SIEMENS

Data sheet 3RT2023-2NP30



power contactor, AC-3e/AC-3, 9 A, 4 kW / 400 V, 3-pole, 200-280 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal, size: S0

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 	0.6 W
 at AC in hot operating state per pole 	0.2 W
 without load current share typical 	1.9 W
type of calculation of power loss depending on pole	quadratic
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 protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,5g / 5 ms, 4,7g / 10 ms
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 10 ms
• at DC	15g / 5 ms, 10g / 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)	10/01/2009
SVHC substance name	Lead - 7439-92-1 Lead monoxide (lead oxide) - 1317-36-8
Weight	0.585 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C

relative humidity with 5°C according to IEC 60069-2-30 maximum relative humidity with 5°C according to IEC 60069-2-30 maximum reproduct Declaration (EPD) Friorimental Product Declaration (EPD) Spot a warming potential (EOC ed) total Spot 7 kg global warming potential (EOC ed) during operation Spot 8 kg global warming potential (EOC ed) during operation Spot 8 kg global warming potential (EOC ed) during operation Spot 8 kg warming potential (EOC ed) during operation Spot 8 kg global warming potential (EOC ed) during operation Spot 8 kg warming potential (EOC ed) during operation Spot 8 kg warming potential (EOC ed) during operation Spot 8 kg warming potential (EOC ed) during operation Spot 8 kg warming potential (EOC ed) during operation Spot 8 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Spot 9 kg warming potential (EOC ed) during operation Warming operation (EOC ed	during storage	-55 +80 °C
Section		
Environmental Product Declaration (EPD) Yes Spitable warming potential (CO2 eq) dutal S9.7 kg S9	relative humidity at 55 °C according to IEC 60068-2-30	
Environmental Product Declaration(EPD) Yes		
global warming potential (CO2 eq) during manufacturing global warming potential (CO2 eq) during operation (S6.8 kg global warming potential (CO2 eq) during operation (S6.8 kg global warming potential (CO2 eq) during operation (S6.8 kg global warming potential (CO2 eq) during operation (S6.8 kg global warming potential (CO2 eq) during operation (S6.8 kg global warming potential (CO2 eq) during operation (S6.8 kg global warming potential (CO2 eq) during operation (S6.8 kg global warming operation (S6.8 kg global warming operation) (S6.8 kg global wa		
global warming potential [CO2 eq] during manufacturing 5.7 kg global warming potential [CO2 eq] date end of life -0.808 kg Namer of NO contacts for main current circuit 3 number of Potes for main current circuit 3 operating voltage 660 V • at A.C-3e rated value maximum 660 V • at A.C-3e rated value maximum 660 V • at A.C-1 at 4.00 V st ambient temperature 40 °C rated value 4 th A.C-1 at 4.00 V st ambient temperature 40 °C rated value 4 th A.C-1 at 4.00 V st ambient temperature 40 °C rated value 4 th A.C-1 at 4.00 V st ambient temperature 40 °C rated value 4 th A.C-1 at 4.00 V rated value 9 A - at A.C-1 at 4.00 V rated value 9 A 9 A 9 A - at 500 V rated value 9 A 9 A 9 A 9 A - at 500 V rated value 9 A		
global warming potential (CO2 eq) during operation 5.6.6 kg		
Social warming potential [CO2 eq] after end of life -0,828 kg		3.7 kg
Name of Poles for main current circuit 3 3 3 3 3 3 3 3 3		56.6 kg
number of NO contacts for main current circuit number of NO contacts for main contacts 3 3 number of NO contacts for main contacts 3 3 at AC-3 rated value maximum 690 V at AC-3 rated value maximum 690 V operational current		-0.626 kg
Number of NO contacts for main contacts September of NO contacts for NO contact		
Accordance Acc	·	
* alt AC-3 rated value maximum * alt AC-3 rated value maximum * alt AC-1 at 400 V at ambient temperature 40 °C rated value * alt AC-1 * — 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 * — up to 690 V rated value * — at 500 V rated value * — at 690 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 690 V for current peak value n=20 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 690 V rated value * — at 400 V rated value * — at 690 V rated value * — at 690 V rated value * — at 24 V rated value — at 22 V rated value — at 690 V rated value		3
• at AC-3e rated value maximum operational current • at AC-1 at 400 v1 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 • 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 690 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at AC-3 • at 400 V rated value • at AC-3 • at 400 V rated value • at AC-4 at 400 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 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 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=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 • at AC-6 • up to 590 V for current peak value n=30 rated value • at AC-6 • up to 590 V for current peak value n=30 rated value • at AC-6 • at 400 V rated value • at 690 V rated value • at 400 V rated value		
September Sept		
		690 V
value • at AC-1 — up to 690 V at ambient temperature 40 "C rated value" 40 A — up to 690 V at ambient temperature 60 "C rated value" 35 A • at 400 V rated value 9 A — at 400 V rated value 9 A — at 4500 V rated value 9 A — at 4500 V rated value 9 A — at 400 V rated value 9 A • at AC-3a up to 690 V rated value 35.2 A • at AC-5b up to 400 V rated value 7.4 A • at AC-5b up to 500 V for current peak value n=20 rated value 11.4 A — up to 500 V for current peak value n=20 rated value 9.1 A • at AC-6a — up to 690 V for current peak value n=30 rated value 9.4 • at AC-6a — up to 400 V for current peak value n=30 rated value 1.6 A — up to 500 V for current peak value n=30 rated value	•	
	value	40 A
value — up to 690 V at ambient temperature 60 °C rated value ■ at 400 V rated value — at 690 V rated value ■ 55 A ■ at AC-5a up to 690 V rated value ■ at AC-5b 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 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=20 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 — at 1400 V rated value — at 600 V rated value — at 6		
value	value	
at 400 V rated value	value	35 A
at 500 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 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-5a up to 690 V rated value • at AC-5a • at AC-5a • 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 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 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 — at 600 V rated value • at 100 V rated value — at 600 V rated value — at 420 V rated value — at 600 V rat	— at 500 V rated value	9 A
- at 400 V rated value		9 A
- at 500 V rated value	• at AC-3e	
- at 690 V rated value 9 A • at AC-4 at 400 V rated value 35.2 A • at AC-5a up to 690 V rated value 7.4 A • at AC-5a • at AC-5b up to 400 V rated value 7.4 A • at AC-6a - up to 230 V for current peak value n=20 rated value 11.4 A - up to 500 V for current peak value n=20 rated value 9 A - up to 590 V for current peak value n=20 rated value 9 A • at AC-6a - up to 230 V for current peak value n=20 rated value 9 A • at AC-6a - up to 590 V for current peak value n=30 rated value 9 A • at AC-6a - up to 590 V for current peak value n=30 rated value 7.6 A - up to 500 V for current peak value n=30 rated value 7.6 A - up to 500 V for current peak value n=30 rated value 6.1 A - 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 9 at 400 V rated value 9 at 690 V for current peak value 9 35 A operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value 3.3 A operational current • at 1 current path at DC-1 - at 24 V rated value 4.5 A - at 60 V rated value 4.5 A - at 60 V rated value 4.5 A - at 440 V rated value 4.5 A - at 440 V rated value 4.5 A - at 440 V rated value 9.25 A • at 440 V rated value 9.25 A - at 60 V rated value 9.25 A • at 440 V rated value 9.25 A	— 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-5b up to 400 V rated value at AC-6a 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 at AC-6a — up to 230 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 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 — at 400 V rated value 4.1 A 3.3 A operational current for approx. 200000 operating cycles at AC-4 at 690 V rated value at 600 V rated value at 600 V rated value at 400 V rated value at 600 V rated value at 440 V rated value at 600 V rated value at 440 V rated value	— at 500 V rated value	9 A
• at AC-5a up to 690 V rated value • at AC-6b 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 690 V for current peak value n=30 rated value — up to 230 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 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 690 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 220 V rated value — at 600 V rated value — at 220 V rated value — at 600 V rated value — at 24 V rated value — at 600 V rated value	— at 690 V rated value	9 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 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=30 rated value • 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 — 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 690 V rated value - at 690 V rated value - at 10 V rated value - at 24 V rated value - at 440 V rated value - at 690 V rated value - at 690 V rated value - at 690 V rated value - at 400 V rated value - at 440 V rated value - at 400 V rated value - at 690 V rated value - at 220 V rated value - at 440 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 • 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 — 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 24 V rated value — at 24 V rated value — at 20 V rated value — at 440 V rated value — at 440 V rated value — at 690 V rated value	 at AC-5a up to 690 V rated value 	35.2 A
- 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=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 - 10 mm² 10 mm² 10 mm² 10 mm² 10 mm² 10 mm² 20 A - at 400 V rated value - at 690 V rated value - at 20 V rated value - at 20 V rated value - at 400 V rated value - at 600 V rated value	 at AC-5b up to 400 V rated value 	7.4 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 - 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 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 - at 400 V rated value - at 200 V rated value - at 200 V rated value - at 400 V rated value - at 600 V rated value - at 200 V rated value	• 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 690 V for current peak value n=30 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 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 24 V rated value at 24 V rated value at 220 V rated value at 440 V rated value at 600 V rated value	 up to 230 V for current peak value n=20 rated value 	11.4 A
- 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 6.1 A 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 60 V rated value - at 400 V rated value - at 440 V rated value - at 460 V rated value - at 600 V rated value - at 24 V rated value - at 24 V rated value - at 600 V rated value - at 600 V rated value - at 24 V rated value - 35 A	 up to 400 V for current peak value n=20 rated value 	11.4 A
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 60 V rated value - at 60 V rated value - at 440 V rated value - at 600 V rated value	 up to 500 V for current peak value n=20 rated value 	9.1 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 - 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 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 60 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 - at 600 V ra	 up to 690 V for current peak value n=20 rated value 	9 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 - 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 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 60 V rated value - at 110 V rated value - at 220 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value	• at AC-6a	
- up to 500 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value 6.1 A 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 - at 120 V rated value - at 220 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value - at 440 V rated value - at 600 V rated val	 up to 230 V for current peak value n=30 rated value 	7.6 A
— 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 • at 110 V rated value • at 110 V rated value • at 440 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 120 V rated value • at 220 V rated value • at 220 V rated value • at 440 V rated value • 35 A	— up to 400 V for current peak value n=30 rated value	7.6 A
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 60 V rated value 20 A — at 110 V rated value 4.5 A — at 220 V rated value 1 A — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value 35 A 35 A 36 A 37 A 38 A 39 A 4.5 A 4.7 A 4.8 A 4.9 A	 up to 500 V for current peak value n=30 rated value 	6.1 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value 4.1 A • at 690 V rated value 3.3 A operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 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 0.25 A • with 2 current paths in series at DC-1 — at 24 V rated value	— up to 690 V for current peak value n=30 rated value	6.1 A
AC-4 ● at 400 V rated value 4.1 A ● at 690 V rated value 3.3 A operational current ● at 1 current path at DC-1 - at 24 V rated value — at 60 V rated value 20 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	value	10 mm²
● at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 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 24 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value 33 A 33 A 35 A		
operational current • at 1 current path at DC-1 — at 24 V rated value 35 A — at 60 V rated value 20 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 35 A	• at 400 V rated value	4.1 A
• at 1 current path at DC-1 — at 24 V rated value 35 A — at 60 V rated value 20 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 690 V rated value	3.3 A
- at 24 V rated value 35 A - at 60 V rated value 20 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	operational current	
- at 60 V rated value 20 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 1 current path at DC-1	
- 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 24 V rated value	35 A
 — 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 35 A 	— at 60 V rated value	20 A
 — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value 35 A 	— at 110 V rated value	4.5 A
 at 600 V rated value with 2 current paths in series at DC-1 at 24 V rated value 35 A 	— at 220 V rated value	1 A
• with 2 current paths in series at DC-1 — at 24 V rated value 35 A	— at 440 V rated value	0.4 A
— at 24 V rated value 35 A	— at 600 V rated value	0.25 A
	 with 2 current paths in series at DC-1 	
— at 60 V rated value 35 A	— at 24 V rated value	35 A
	— at 60 V rated value	35 A

at 110 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 60 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 24 V rated value — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value — at 440 V rated value — at 440 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 60 V rated value — at 75 A 	
 with 3 current paths in series at DC-1 at 24 V rated value at 60 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 440 V rated value 2.9 A at 600 V rated value 4.4 A at 1 current path at DC-3 at DC-5 at 24 V rated value 5 A at 110 V rated value 2.5 A at 220 V rated value 1 A at 440 V rated value 0.09 A at 600 V rated value o.06 A with 2 current paths in series at DC-3 at DC-5 at 24 V rated value 35 A at 60 V rated value 35 A 	
- at 24 V rated value 35 A - at 60 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 • at 1 current path at DC-3 at DC-5 - at 24 V rated value 5 A - at 110 V rated value 5 A - at 110 V rated value 1.4 A • at 1 v rated value 5 A - at 110 V rated value 1.4 A - at 440 V rated value 1.5 A - at 220 V rated value 1.5 A - at 440 V rated value 1.5 A - at 600 V rated value 1.5 A - at 600 V rated value 1.5 A - at 600 V rated value 1.5 A - at 24 V rated value 1.5 A - at 24 V rated value 1.5 A - at 60 V rated value 1.5 A - at 60 V rated value 1.5 A	
- at 60 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 • at 1 current path at DC-3 at DC-5 - at 24 V rated value 5 A - at 10 V rated value 5.4 - at 110 V rated value 2.5 A - at 220 V rated value 1.4 - at 440 V rated value 1.5 - at 240 V rated value 1.6 - at 440 V rated value 1.6 - at 440 V rated value 1.7 - at 440 V rated value 1.8 - at 400 V rated value 1.8 - at 600 V rated value 1.8 - at 600 V rated value 1.8 - at 24 V rated value 1.8 - at 24 V rated value 1.8 - at 60 V	
- at 110 V rated value 35 A - at 220 V rated value 2.9 A - at 440 V rated value 1.4 A - at 600 V rated value 1.4 A • at 1 current path at DC-3 at DC-5 - at 24 V rated value 2.9 A - at 60 V rated value 5 A - at 110 V rated value 2.5 A - at 1220 V rated value 1 A - at 440 V rated value 1 A - at 600 V rated value 1 A	
- at 220 V rated value 2.9 A - at 440 V rated value 1.4 A • at 1 current path at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 2.5 A - at 220 V rated value 1 A - at 440 V rated value 1 A - at 440 V rated value 1 A - at 440 V rated value 1 A - at 600 V rated value 1 A - at 600 V rated value 1 A - at 600 V rated value 35 A - at 24 V rated value 35 A - at 26 V rated value 35 A - at 60 V rated value 35 A - at 60 V rated value 35 A - at 110 V rated value 35 A - at 110 V rated value 15 A	
- at 440 V rated value 2.9 A - at 600 V rated value 1.4 A • at 1 current path at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 2.5 A - at 220 V rated value 1 A - at 440 V rated value 0.09 A - at 600 V rated value 0.06 A • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 35 A - at 60 V rated value 35 A - at 60 V rated value 35 A - at 110 V rated value 15 A	
- at 600 V rated value 1.4 A • at 1 current path at DC-3 at DC-5 - at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 1 A - at 220 V rated value 1 A - at 440 V rated value 0.09 A - at 600 V rated value 0.06 A • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 35 A - at 60 V rated value 35 A - at 110 V rated value 15 A	
• at 1 current path at DC-3 at DC-5 — at 24 V rated value 20 A — at 60 V rated value 5 A — at 110 V rated value 2.5 A — at 220 V rated value 1 A — at 440 V rated value 0.09 A — at 600 V rated value 0.06 A • with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value 35 A — at 60 V rated value 35 A — at 110 V rated value 15 A	
- at 24 V rated value 20 A - at 60 V rated value 5 A - at 110 V rated value 2.5 A - at 220 V rated value 1 A - at 440 V rated value 0.09 A - at 600 V rated value 0.06 A • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 35 A - at 60 V rated value 35 A - at 110 V rated value 15 A	
- at 60 V rated value 5 A - at 110 V rated value 2.5 A - at 220 V rated value 1 A - at 440 V rated value 0.09 A - at 600 V rated value 0.06 A • with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value 35 A - at 60 V rated value 35 A - at 110 V rated value 15 A	
 — 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-3 at DC-5 — at 24 V rated value — at 60 V rated value — at 60 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 600 V rated value • with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 60 V rated value — at 110 V rated value 1 A 1 A 1 A 	
 — at 440 V rated value 0.09 A — at 600 V rated value 0.06 A • with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value 35 A — at 60 V rated value 35 A — at 110 V rated value 15 A 	
 at 600 V rated value with 2 current paths in series at DC-3 at DC-5 at 24 V rated value at 60 V rated value at 110 V rated value 15 A 	
 with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 60 V rated value — at 110 V rated value 15 A 	
 at 24 V rated value at 60 V rated value at 110 V rated value 15 A 	
 at 60 V rated value at 110 V rated value 15 A 	
— at 110 V rated value 15 A	
— at 220 V rated value 3 A	
— at 440 V rated value 0.27 A	
— at 600 V rated value 0.16 A	
with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value 35 A	
— at 60 V rated value 35 A	
— at 110 V rated value 35 A	
— at 220 V rated value 10 A	
— at 440 V rated value 0.6 A	
— at 600 V rated value 0.6 A	
operating power	
at AC-2 at 400 V rated value 4 kW	
• at AC-3	
— at 230 V rated value 2.2 kW	
— at 400 V rated value 4 kW	
— at 500 V rated value 4 kW	
— at 690 V rated value 7.5 kW	
• at AC-3e	
— at 230 V rated value 2.2 kW	
— at 400 V rated value 4 kW	
— at 500 V rated value 4 kW	
— at 690 V rated value 7.5 kW	
operating power for approx. 200000 operating cycles at AC-	
• 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 4.5 kVA	
• up to 400 V for current peak value n=20 rated value 7.8 kVA	
• up to 500 V for current peak value n=20 rated value 7.8 kVA	
• up to 690 V for current peak value n=20 rated value 10.7 kVA	
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value 3 kVA	
• up to 400 V for current peak value n=30 rated value 5.2 kVA	
• up to 500 V for current peak value n=30 rated value 5.2 kVA	
• up to 690 V for current peak value n=30 rated value 7.2 kVA	
short-time withstand current in cold operating state up to	
40 °C	
• limited to 1 s switching at zero current maximum 170 A; Use minimum cross-section acc. to AC-1 rated value	

a limited to E.a. quitables at sere conservations	170 At Lieu minimum group gestion and to AC 4 min during
limited to 5 s switching at zero current maximum	170 A; Use minimum cross-section acc. to AC-1 rated value
limited to 10 s switching at zero current maximum limited to 20 s switching at zero surrent maximum	140 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	104 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 60 s switching at zero current maximum	88 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	4.500.4/1-
• at AC	1 500 1/h
• at DC	1 500 1/h
operating frequency	4 000 4 //
• 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-3e maximum	1 000 1/h
• at AC-4 maximum	300 1/h
Control circuit/ Control	ACIDO
type of voltage of the control supply voltage	AC/DC
control supply voltage at AC	000 000 1
at 50 Hz rated value	200 280 V
at 60 Hz rated value	200 280 V
control supply voltage at DC rated value	200 280 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.7
full-scale value	1.1
operating range factor control supply voltage rated value of	
magnet coil at AC	
● at 50 Hz	0.7 1.1
● at 60 Hz	0.7 1.1
design of the surge suppressor	with varistor
inrush current peak	25 A
duration of inrush current peak	30 µs
locked-rotor current mean value	0.1 A
locked-rotor current peak	0.13 A
duration of locked-rotor current	180 ms
holding current mean value	17 mA
apparent pick-up power of magnet coil at AC	
● at 50 Hz	12.7 VA
● at 60 Hz	14.7 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.98
● at 60 Hz	0.98
apparent holding power	
 at minimum rated control supply voltage at DC 	1.9 VA
at maximum rated control supply voltage at DC	1.9 VA
apparent holding power	
 at minimum rated control supply voltage at AC 	
— at 50 Hz	3.9 VA
— at 60 Hz	4.3 VA
 at maximum rated control supply voltage at AC 	
— at 50 Hz	3.9 VA
— at 60 Hz	4.3 VA
apparent holding power of magnet coil at AC	
● at 50 Hz	3.9 VA
● at 60 Hz	4.3 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.51
● at 60 Hz	0.56
closing power of magnet coil at DC	14.3 W
holding power of magnet coil at DC	1.9 W
closing delay	
at ACat DC	50 80 ms 50 80 ms

opening delay	
• at AC	30 50 ms
• at DC	30 50 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 instantaneous	1
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	A ba
— at 110/120 V rated value	1 hp
— at 230 V rated value • for 3-phase AC motor	1 hp
tor 3-pnase AC motor — at 200/208 V rated value	2 hn
— at 200/208 V rated value — at 220/230 V rated value	2 hp 3 hp
— at 460/480 V rated value	5 hp
— at 400/460 V rated value	7.5 hp
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
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 required	gG: 10 A (500 V, 1 kA)
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 side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	102 mm
width	45 mm

depth	107 mm
required spacing	(V) 11111
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
·	10 mm
— downwards	
— 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	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	spring-loaded terminals
 for auxiliary and control circuit 	spring-loaded terminals
 at contactor for auxiliary contacts 	Spring-type terminals
of magnet coil	Spring-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 10 mm²)
— solid or stranded	2x (1 10 mm²)
 finely stranded with core end processing 	2x (1 6 mm²)
 finely stranded without core end processing 	2x (1 6 mm²)
 for AWG cables for main contacts 	2x (18 8)
connectable conductor cross-section for main contacts	
• solid	1 10 mm²
• stranded	1 10 mm²
 finely stranded with core end processing 	1 6 mm²
 finely stranded without core end processing 	1 6 mm²
connectable conductor cross-section for auxiliary contacts	
solid or stranded	0.5 2.5 mm²
 finely stranded with core end processing 	0.5 1.5 mm²
 finely stranded without core end processing 	0.5 2.5 mm²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or stranded	2x (0.5 2.5 mm²)
finely stranded with core end processing	2x (0.5 1.5 mm²)
finely stranded without core end processing	2x (0.5 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 14)
AWG number as coded connectable conductor cross	,
section	
• for main contacts	18 8
for auxiliary contacts	20 14
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
with low demand rate according to SN 31920	40 %
with high demand rate according to SN 31920	73 %
B10 value with high demand rate according to SN 31920	1 000 000
2.5 Talue With Ingh demand rate according to 5N 51520	1 000 000

failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
Electrical Safety	
protection class IP on the front according to IEC 60529	IP20
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front
Approvals Certificates	

General Product Approval







Confirmation



<u>KC</u>

General Product Ap-

EMV

Test Certificates

Marine / Shipping





Special Test Certific-<u>ate</u>

Type Test Certificates/Test Report





Marine / Shipping











Miscellaneous

other

other

Railway

Dangerous goods

Environment

Confirmation

Special Test Certific-<u>ate</u>

Transport Information



Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.

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=3RT2023-2NP30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2023-2NP30

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-2NP30

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

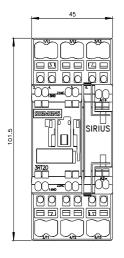
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2023-2NP30&lang=en

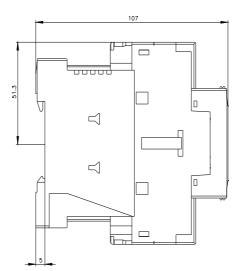
Characteristic: Tripping characteristics, I2t, Let-through current

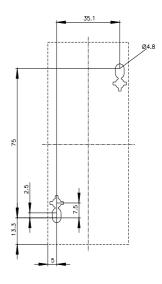
https://support.industry.siemens.com/cs/ww/en/ps/3RT2023-2NP30/char

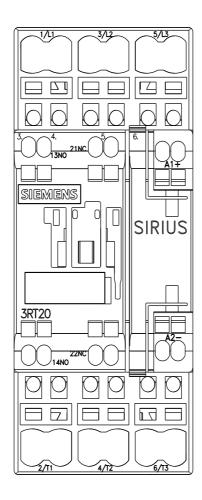
Further characteristics (e.g. electrical endurance, switching frequency)

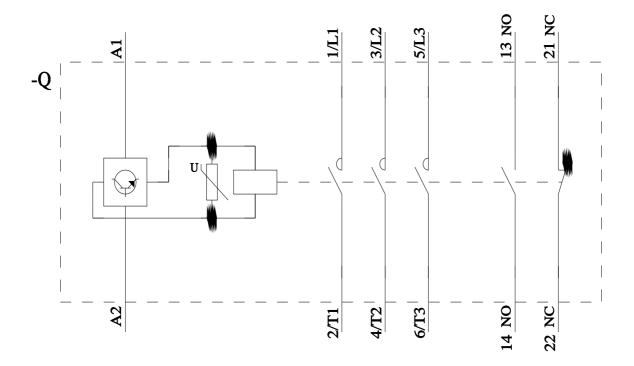
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2023-2NP30&objecttype=14&gridview=view1











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