SIEMENS

Data sheet 3RT2023-1AF00



power contactor, AC-3 9 A, 4 kW / 400 V 1 NO + 1 NC, 110 V AC, 50 Hz 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	7.6 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	7,5g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 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
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature during operation	-25 +60 °C
ambient temperature 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	

— up to 880 V at ambient temperature 40 °C rated value — up to 890 V at ambient temperature 80 °C rated value • at AC-3 — at 400 V rated value — at 890 V rated value — at 890 V rated value • at AC-5a up to 890 V rated value • at AC-5a up to 890 V rated value • at AC-5a up to 890 V rated value • at AC-5a up to 890 V rated value • at AC-5a up to 590 V rated value • at AC-5a up to 400 V rated value • at AC-5a up to 590 V for current peak value n=20 rated value — up to 590 V for current peak value n=20 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 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 790 V for current for approx. 200000 operating volue at AC-4 • at 400 V rated value — at 590 V rated v	 at AC-1 at 400 V at ambient temperature 40 °C rated value at AC-1 	40 A
rated value at 400 V rated value at 500 V rated value at 500 V rated value at 690 V rated value at AC-4 at 400 V rated value at AC-3 up to 690 V rated value at AC-3 up to 590 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 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 - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak value - up to 690 V for current peak valu		40 A
at 400 V rated value	 up to 690 V at ambient temperature 60 °C rated value 	35 A
at 500 V rated value	• at AC-3	
at 690 V rated value * at AC-3 ar up to 690 V rated value * at AC-5 ar up to 690 V rated value * at AC-5 ar up to 690 V rated value * at AC-5a	— at 400 V rated value	9 A
at AC-4 at 400 V rated value at AC-5u p to 690 V rated value at AC-5u p to 690 V rated value at AC-5u p to 400 V rated value au p 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 500 V for current peak value n=20 rated value — up to 600 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 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 400 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — at 400 V rated value — at 600 V rated value — at 100 V rated value — at 24 V rated value — at 600 V rated value —	— at 500 V rated value	9 A
at AC-5a up to 690 V rated value	— at 690 V rated value	9 A
at AC-5b up to 400 V rated value	• at AC-4 at 400 V rated value	8.5 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 — 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 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 — at 690 V rated value — at 690 V rated value — at 24 V rated value — at 190 V rated value — at 440 V rated value — at 600 V rated value — at 220 V rated value — at 240 V rated value — at 600 V rated value	• at AC-5a up to 690 V rated value	35.2 A
	 at AC-5b up to 400 V rated value 	7.4 A
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 • at AC-8a — 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 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 690 V rated value — at 140 V rated value — at 600 V rated value — at 220 V rated value — at 240 V rated value — at 600 V rated value — at 440 V rated value — at 55 A — at 110 V rated value — at 440 V rated value — at 290 V rated value — at 650 V rated value — at 660 V rated value — at 660 V rated value — at 660 V rated value — at 670 V rated	• at AC-6a	
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 • 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 — 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 for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 1 current for approx. 200000 operating value • at 1 current path at DC-1 — at 24 V rated value — at 22 V rated value — at 22 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 24 V rated value — at 440 V rated value — at 24 V rated value — at 24 V rated value — at 400 V rated value — at 400 V rated value — at 400 V rated value — at 24 V rated value — at 24 V rated value — at 400 V rated value — at 440 V rated value — at 24 V rated value — at 440 V rated value — at 55 A — at 110 V rated value — at 24 V rated value — at 25 V rated value — at 26 V rated value — at 27 V rated value — at 28 V rated value — at 29 V rated value — at 20 V rated value — at 24 V rated value — at 24 V ra		11.4 A
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 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 690 V rated value — at 690 V rated value — at 690 V rated value — at 24 V rated value — at 22 V rated value — at 22 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 24 V rated value — at 22 V rated value — at 400 V rated value — at 22 V rated value — at 400 V rated value — at 400 V rated value — at 22 V rated value — at 600 V rated value — at 22 V rated value — at 600 V rated value —	value	
value	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 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 operational current for approx. 200000 operating cycles at AC-4 at 400 V rated value at 100 V rated value at 24 V rated value at 220 V rated value at 440 V rated value at 440 V rated value at 440 V rated value at 110 V rated value at 220 V rated value at 110 V rated value at 220 V rated value at 220 V rated value at 440 V rated value at 440 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 220 V rated value at 220 V rated value at 220 V rated value at 24 V rated value at 250 V rated value at	value	9 A
value		7.0.4
value	value	
value − up to 690 V for current peak value n=30 rated value 6.1 A minimum cross-section in main circuit at maximum AC-1 rated value 10 mm² operational current for approx. 200000 operating cycles at AC-4 4.1 A • at 400 V rated value 3.3 A operational current 4.1 A • at 690 V rated value 3.5 A - at 1 current path at DC-1 4.5 A - at 24 V rated value 4.5 A - at 220 V rated value 1.4 A - at 440 V rated value 0.25 A • with 2 current paths in series at DC-1 2.5 A - at 24 V rated value 35 A - at 110 V rated value 35 A - at 220 V rated value 5 A - at 440 V rated value 1.4 - at 600 V rated value 0.8 A • with 3 current paths in series at DC-1 35 A - at 220 V rated value 35 A - at 440 V rated value 35 A - at 47 V rated value 35 A - at 220 V rated value 35 A - at 220 V rated value 35 A - at 420 V rated value 35 A <	value	
value 10 mm² minimum cross-section in main circuit at maximum AC-1 rated value 10 mm² operational current for approx. 200000 operating cycles at AC-4 4 • at 400 V rated value 4.1 A • at 690 V rated value 3.3 A operational current 4.1 A • at 1 current path at DC-1	value	
parational current for approx. 200000 operating cycles at AC-4		6.1 A
e at 400 V rated value		
◆ at 690 V rated value 3.3 A operational current	rated value	10 mm ²
	rated value operational current for approx. 200000 operating	
• at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 440 V rated value — at 40 V rated value — at 40 V rated value — at 40 V rated value — at 22 V rated value — at 600 V rated value — at 24 V rated value — at 25 A — at 110 V rated value — at 20 V rated value — at 600 V rated value	operational current for approx. 200000 operating cycles at AC-4	4.1 A
- at 24 V rated value 35 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 35 A - at 110 V rated value 5 A - at 440 V rated value 5 A - at 440 V rated value 1 A - at 600 V rated value 5 A - at 220 V rated value 1 A - at 600 V rated value 35 A - at 220 V rated value 35 A - at 24 V rated value 35 A - at 24 V rated value 35 A - at 110 V rated value 35 A - at 220 V rated value 35 A - at 440 V rated value 35 A - at 600 V rated value 35 A - at 600 V rated value 35 A - at 600 V rated value 35 A - at 70 V rated value 35 A - at 440 V rated value 35 A - at 440 V rated value 35 A - at 440 V rated value 35 A - at 70 V rated value 35 A	operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value	4.1 A
- at 110 V rated value 4.5 A - at 220 V rated value 0.4 A - at 440 V rated value 0.25 A ● with 2 current paths in series at DC-1 - at 24 V rated value 35 A - at 110 V rated value 5 A - at 220 V rated value 5 A - at 220 V rated value 5 A - at 440 V rated value 1 A - at 600 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 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 220 V rated value 35 A - at 20 V rated value 35 A - 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	operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current	4.1 A
- at 220 V rated value - at 440 V rated value 0.4 A 0.25 A ● with 2 current paths in series at DC-1 - at 24 V rated value 35 A - at 110 V rated value 35 A - at 220 V rated value 5 A - at 440 V rated value 1 A - at 600 V rated value 1 A - at 600 V rated value 35 A - at 110 V rated value 35 A - at 220 V rated value 35 A - at 440 V rated value 35 A - at 220 V rated value 35 A - at 110 V rated value 35 A - at 440 V rated value 35 A - at 220 V rated value 35 A - at 220 V rated value 35 A - at 440 V rated value 35 A - at 440 V rated value 31 A - at 440 V rated value 32 A - at 440 V rated value 34 A - at 600 V rated value 35 A - at 600 V 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	4.1 A 3.3 A
 — at 440 V rated value — at 600 V rated value 0.25 A ● with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 10 V rated value — at 600 V rated value — at 600 V rated value — at 10 V rated value — at 600 V rated value — at 10 V rated value — at 10 V rated value — at 600 V rated value — at 600 V rated value — at 10 V rated value — at 600 V rated value — at 600 V rated value — at 10 V rated value — at 10 V rated value — at 600 V rated value — at 600 V rated value — at 10 V rated value — at 10 V rated value — at 600 V rated value — at 60	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	4.1 A 3.3 A
 — at 600 V rated value ● with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 220 V rated value — at 440 V rated value — at 400 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 1 Current path at DC-3 at DC-5 	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 — at 110 V rated value	4.1 A 3.3 A 35 A 4.5 A
with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value 35 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 rated value 35 A — at 110 V rated value 35 A — at 110 V rated value 35 A — at 440 V rated value 35 A — at 600 V rated value 35 A — at 440 V 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 — at 110 V rated value — at 220 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A
 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 100 V rated value — at 100 V rated value — at 600 V rated value — at 100 V 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 — at 110 V rated value — at 220 V rated value — at 440 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A
 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 120 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 1.4 A Operational current • at 1 current path at DC-3 at DC-5 	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A
 — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 1.4 A Operational current • at 1 current path at DC-3 at DC-5 	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A
 — at 440 V rated value — at 600 V rated value ● with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value ● at 1 current path at DC-3 at DC-5 	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A
 — at 600 V rated value ● with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value ■ at 1 current path at DC-3 at DC-5 	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A
with 3 current paths in series at DC-1 — at 24 V rated value	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 210 V rated value — at 220 V rated value — at 220 V rated value — at 24 V rated value — at 210 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A
— at 24 V rated value 35 A — at 110 V rated value 35 A — at 220 V rated value 35 A — 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	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 — at 110 V rated value — at 220 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 120 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A
— at 220 V rated value 35 A — 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	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • at 120 V rated value - at 24 V rated value — at 24 V rated value — at 440 V rated value — at 110 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A
— at 220 V rated value 35 A — 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	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 24 V rated value — at 24 V rated value — at 440 V rated value — at 10 V rated value — at 110 V rated value — at 600 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 3 current paths in series at DC-1	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 4.5 A 1 A 0.8 A
— at 600 V rated value 1.4 A operational current • at 1 current path at DC-3 at DC-5	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value — at 220 V rated value — at 220 V rated value — at 240 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 35 A
operational current • at 1 current path at DC-3 at DC-5	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 24 V rated value — at 250 V rated value — at 2600 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 5 A 1 A 0.8 A
• at 1 current path at DC-3 at DC-5	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 — at 110 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value — at 20 V rated value — at 220 V rated value — at 24 V rated value — at 440 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 24 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 220 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 35 A 35 A
	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 — at 110 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 220 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A
— at 24 V rated value	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 — at 110 V rated value — at 220 V rated value — at 440 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value • at 110 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 440 V rated value — at 420 V rated value — at 440 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A
at 27 V Tated 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 — at 110 V rated value — at 220 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 24 V rated value — at 24 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 22 V rated value — at 24 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A
— at 110 V rated value 2.5 A	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 — at 110 V rated value — at 220 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 24 V rated value — at 24 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 22 V rated value — at 24 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value	4.1 A 3.3 A 35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A 2.9 A



● at 50 Hz	65 V·A
	GE V A
apparent pick-up power of magnet coil at AC	
value of magnet coil at AC ● at 50 Hz	0.8 1.1
operating range factor control supply voltage rated	
at 50 Hz rated value	110 V
control supply voltage at AC	
type of voltage of the control supply voltage	AC
Control circuit/ Control	
at AC-4 maximum	300 1/h
• at AC-3 maximum	1 000 1/h
• at AC-2 maximum	1 000 1/h
at AC-1 maximum	1 000 1/h
operating frequency	
• at AC	5 000 1/h
no-load switching frequency	
limited to 60 s switching at zero current maximum	68 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	78 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum	122 A; Use minimum cross-section acc. to AC-1 rated value
limited to 5 s switching at zero current maximum	170 A; Use minimum cross-section acc. to AC-1 rated value
limited to 1 s switching at zero current maximum	170 A; Use minimum cross-section acc. to AC-1 rated value
short-time withstand current in cold operating state up to 40 °C	
up to 690 V for current peak value n=30 rated value	7.2 kV·A
• up to 500 V for current peak value n=30 rated value	5.2 kV·A
• up to 400 V for current peak value n=30 rated value	5.2 kV·A
• up to 230 V for current peak value n=30 rated value	3 kV·A
operating apparent power at AC-6a	
up to 690 V for current peak value n=20 rated value	10.7 kV·A
up to 500 V for current peak value n=20 rated value	7.8 kV·A
up to 400 V for current peak value n=20 rated value 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=20 rated value	
operating apparent power at AC-6a	4.5 kV·A
at 690 V rated value Operating apparent power at AC 63	VVV U.J. VVV
	2.5 kW
at 400 V rated value at 400 V rated value	2 kW
operating power for approx. 200000 operating cycles at AC-4	
— at 690 V rated value	7.5 kW
— at 500 V rated value	4 kW
— at 400 V rated value	4 kW
— at 230 V rated value	2.2 kW
• at AC-3	20114
operating power	
— at 600 V rated value	0.6 A
— at 440 V rated value	0.6 A
— at 220 V rated value	10 A
— at 110 V rated value	35 A
— at 24 V rated value	35 A
• with 3 current paths in series at DC-3 at DC-5	
— at 600 V rated value	0.16 A
— at 440 V rated value	0.27 A
— at 220 V rated value	3 A
— at 110 V rated value	15 A
— at 24 V rated value	35 A
with 2 current paths in series at DC-3 at DC-5	
— at 600 V rated value	0.06 A
— at 440 V rated value	0.09 A
	1 A



● at 50 Hz	0.82
apparent holding power of magnet coil at AC	
● at 50 Hz	7.6 V·A
inductive power factor with the holding power of the	
coil • at 50 Hz	0.25
closing delay	0.20
• at AC	9 38 ms
opening delay	5 55 ms
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts	1
instantaneous contact	
number of NO contacts for auxiliary contacts	1
instantaneous contact	40.4
operational current at AC-12 maximum	10 A
operational current at AC-15	40.4
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	_ 1A
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	readity switching per 100 million (17 v, 1 milly)
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	1 ho
— at 110/120 V rated value	1 hp
— at 230 V rated value	1 hp
• for 3-phase AC motor	2 ha
— 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
side-by-side mounting	Yes
height	85 mm
width	45 mm
depth	97 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	
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
AWG number as coded connectable conductor cross section for auxiliary contacts	20 14
Safety related data	



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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	
mirror contact acc. to IEC 60947-4-1	Yes
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

Certificates/ approvals

General Product Approval

EMC













Declaration of Conformity

Test Certificates

Marine / Shipping

Miscellaneous



Special Test Certificate

Type Test **Certificates/Test** Report





Marine / Shipping









Confirmation

other



other

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=3RT2023-1AF00

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-1AF00

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1AF00

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

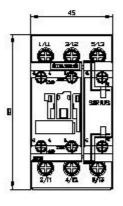
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-1AF00&lang=en

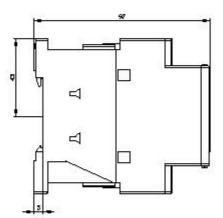
Characteristic: Tripping characteristics, I2t, Let-through current

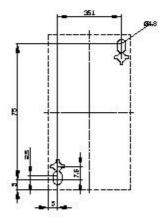
https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-1AF00/char

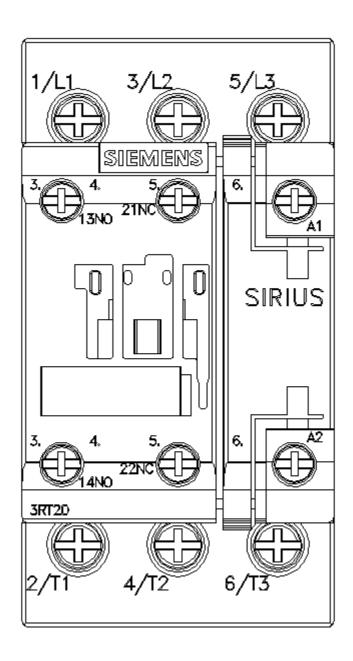
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2023-1AF00&objecttype=14&gridview=view1

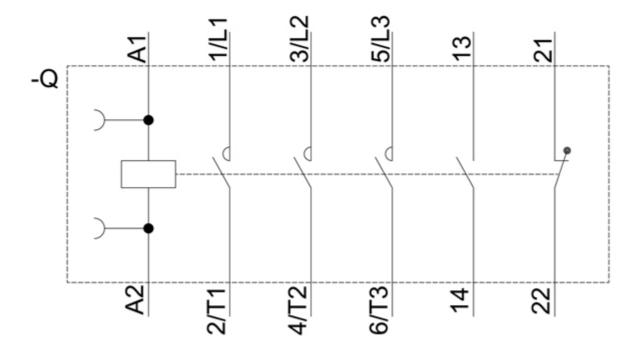












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