terminals
at contactor for auxiliary contacts af magnet asil.	Screw-type terminals
for auxiliary and control circuit	screw-type terminals
• for main current circuit	screw-type terminals
type of electrical connection	
Connections/ Terminals	
— at the side	6 mm
— downwards	10 mm
— upwards	10 mm
— forwards	10 mm
• for live parts	
— downwards	10 mm
— at the side	6 mm
— upwards	10 mm
— forwards	10 mm
 for grounded parts 	
— at the side	0 mm
— downwards	10 mm
— upwards	10 mm
— forwards	10 mm
with side-by-side mounting	
required spacing	
depth	174 mm
width	55 mm
side-by-side mounting height	114 mm
e side by side mounting	according to DIN EN 60715 Yes
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail
	forward and backward by +/- 22.5° on vertical mounting surface
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted
Installation/ mounting/ dimensions	
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)
	(415V,80kA)
— with type of assignment 2 required	(415 V, 80 kA) gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A
— with type of coordination 1 required	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A

B10 value with high demand rate acc. to SN 31920	1 000 000
proportion of dangerous failures	
 with low demand rate acc. to SN 31920 	40 %
 with high demand rate acc. to SN 31920 	73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
product function positively driven operation acc. to IEC 60947-5-1	No
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
suitability for use	
 safety-related switching OFF 	Yes
Cortificates/ approvals	

Certificates/ approvals

General Product Approval

EMC













Functional
Safety/Safety of
Machinery

Declaration of Conformity

Test Certificates

Marine / Shipping

Type Examination Certificate UK Declaration of Conformity



Type Test Certificates/Test Report

Special Test Certificate



Marine / Shipping













other

Confirmation

Confirmation

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=3RT2038-1AB04

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2038-1AB04

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1AB04

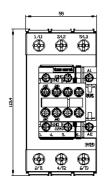
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

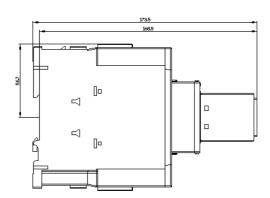
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2038-1AB04&lang=en

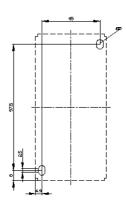
Characteristic: Tripping characteristics, I²t, Let-through current

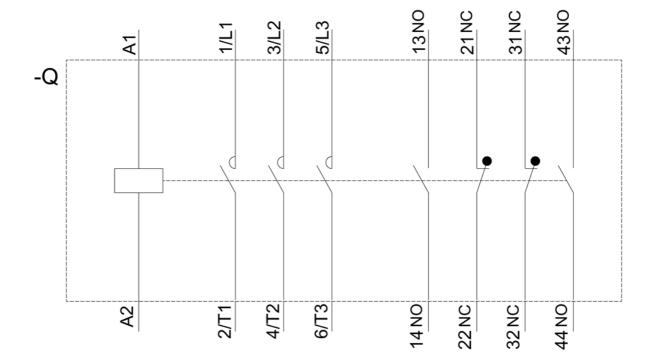
https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1AB04/char

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









last modified: 12/21/2020 ☑