SIEMENS

Data sheet 3RT2023-1BB40



power contactor, AC-3 9 A, 4 kW / 400 V 1 NO + 1 NC, 24 V DC 3-pole, Size S0 screw terminal

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S0
product extension	
 function module for communication 	No
auxiliary switch	Yes
power loss [W] for rated value of the current at AC in hot operating state	1.2 W
• per pole	0.4 W
power loss [W] for rated value of the current without load current share typical	5.9 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 acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at DC	15g / 5 ms, 10g / 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)	01.10.2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C acc. to IEC 60068-2-30	95 %

Main circuit number of Doles for main current circuit number of Doles for main current circuit appearating voltage at AC-3 rated value maximum 690 V operating voltage at AC-3 rated value maximum 690 V operating voltage at AC-3 rated value maximum 690 V operating voltage at AC-3 rated value maximum 690 V operating voltage at AC-3 rated value maximum 690 V 40 A rated value - up to 690 V at ambient temperature 40 °C rated value - up to 690 V at ambient temperature 60 °C rated value - up to 690 V at ambient temperature 60 °C rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 800 V rated value - at AC-4 at 400 V rated value - at AC-5 up to 400 V rated value - at AC-5 up to 400 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=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 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 va	maximum	
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Operating voltage at AC-3 rated value maximum		
operational current • at AC-1 at 400 V at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-3 — at 400 V rated value • at 500 V rated value • at 500 V rated value — at 500 V rated value — at 690 V rated value — at 690 V rated value • at AC-5 au p to 690 V rated value • at AC-5 au p to 690 V rated value • at AC-5 au p to 690 V rated value • at AC-5 au p to 690 V rated value • at AC-5 au p to 690 V rated value • at AC-6 bu p to 400 V rated value • at AC-6 bu p to 400 V ror 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 500 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value • at AC-6a — up to 500 V for current peak value n=30 rated value • at AC-6a — up to 500 V for current peak value n=30 rated value • at BC-6a — up to 500 V for current peak value n=30 rated value • at AC-6a — up to 500 V for current peak value n=30 rated value • at 600 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 — at 420 V rated value • at 600 V rated value • at 100 V rated value • at 110 V rated value — at 110 V rated value		
• at AC-1 at 400 V at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-3 — at 400 V rated value • at 600 V rated value • at 600 V rated value • at 690 V rated value • at 690 V rated value • at AC-4 at 400 V rated value • at AC-5 up to 690 V rated value • at AC-5 up to 690 V rated value • at AC-6 up to 690 V rated value • at AC-6 up to 690 V rated value • at AC-6 up to 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 • at AC-6 up to 690 V for current peak value n=20 rated value • at AC-6 up to 690 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at AC-6 up to 500 V for current peak value n=30 rated value • at 600 V for current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 600 V rated value • at 100 V rated value • at 100 V rated value • at 500 V rated value		
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- at 400 V rated value	rated value	35 A
- at 500 V rated value	• at AC-3	
■ at 690 V rated value ■ at AC-4 at 400 V rated value ■ at AC-5a up to 690 V rated value ■ at AC-5a up to 690 V rated value ■ at AC-6a ■ 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 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 ■ 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 400 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 □ up to 690 V for current peak value n=30 rated	— at 400 V rated value	9 A
at AC-4 at 400 V rated value at AC-5a up to 690 V rated value at AC-6u tat AC-6u — 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 690 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 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 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 600 V for current peak value n=30 rated value n=30 r	— at 500 V rated value	9 A
at AC-5a up to 690 V rated value at AC-5b up to 400 V rated value 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 — 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 530 V for current peak value n=30 rated value — up to 530 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 400 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 — at 40 V rated value — at 40 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 11.4 A 7.6 A 7.6 A 8.1 A 8.1 A 8.3 A 9.4 A 9.4 A 9.5 A		
at AC-5b up to 400 V rated value 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 — 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 690 V for current peak value n=30 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 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — at 400 V rated value • at 400 V rated value • at 400 V rated value • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value 4.5 A		
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 • 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 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 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 — at 400 V rated value • at 400 V rated value • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value 4.5 A	•	
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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 • 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 - up to 690 V for current peak value n=30 rated value n=30 rated value - up to 690 V for current peak value n=30 rated value n=30 rate	value	
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value • 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 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 minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value 35 A — at 110 V rated value 4.5 A	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 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 1 current path at DC-1 - at 24 V rated value 35 A - at 110 V rated value 4.5 A	value	9 A
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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 minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 1 current path at DC-1 at 24 V rated value 35 A at 110 V rated value 4.5 A	value	
value — up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value 35 A - at 110 V rated value 4.5 A	value	
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value 35 A — at 110 V rated value 4.5 A	value	
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• at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value 4.5 A		
operational current • at 1 current path at DC-1 — at 24 V rated value 35 A — at 110 V rated value 4.5 A	• at 400 V rated value	4.1 A
● at 1 current path at DC-1 — at 24 V rated value 35 A — at 110 V rated value 4.5 A	• at 690 V rated value	3.3 A
 at 24 V rated value at 110 V rated value 4.5 A 	operational current	
— at 110 V rated value 4.5 A	• at 1 current path at DC-1	
	— at 24 V rated value	35 A
— at 220 V rated value 1 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 440 V rated value	0.4 A
— at 600 V rated value 0.25 A	— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	 with 2 current paths in series at DC-1 	
— at 24 V rated value 35 A	— at 24 V rated value	35 A
— at 110 V rated value 35 A	— at 110 V rated value	35 A
— at 220 V rated value 5 A	— at 220 V rated value	5 A
— at 440 V rated value 1 A	— at 440 V rated value	1 A
— at 600 V rated value 0.8 A	— at 600 V rated value	0.8 A
• with 3 current paths in series at DC-1	 with 3 current paths in series at DC-1 	
— at 24 V rated value 35 A	— at 24 V rated value	35 A
— at 110 V rated value 35 A	— at 110 V rated value	35 A
— at 220 V rated value 35 A	— at 220 V rated value	35 A
— at 440 V rated value 2.9 A	— at 440 V rated value	2.9 A
— at 600 V rated value 1.4 A	— at 600 V rated value	1.4 A

- at 224 V rised value	• at 1 current path at DC-3 at DC-5	
at 210 V rated value		20 ^
with 2 current paths in series at DC-3 at DC-5 — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 220 V rated value — at 600 V rated value — at 600 V rated value — at 24 V rated value — at 24 V rated value — at 100 V rated value — at 200 V rated value — at 600 V rated val		
		0.00 A
	-	35 Δ
at 600 V rated value at 124 V rated value at 24 V rated value at 110 V rated value at 240 V rated value at 440 V rated value at 440 V rated value at 600 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 600		
with 3 current paths in series at DC-3 at DC-5		
		0.10 A
	•	35 Δ
operating power at AC-3 — at 230 V rated value — at 400 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=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 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 up eak value n=30 rated value — up to 600 V for current up eak value n=30 rated value — up to 600 V for current up eak value n=30 rated value — up to 600 V for current up eak value n=30 rated value — up to 600 V for current up eak value n=30 rated value — up to 600 V for current up eak value n=20 rated value — up to 600 V for current up eak value n=20 rated value — up to 600 V for current up eak v		
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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 690 V rated value at 690 V rated value 20 rated value 2.5 kW		
- at 400 V rated value - at 500 V rated value - at 500 V rated value - at 500 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 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 500 V for current peak value n=20 rated value • up to 500 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 • 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use mini		2.2 kW
- at 500 V rated value — at 690 V rated value — 20 rated value 2 kW operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value 2 kW • at 690 V rated value 2.5 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 690 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 690 V for current peak value n=30 rated value • 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section acc. to AC-1 rated value 170 A; Use minimum cross-section		
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operating power for approx. 200000 operating cycles at AC-4		
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• 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 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 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 10 s vaitching 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 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • at DC 1 500 l/h operating frequency • at DC 1 500 l/h • at AC-1 maximum 1 000 l/h • at AC-3 maximum 1 000 l/h • at AC-3 maximum 1 000 l/h • at AC-3 maximum 1 000 l/h • at AC-4 maximum 24 V verated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value 1.1	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 • up to 690 V for current peak value n=30 rated value • limited to 10 s switching at zero current maximum • limited to 10 s 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 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 ma	 up to 230 V for current peak value n=20 rated value 	4.5 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 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 3 s switching at zero current maximum • limited to 60 s switching at zero current maximum rol-load switching frequency • at DC • at AC-1 maximum • at AC-2 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-2 maximum • at AC-4 maximum	 up to 400 V for current peak value n=20 rated value 	7.8 kV·A
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 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 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 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 10 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 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 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 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 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	 up to 500 V for current peak value n=20 rated value 	7.8 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 ilimited 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 at DC operating frequency at AC-1 maximum at AC-2 maximum at AC-2 maximum 1000 1/h at AC-3 maximum 1000 1/h at AC-4 maximum 2001 1/h at AC-3 maximum 2001 1/h at AC-4 maximum 2001 1/h at AC-4 maximum 2001 1/h 24 V operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value 0.8 1.1	 up to 690 V for current peak value n=20 rated value 	10.7 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 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 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 limited to 60 s switching at zero current maximum slimited to 60 switching at zero current maximum	operating apparent power at AC-6a	
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• 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 • limited to 60 s switching at zero current maximum no-load switching frequency • at DC operating frequency • at AC-1 maximum 1 000 1/h • at AC-2 maximum 1 000 1/h • at AC-4 maximum 1 000 1/h • at AC-4 maximum 24 V operating range factor control supply voltage rated value operating range factor control supply voltage rated value • full-scale value • full-scale value 7.2 kV-A 7	 up to 400 V for current peak value n=30 rated value 	5.2 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 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 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 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 78 A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • 8A; Use minimum cross-section acc. to AC-1 rated value • Bull-scale value • DC • I 500 1/h • 200	 up to 500 V for current peak value n=30 rated value 	5.2 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 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 no-load switching frequency • at DC • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 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-1 maximum • at AC-4 maximum • at AC-1 rated value • at AC-2		7.2 kV·A
 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 no-load switching frequency at DC at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum but the control supply voltage control circuit/ Control type of voltage of the control supply voltage rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value no.8 170 A; Use minimum cross-section acc. to AC-1 rated value 182 A; Use minimum cross-section acc. to AC-1 rated value 78 A; Use minimum cross-section acc. to AC-1 rated value 1500 1/h 1500 1/h 1000 1/h 1000 1/h 1000 1/h 1000 1/h 1000 1/h 24 V 0.8 1.1 		
 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 DC at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum at AC-5 voltage of the control supply voltage rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value 	 limited to 1 s switching at zero current maximum 	170 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 Inoload switching frequency Inoload switching at zero current maximum Inoload switching at zero current maximum Inoload switching frequency Inoload switching at zero current maximum Inoload switching at DC Inoload switching at zero current maximum Inoload switching at DC Inoload switching at DC Inoload switching at DC Inoload I	_	· · · · · · · · · · · · · · · · · · ·
• limited to 60 s switching at zero current maximum no-load switching frequency • at DC operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum ot AC-4 maximum ot AC-4 maximum ot AC-5 maximum ot AC-6 maximum ot AC-1 maximum DC Control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value 1 500 1/h 1 000 1/h 000 1/h 24 V ODC	 limited to 10 s switching at zero current maximum 	122 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency • at DC operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-5 maximum • at AC-5 maximum • at AC-6 maximum • at AC-1 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC • rated value • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value 1.1	 limited to 30 s switching at zero current maximum 	78 A; Use minimum cross-section acc. to AC-1 rated value
at DC operating frequency at AC-1 maximum 1 000 1/h at AC-2 maximum 1 000 1/h at AC-3 maximum 1 000 1/h at AC-4 maximum 300 1/h Control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC arated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value 1 500 1/h DC DC 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0		68 A; Use minimum cross-section acc. to 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 • at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at DC • rated value operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value 1.000 1/h DC DC OCONTROL SUPPLY VOLTAGE DC 24 V OPERATION OF THE MARCH STATE OF THE MARCH STA		
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 rated value operating range factor control supply voltage rated value of magnet coil at DC initial value full-scale value 1.1 		DC
operating range factor control supply voltage rated value of magnet coil at DC • initial value • full-scale value 0.8 1.1		24 V
 initial value full-scale value 1.1 	operating range factor control supply voltage rated	
	•	0.8
closing power of magnet coil at DC 5.9 W	• full-scale value	1.1
	closing power of magnet coil at DC	5.9 W

holding power of magnet coil at DC	5.9 W
closing delay	0.0 VV
• at DC	50 170 ms
opening delay	30 170 III3
• at DC	15 17.5 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	Standard / / / / /
number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	10 A
• at 400 V rated value	3 A
at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
at 24 V rated value	10 A
at 48 V rated value	6 A
at 60 V rated value	6 A
at 110 V rated value	3 A
at 125 V rated value	2 A
at 220 V rated value	1 A
at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	10 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 	7.6 A
at 600 V rated value	9 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	1 hp
— at 230 V rated value	1 hp
• for 3-phase AC motor	
— at 200/208 V rated value	2 hp
— at 220/230 V rated value	3 hp
— at 460/480 V rated value	5 hp
— at 575/600 V rated value	7.5 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit	
with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
for short-circuit protection of the auxiliary switch	gG: 10 A (500 V, 1 kA)
required	
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715
	g = =

side-by-side mounting	Yes
height	85 mm
width	45 mm
depth	107 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 	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
• for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
at AWG cables for main contacts	2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	
• solid	1 10 mm²
• stranded	1 10 mm²
 finely stranded with core end processing 	1 10 mm²
connectable conductor cross-section for auxiliary	
contacts • solid or stranded	0.5 2.5 mm²
finely stranded with core end processing	0.5 2.5 mm²
type of connectable conductor cross-sections	0.0 2.0 Hilli
for auxiliary contacts	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
— finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
at AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross	
section	
for main contacts	16 8
for auxiliary contacts	20 14
Safety related data	
B10 value with high demand rate acc. to SN 31920	450 000
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
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	

Yes

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination
Certificate



UK Declaration of Conformity

Special Test Certificate

ate

Type Test Certificates/Test Report

Marine / Shipping













other

Dangerous Good

Confirmation



<u>Transport Information</u>

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=3RT2023-1BB40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1BB40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1BB40

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

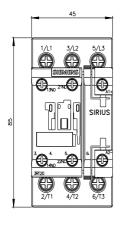
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-1BB40&lang=en

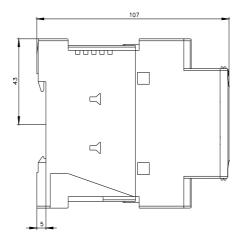
Characteristic: Tripping characteristics, I2t, Let-through current

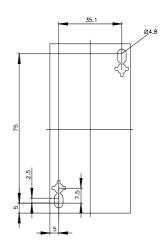
https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1BB40/char

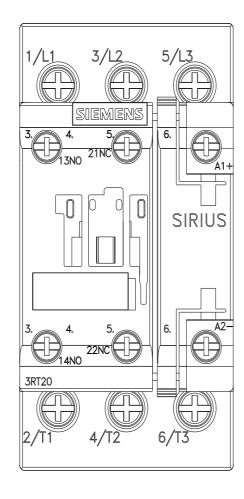
Further characteristics (e.g. electrical endurance, switching frequency)

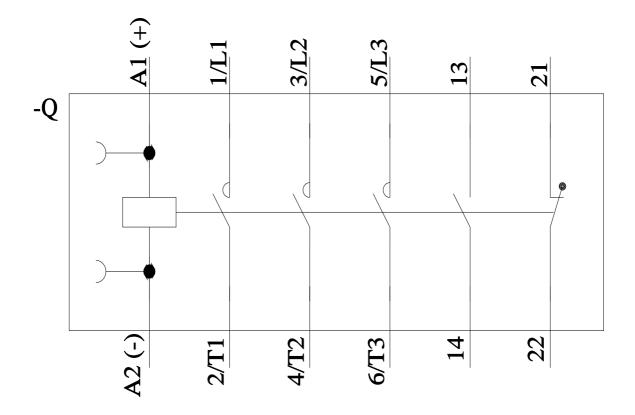
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2023-1BB40&objecttype=14&gridview=view1











last modified: 12/23/2021 🖸