SIEMENS

Data sheet 3RT2038-1NB34



power contactor, AC-3e/AC-3, 80 A, 37 kW / 400 V, 3-pole, 20-33 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 2 NO + 2 NC, screw terminal, removable auxiliary switch

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		
 at AC in hot operating state per pole 	5.7 W		
 without load current share typical 	2 W		
insulation voltage			
 of main circuit with degree of pollution 3 rated value 	690 V		
 of auxiliary 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		
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V		
shock resistance at rectangular impulse			
• at AC	6.1g / 5 ms, 3.7g / 10 ms		
• at DC	6.1g / 5 ms, 3.7g / 10 ms		
shock resistance with sine pulse			
• at AC	9.6g / 5 ms, 5.8g / 10 ms		
• at DC	9.6g / 5 ms, 5.8g / 10 ms		
mechanical service life (operating 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 according to IEC 81346-2	Q		
Substance Prohibitance (Date)	10/01/2014		
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	3
number of NO contacts for main contacts	3
operating voltage	
 at AC-3 rated value maximum 	690 V
 at AC-3e rated value maximum 	690 V
operational current	
at AC-1 at 400 V at ambient temperature 40 °C	90 A
rated value	
 at AC-1 up to 690 V at ambient temperature 40 °C 	90 A
rated value	90 A
— up to 690 V at ambient temperature 60 °C	80 A
rated value	
• 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-3e	
— 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 AC-5b up to 400 V rated value	79.2 A
at AC-5b up to 400 V rated valueat AC-6a	66.4 A
	70 A
 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	70 A
value	
 up to 500 V for current peak value n=20 rated 	70 A
value	
— up to 690 V for current peak value n=20 rated	58 A
value ● at AC-6a	
— up to 230 V for current peak value n=30 rated	46.7 A
value	40.7 A
— up to 400 V for current peak value n=30 rated	46.7 A
value	
— up to 500 V for current peak value n=30 rated	46.7 A
value	
 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	35 mm²
rated value	O mili
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 60 V rated value	23 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 — at 24 V rated value 	55 A
— at 60 V rated value	45 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	0.071
— at 24 V rated value	55 A

	— at 60 V rated value	55 A
** at 1 current path a DC-3 at DC-5 — at 260 V rated value — at 400 V rated value — at 600 V rated value — at 700 V rated value — at 700 V rated value — at 110 V rated value — at 600 V rated value — 55 A — at 24 V rated value — 55 A — at 20 V rated value — 55 A — at 10 V rated value — 55 A — at 10 V rated value — 50 A — at 100 V rated value — 55 A — at 20 V rated value — 55 A — at 20 V rated value — 57 KW — at 600 V rated value — 37 KW — at 200 V rated value — at 400 V rated value — at 200 V rated value — at 600 V rated va		
	•	35 A
at 600 Y rated value at 124 V rated value at 100 V rated value at 100 V rated value at 120 V rated value at 240 V rated value at 260 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 240 V rated value at 110 V rated value at 240 V rated value		
with 2 current paths in series at DC-3 at DC-5 = at 24 V rated value = at 100 V rated value = at 100 V rated value = at 100 V rated value = at 200 V rated value = at 440 V rated value = at 600 V rated value = at 1100 V rated value = at 600 V rated va		
	 with 2 current paths in series at DC-3 at DC-5 	
		55 A
	— at 60 V rated value	45 A
	— at 110 V rated value	25 A
■ at 600 V rated value ■ with 3 current paths in series at DC-3 at DC-5 ■ at 24 V rated value □ at 100 V rated value □ at 110 V rated value □ at 220 V rated value □ at 220 V rated value □ at 400 V rated value □ at 400 V rated value □ at 400 V rated value □ at 230 V rated value □ at 400 V rated value □ at 600 V rated value □ pu to 200 V rated value □ pu to 200 V for current peak value n=20 rated value □ pu to 500 V for current peak value n=20 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=30 rated value □ pu to 500 V for current peak value n=40 rate value □ pu to 500 V for current peak value n=40 rate value □ pu t	— at 220 V rated value	5 A
- with 3 current paths in series at DC-3 at DC-5	— 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 110 V rated value at 220 V rated value at 440 V rated value at 600 V rated value at 400 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 600 V rated value 20 rated value at 600 V rated value 20 rated value at 600 V roc current peak value n-20 rated value at 600 V roc current peak value n-20 rated value at 600 V roc current peak value n-20 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 rated value at 600 V roc current peak value n-30 ra	— at 24 V rated value	55 A
- at 220 V rated value - at 460 V rated value 0.6 A 0.6 A 0.35 A operating power • at AC-2 at 400 V rated value • at AC-3 - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 600 V rated value - at 500 V rated value - at 600 V 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 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 valu	— at 60 V rated value	55 A
- at 440 V rated value	— at 110 V rated value	55 A
operating power 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 500 V rated value — at 500 V rated value — at 600 V rated value — at 400 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 600 V rated value operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value operating apparent power at AC-6a • 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 600 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value	— at 220 V rated value	25 A
e at AC-2 at 400 V rated value e at AC-3 — at 230 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 operating apparent power at AC-6a • 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 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 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 • up to 590 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 • up to 590 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 • up to 590 V for current peak value n=30 rated value • up to 590 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	— at 440 V rated value	0.6 A
at AC-2 at 400 V rated value at AC-3 — at 230 V rated value — at 400 V rated value — at 690 V rated value — at 690 V rated value — at 400 V rated value — at 500 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 operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value 15.8 kW 21.8 kW 27.8 kVA 48.4 kVA 60.6 kVA 60.5 kVA 60.6 kVA 60.5 kVA 60.6 kVA 60.5 kVA 60.5 kVA 60.6 kVA 60.5 kVA 60.6 kVA 60.6 kVA 60.5 kVA 60.6 kVA	— at 600 V rated value	0.35 A
at AC-3 at 230 V rated value at AC 3e at AC-3e at 230 V rated value at AC-3e at 230 V rated value at AC 3e at 400 V rated value at 500 V rated value at 690 V rated value at 690 V rated value at 690 V rated value 57 kW 45 kW 22 kW 37 kW 45 kW 46 kW 47 kW 48 kW 48 kW 49 to 230 V for current peak value n=20 rated value 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 400 V for current peak value n=20 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 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 sup to 500 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C ilimited to 10 s switching at zero current maximum ilimited to 50 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 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 switching at zero current maxi	operating power	
- at 230 V rated value - at 400 V rated value - at 690 V rated value - at 330 V rated value - at 400 V rated value - at 590 V rated value - at 590 V rated value - at 690 V rated value	 at AC-2 at 400 V rated value 	37 kW
- at 400 V rated value - at 590 V rated value 45 kW • at AC-3e - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value • 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 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 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=3	• at AC-3	
- at 500 V rated value - at 690 V rated value - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 500 V rated value - at 690 V rated value	— at 230 V rated value	22 kW
- at 690 V rated value • at AC-3e - at 230 V rated value - at 400 V rated value - at 590 V rated value - at 690 V rated value • at 400 V rated value • at 690 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 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=30 rated value • up to 400 °C • limited to 1 s switching at zero current maximum • limited to 5 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	— at 400 V rated value	37 kW
at AC-3e — at 230 V rated value — at 400 V rated value — at 590 V rated value — at 690 V rated value Operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value 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 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 operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value operating apparent power at AC-6a up to 500 V for current peak value n=30 rated value operating apparent power at AC-6a up to 500 V for current peak value n=30 rated value operating apparent power at AC-6a up to 500 V for current peak value n=30 rated value oup to 690 V for current peak value n=30 rated value oup to 690 V for current peak value n=30 rated value oup to 500 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 500 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for current peak value n=30 rated value oup to 600 V for c	— at 500 V rated value	37 kW
- at 230 V rated value - at 400 V rated value - at 690 V rated value • at 400 V rated value • at 690 V rated value • 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 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 sup 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 30 s switching at zero current maximum • limited to 60 s switching at zero current ma	— at 690 V rated value	45 kW
- 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 • 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=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 sup 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 10 s switching at zero current maximum • limited to 5 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 • 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 •	• at AC-3e	
- 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 • at 690 V rated value 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 operating apparent power at AC-6a • up to 500 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 operating apparent power at AC-6a • up to 500 V for current peak value n=30 rated value oup to 690 V for current peak value n=30 rated value oup 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 10 s switching at zero current maximum olimited to 10 s switching at zero current maximum olimited to 10 s switching at zero current maximum olimited to 60 s switching at zero cu	— at 230 V rated value	22 kW
	— at 400 V rated value	37 kW
operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value 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 230 V for current peak value n=20 rated value • 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 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 • limited to 1 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 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 • at DC operating frequency • at AC-1 maximum 15.8 kW 21.8 kW 27.8 kVA 48.4 kVA 60.6 kVA 69.3 kVA 18.6 kVA 32.3 kVA 40.4 kVA 55.8 kVA 18.6 kVA	— at 500 V rated value	37 kW
at AC-4 • at 400 V rated value • at 690 V rated value operating apparent power at AC-6a • 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 operating apparent power at AC-6a • up to 230 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 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 short-time withstand current in cold operating state up to 40 °C • limited to 1 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 60 s switching at zer		45 kW
 at 400 V rated value at 690 V rated value at 690 V rated value at 690 V rated value 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 operating apparent power at AC-6a up to 230 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 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 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 frequency at AC at DC operating frequency at AC-1 maximum 700 1/h 	operating power for approx. 200000 operating cycles	
• at 690 V rated value 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 230 V for current peak value n=30 rated value • up to 400 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 • 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 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 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 5 s switching at zero current maximum • limited to 60 s switching at zero current maxim		45.0 kM
operating apparent power at AC-6a		
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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 olimited to 60 s switching at zero current maximum alimited to 60 s switching at zero current maximum fooload switching frequency • at AC at DC operating frequency • at AC-1 maximum 1 298 A; Use minimum cross-section acc. to AC-1 rated value 444 A; Use minimum cross-section acc. to AC-1 rated value 415 ON 1/h 1 500 1/h 700 1/h		
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 limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum no-load switching frequency at AC at DC operating frequency at AC-1 maximum 414 A; Use minimum cross-section acc. to AC-1 rated value 333 A; Use minimum cross-section acc. to AC-1 rated value 1 500 1/h 1 500 1/h 700 1/h 	 limited to 5 s switching at zero current maximum 	898 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 60 s switching at zero current maximum no-load switching frequency at AC at DC 1 500 1/h operating frequency at AC-1 maximum 700 1/h 	 limited to 10 s switching at zero current maximum 	640 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency		
 at AC at DC 1 500 1/h 1 500 1/h operating frequency at AC-1 maximum 700 1/h 		333 A; Use minimum cross-section acc. to AC-1 rated value
 at DC operating frequency at AC-1 maximum 700 1/h 	no-load switching frequency	
operating frequency ◆ at AC-1 maximum 700 1/h		
• at AC-1 maximum 700 1/h		1 500 1/h
• at AC-2 maximum 350 1/h		
	• at AC-2 maximum	350 1/h

at AC-3 maximum at AC-3e maximum at AC-4 maximum at AC-4 maximum type of voltage of the control supply voltage AC/DC	
at AC-4 maximum 150 1/h Control circuit/ Control type of voltage of the control supply voltage AC/DC	
Control circuit/ Control type of voltage of the control supply voltage AC/DC	
type of voltage of the control supply voltage AC/DC	
36.4.4.4.3.4.4.4.4.3.4.3.4.3.4.3.4.3.4.3	
control cumply voltage at AC	
control supply voltage at AC • at 50 Hz rated value 20 33 V	
• at 50 Hz rated value 20 33 V	
control supply voltage at DC • rated value 20 33 V	
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value 0.8	
• full-scale value 1.1	
operating range factor control supply voltage rated	
value of magnet coil at AC	
• at 50 Hz 0.8 1.1	
● at 60 Hz 0.8 1.1	
design of the surge suppressor with varistor	
inrush current peak 3 A	
duration of inrush current peak 50 µs	
locked-rotor current mean value 1 A	
locked-rotor current peak 2.6 A	
duration of locked-rotor current 230 ms	
holding current mean value 40 mA	
apparent pick-up power of magnet coil at AC	
• at 50 Hz 40 VA	
• at 60 Hz 40 VA	
apparent holding power of magnet coil at AC	
• at 50 Hz 2 VA	
• at 60 Hz 2 VA	
closing power of magnet coil at DC 23 W	
holding power of magnet coil at DC 1 W	
closing delay	
• at AC 35 110 ms	
• at DC 35 110 ms	
opening delay	
• at AC 30 55 ms	
• at DC 30 55 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 2	
instantaneous contact	
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 Approximately present at DC 42	
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	
at 110 V rated value 3 A A A A A	
at 125 V rated value 2 A A A A A A A A A A A	
at 220 V rated value 1 A A A A	
at 600 V rated value 0.15 A	
operational current at DC-13	
at 24 V rated value 6 A A A A A A A A A A A A A A	
at 48 V rated value 2 A 3 A	
at 60 V rated value 2 A	

a at 110 V rated value	1.0
• at 110 V rated value	1 A
at 125 V rated value at 220 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 	
 — with type of coordination 1 required 	gG: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A
with time of the state of the s	(415 V, 80 kA)
 — with type of assignment 2 required 	gG: 160A (690V,100kA), aM: 80A (690V,100kA), BS88: 125A (415V,80kA)
for short-circuit protection of the auxiliary switch	gG: 10 A (500 V, 1 kA)
required	go. 1071(000 v, 1101)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted
g poolie.	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	114 mm
width	55 mm
depth	174 mm
required spacing	
 with side-by-side mounting 	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
• for grounded parts	40
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	10 mm
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
— at the side	6 mm
Connections/ Terminals	6 mm
Connections/ Terminals type of electrical connection	
type of electrical connection • for main current circuit	screw-type terminals
type of electrical connection	screw-type terminals screw-type terminals
type of electrical connection	screw-type terminals screw-type terminals Screw-type terminals
type of electrical connection	screw-type terminals screw-type terminals
type of electrical connection	screw-type terminals screw-type terminals Screw-type terminals
type of electrical connection	screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals
type of electrical connection	screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals 2x (1 35 mm²), 1x (1 50 mm²)
type of electrical connection	screw-type terminals screw-type terminals Screw-type terminals Screw-type terminals

contacts

 finely stranded with core end processing connectable conductor cross-section for auxiliary contacts

- solid or stranded
- finely stranded with core end processing

type of connectable conductor cross-sections

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

AWG number as coded connectable conductor cross section

- for main contacts
- for auxiliary contacts

1 ... 35 mm²

0.5 ... 2.5 mm² 0.5 ... 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)

18 ... 1

20 ... 14

Safety related data

product function

• mirror contact according to IEC 60947-4-1

• positively driven operation according to IEC 60947-

5-1

B10 value with high demand rate according to SN 31920 proportion of dangerous failures

• with low demand rate according to SN 31920

• with high demand rate according to SN 31920

failure rate [FIT] with low demand rate according to SN 31920

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

protection class IP on the front according to IEC 60529

touch protection on the front according to IEC 60529 suitability for use

• safety-related switching OFF

Yes No

1 000 000

40 %

73 %

100 FIT

20 a

IP20

finger-safe, for vertical contact from the front

Yes

Certificates/ approvals

General Product Approval





Confirmation



<u>KC</u>



EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping









LRS





Marine / Shipping

other

Railway

Dangerous Good



Further information

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=3RT2038-1NB34

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2038-1NB34

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1NB34

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

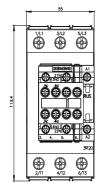
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2038-1NB34&lang=en

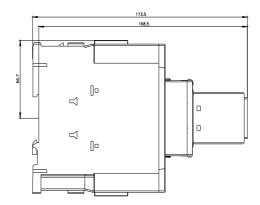
Characteristic: Tripping characteristics, I2t, Let-through current

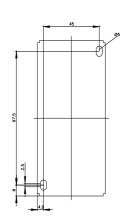
https://support.industry.siemens.com/cs/ww/en/ps/3RT2038-1NB34/char

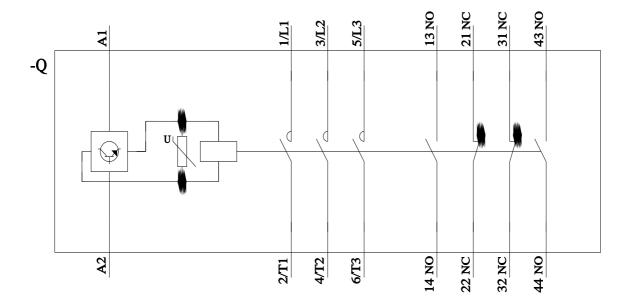
Further characteristics (e.g. electrical endurance, switching frequency)

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2038-1NB34&objecttype=14&gridview=view1









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