SIEMENS

Data sheet 3RT2025-1NF30

	power contactor, AC-3e/AC-3, 17 A, 7.5 kW / 400 V, 3-pole, 95-130 V AC/DC, 50/60 Hz, with integrated varistor, auxiliary contacts: 1 NO + 1 NC, screw 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	1.8 W
at AC in hot operating state per pole	0.6 W
without load current share typical	1.8 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 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
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
 during operation 	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
• at AC-3 rated value maximum	690 V
• at AC-3e rated value maximum	690 V
operational current • at AC-1 at 400 V at ambient temperature 40 °C rated	40 A
value ● at AC-1	

— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	40 A
— up to 690 V at ambient temperature 60 °C rated	35 A
value	
• at AC-3	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
• at AC-3e	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
 at AC-4 at 400 V rated value 	15.5 A
 at AC-5a up to 690 V rated value 	35.2 A
 at AC-5b up to 400 V rated value 	14.1 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	11.4 A
— up to 400 V for current peak value n=20 rated value	11.4 A
— up to 500 V for current peak value n=20 rated value	11.4 A
— up to 690 V for current peak value n=20 rated value	11.3 A
• at AC-6a	
— up to 230 V for current peak value n=30 rated value	7.6 A
— up to 400 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 690 V for current peak value n=30 rated value	7.6 A
minimum cross-section in main circuit at maximum AC-1 rated	10 mm²
value	
operational current for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	7.7 A
at 690 V rated value	7.7 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 	
— at 24 V rated value	
— at 47 v rated value	35 A
	35 A 35 A
— at 60 V rated value	35 A
	35 A 35 A
— at 60 V rated value— at 110 V rated value— at 220 V rated value	35 A 35 A 5 A
 at 60 V rated value at 110 V rated value at 220 V rated value at 440 V rated value 	35 A 35 A 5 A 1 A
 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 	35 A 35 A 5 A
 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 with 3 current paths in series at DC-1 	35 A 35 A 5 A 1 A 0.8 A
 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 with 3 current paths in series at DC-1 at 24 V rated value 	35 A 35 A 5 A 1 A 0.8 A
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 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 with 3 current paths in series at DC-1 at 24 V rated value at 60 V rated value at 60 V rated value at 110 V rated value at 220 V rated value 	35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A
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 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 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 440 V rated value at 600 V rated value at 600 V rated value at 1 current path at DC-3 at DC-5 at 24 V rated value 	35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A 35 A 2.9 A 1.4 A
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	— at 60 V rated value	35 A
	— at 110 V rated value	15 A
at 800 V rated value at 100 V rated value at 100 V rated value at 100 V rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rated value at 200 V ro current peak value n-20 rat	— at 220 V rated value	3 A
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		0.16 A
	 with 3 current paths in series at DC-3 at DC-5 	
	— at 24 V rated value	
	— at 60 V rated value	35 A
	— at 110 V rated value	
Operating power		
	— at 600 V rated value	0.6 A
- at 500 V rated value		
- at 890 V rated value • at AC-3e - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value - 40 V rated		
at AC-3e at 200 V rated value at 400 V rated value at 500 V rated value 7.5 kW 11 kW operating power for approx. 200000 operating cycles at AC-4 at 400 V rated value at 500 V rated value at 500 V rated value at 500 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 400 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 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 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 short-time withstand current in cold operating state up to 40 °C illimited to 1 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited to 30 s switching at zero current maximum illimited		
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- at 400 V rated value - at 500 V rated value - at 690 V rated value operating power for approx. 200000 operating cycles at AC- 4 at 400 V rated value - at 690 V rated value - up to 230 V for current peak value n=20 rated value - up to 400 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 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 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 valu		All
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• up to 500 V for current peak value n=20 rated value • up to 890 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 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 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 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 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • at AC- • at DC • at CD • at AC-4 maximum • at AC-3 maximum • at AC-4 maxi		7.8 kVA
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 short-time withstand current in cold operating state up to 40 °C • ilmited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum 115 A; Use minimum cross-section acc. to AC-1 rated value 115 A; Use minimum cross-section acc. to AC-1 rated value 115 A; Use minimum cross-section acc. to AC-1 rated value 115 A; Use minimum cross-section acc. to AC-1 rated value 116 A; Use minimum cross-section acc. to AC-1 rated value 117 A; Use minimum cross-section acc. to AC-1 rated value 118 A; Use minimum cross-section acc. to AC-1 rated value 119 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 115 A; Use minimum cross-section acc. to AC-1 rated value 116 A; Use minimum cross-section acc. to AC-1 rated value 117 A; Use minimum cross-section acc. to AC-1 rated value 118 A; Use minimum cross-section acc. to AC-1 rated value 119 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to		9.9 kVA
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 short-time withstand current in cold operating state up to 40 °C ilimited to 1 s switching at zero current maximum ilimited to 5 s switching at zero current maximum ilimited to 10 s switching at zero current maximum ilimited to 30 s switching at zero current maximum ilimited to 80 s switching at zero current maximum ilimited to 80 s switching at zero current maximum ilimited to 80 s switching at zero current maximum ilimited to 80 s switching at zero current maximum that Change frequency at AC at AC at AC 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-3 maximum 1 000 1/h at AC-3 maximum 1 000 1/h at AC-4 maximum 2 ta Control supply voltage at AC at 50 Hz rated value at 60 Hz rated value 95 130 V operating range factor control supply voltage rated value 95 130 V operating range factor control supply voltage rated value operating range factor control supply voltage rated value 95 130 V		13.6 kVA
• 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 • which is switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum 1000 1/h • at DC • at AC • at DC • at AC • at CC • at AC • at CC • at AC • at CC • at SC maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum 1000 1/h • at AC-4 maximum 1000 1/h • at AC-4 maximum 2000 1/h • at AC-4 maximum 2000 1/h • at AC-4 maximum 2000 1/h • at CC • at SC Hz rated value • at CC • rated value • scale value • scale value • scale value • scale va	operating apparent power at AC-6a	
• up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 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 no-load switching frequency • at AC • at DC • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-9 working at zero current maximum • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-5 maximum • at AC-6 maximum • at AC-7 maximum • at AC-9 maximum • at AC-1 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-3 maximum • at AC-4 maximum • at AC-6 maximum • at AC-7 maximum • at AC-9 maximum • at AC-9 maximum • at AC-1 maximum • at AC-3 maximum • at AC-	• up to 230 V for current peak value n=30 rated value	3 kVA
• up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C • limited to 1 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • 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 100-load switching frequency • at AC • at DC • at DC • at AC • at DC • at AC-1 maximum 1 000 1/h • at AC-3 maximum 1 000 1/h • at AC-3 maximum 1 000 1/h • at AC-4 maximum 1 000 1/h • at AC-4 maximum 2 000 1/h • at AC-4 maximum 2 000 1/h • at AC-4 maximum 2 000 1/h • at AC-5 maximum 2 000 1/h • at AC-4 maximum 2 000 1/h • at AC-5 maximum 2 000 1/h • at AC-4 maximum 2 000 1/h • at AC-5 maximum 2 000 1/h • at AC-6 maximum 2 000 1/h • at AC-7 maximum 3 000 1/h • at AC-8 maximum 2 000 1/h • at AC-9 maximum 3 000 1/h • at AC-1 maximum 2 000 1/h • at AC-2 maximum 3 000 1/h • at AC-3 maximum 9 000 1/h • at AC-4 maximum 9 000 1/h • at AC-5 maximum 9 000 1/h • at AC-7 maximum 9 000 1/h • at AC-8 maximum 9 000 1/h • at AC-9 maximum 1 000 1/h • at AC-9	• up to 400 V for current peak value n=30 rated value	5.2 kVA
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 115 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching frequency • at AC 1 500 1/h • at DC 1 500 1/h • at AC-2 maximum 1 000 1/h • at AC-3 maximum 1 000 1/h • at AC-3 maximum 1 000 1/h • at AC-4 maximum 1 000 1/h • at AC-4 maximum 2 AC-4 maximum 2 AC-7 maximum 3 AC-7 maximum 5 AC-7 maximum 1 DO0 1/h • at AC-8 maximum 5 AC-8 maximum 5 AC-9 maximum 6 AC-1 rated value 7 AC-1 Tated value 8 AC-1 Tated value 9 AC-1 Tated value	• up to 500 V for current peak value n=30 rated value	6.6 kVA
Ilmited to 1 s switching at zero current maximum 225 A; Use minimum cross-section acc. to AC-1 rated value	• up to 690 V for current peak value n=30 rated value	9.1 kVA
Ilimited to 1 s switching at zero current maximum Ilimited to 5 s switching at zero current maximum Ilimited to 10 s switching at zero current maximum Ilimited to 10 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Inoload switching frequency Inoload switching frequency Inoload switching frequency Ilimited to 60 s switching at zero current maximum Inoload switching frequency Inoload switching frequency Ilimited to 60 s switching at zero current maximum Inoload switching frequency In		
Ilimited to 5 s switching at zero current maximum Ilimited to 10 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 30 s switching at zero current maximum Ilimited to 60 s switching at zero current at zero current section acc. to AC-1 rated value Ilimited to 60 s		
 limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum no-load switching frequency at AC at DC 1 500 1/h 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 1 000 1/h at AC-4 maximum 1 000 1/h at AC-3 maximum 1 000 1/h at AC-4 maximum 200 1/h at AC-4 maximum 300 1/h Control circuit/ Control type of voltage of the control supply voltage at 60 Hz rated value <li< td=""><td>-</td><td></td></li<>	-	
Ilimited to 30 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching frequency Ilimited to 60 s switching frequency Ilimited to 60 s switching frequency Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at 2c section acc. to AC-1 rated value Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at zero current maximum Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at 2c. to AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value Ilimited to 60 s switching at AC-1 rated value	-	
Inoload switching frequency at AC 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-3 maximum 1 000 1/h at AC-4 maximum 1 000 1/h at AC-4 maximum 5 000 1/h at AC-5 maximum 6 00 1/h at AC-6 maximum 7 000 1/h At AC-7 maximum 8 1 000 1/h At AC-8 maximum 9 00 1/h AC/DC Control circuit/ Control type of voltage of the control supply voltage at 50 Hz rated value AC/DC control supply voltage at AC at 60 Hz rated value 95 130 V control supply voltage at DC arated value operating range factor control supply voltage rated value of	-	
no-load switching frequency • at AC • at DC 1 500 1/h operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3e maximum • at AC-4 maximum • at AC-4 maximum 1 000 1/h • at AC-4 maximum 200 1/h • at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 95 130 V control supply voltage at DC • rated value • rated value 95 130 V operating range factor control supply voltage rated value of	-	
at AC at DC toperating 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 bat AC-4 maximum control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value at 60 Hz rated value are at 60 Hz rated value by 5 130 V		115 A; Use minimum cross-section acc. to AC-1 rated value
at DC operating frequency at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-4 maximum out AC-4 maximum control circuit/ Control type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value		4 500 4 %
operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum 1 000 1/h • at AC-4 maximum 300 1/h Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 95 130 V control supply voltage at DC • rated value 95 130 V operating range factor control supply voltage rated value of		
 at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-3 e maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum at AC-4 maximum at AC-DC control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage at AC at 50 Hz rated value at 60 Hz rated value at 70 Hz rated value 		חוד טטט אור
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-3e maximum at AC-4 maximum 300 1/h Control circuit/ Control type of voltage of the control supply voltage AC/DC Control supply voltage at AC at 50 Hz rated value at 60 Hz rated value at 50 Hz rated value at 130 V control supply voltage at DC rated value at 130 V operating range factor control supply voltage rated value of at 30 V operating range factor control supply voltage rated value of		4 000 4/b
 at AC-3 maximum at AC-3e maximum at AC-4 maximum 300 1/h Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage at AC at 50 Hz rated value at 60 Hz rated value 95 130 V control supply voltage at DC rated value 95 130 V operating range factor control supply voltage rated value of		
 at AC-3e maximum at AC-4 maximum 300 1/h Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage at AC at 50 Hz rated value at 60 Hz rated value 95 130 V control supply voltage at DC rated value 95 130 V operating range factor control supply voltage rated value of 95 130 V 		
■ at AC-4 maximum Control circuit/ Control type of voltage of the control supply voltage AC/DC control supply voltage at AC ■ at 50 Hz rated value ■ at 60 Hz rated value ■ at 60 Hz rated value □ rated value ■ rated value □ supply voltage at DC □ rated value □ rated value □ rated value □ rated value □ supply voltage rated value of		
type of voltage of the control supply voltage control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value souther than the supply voltage at DC • rated value • rated value • rated value 95 130 V control supply voltage at DC • rated value 95 130 V operating range factor control supply voltage rated value of		
type of voltage of the control supply voltage control supply voltage at AC at 50 Hz rated value at 60 Hz rated value 55 130 V control supply voltage at DC rated value 95 130 V operating range factor control supply voltage rated value of		300 1/11
control supply voltage at AC • at 50 Hz rated value • at 60 Hz rated value 95 130 V control supply voltage at DC • rated value 95 130 V operating range factor control supply voltage rated value of		ACIDO
 at 50 Hz rated value at 60 Hz rated value 25 130 V control supply voltage at DC rated value 95 130 V operating range factor control supply voltage rated value of 		AU/DU
• at 60 Hz rated value		05 120 \/
control supply voltage at DC ● rated value 95 130 V operating range factor control supply voltage rated value of		
• rated value 95 130 V operating range factor control supply voltage rated value of		30 13U V
operating range factor control supply voltage rated value of		05 120 \/
		30 10U V
•	operating range factor control supply voltage rated value of magnet coil at DC	

• initial value	0.7
• full-scale value	1.3
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.7 1.3
• at 60 Hz	0.7 1.3
design of the surge suppressor	with varistor
inrush current peak	15 A
duration of inrush current peak	30 µs
locked-rotor current mean value	0.13 A
locked-rotor current peak	0.19 A
duration of locked-rotor current	180 ms
holding current mean value	19 mA
apparent pick-up power of magnet coil at AC	
• at 50 Hz	11.9 VA
● at 60 Hz	12 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.98
• at 60 Hz	0.98
apparent holding power of magnet coil at AC	
• at 50 Hz	1.6 VA
• at 60 Hz	1.8 VA
inductive power factor with the holding power of the coil	
at 50 Hz	0.79
• at 60 Hz	0.74
closing power of magnet coil at DC	10.2 W
holding power of magnet coil at DC	1.3 W
	1.5 W
closing delay	F0 00 mg
• at AC	50 80 ms
• at DC	50 75 ms
opening delay	
-+ ^ 0	00 50
• at AC	30 50 ms
• at DC	30 50 ms
at DC arcing time	30 50 ms 10 10 ms
at DC arcing time control version of the switch operating mechanism	30 50 ms
at DC arcing time control version of the switch operating mechanism Auxiliary circuit	30 50 ms 10 10 ms Standard A1 - A2
at DC arcing time control version of the switch operating mechanism	30 50 ms 10 10 ms
at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact	30 50 ms 10 10 ms Standard A1 - A2
at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous	30 50 ms 10 10 ms Standard A1 - A2
at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous	30 50 ms 10 10 ms Standard A1 - A2
at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact	30 50 ms 10 10 ms Standard A1 - A2
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum	30 50 ms 10 10 ms Standard A1 - A2
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15	30 50 ms 10 10 ms Standard A1 - A2
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 48 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 690 V rated value at 690 V rated value at 690 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A
 at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 24 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value 	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A
 at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 690 V rated value at 690 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value 	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 6 A 3 A 2 A
■ at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 ■ at 230 V rated value ■ at 400 V rated value ■ at 690 V rated value ■ at 690 V rated value operational current at DC-12 ■ at 24 V rated value ■ at 48 V rated value ■ at 48 V rated value ■ at 110 V rated value ■ at 125 V rated value ■ at 220 V rated value ■ at 600 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
 at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 48 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 24 V rated value 	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 10 A 1 A 1 A 1 A
 at DC arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 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 operational current at DC-13 at 24 V rated value at 48 V rated value 	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 690 V rated value at 690 V rated value at 24 V rated value at 48 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 240 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 48 V rated value at 60 V rated value at 60 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 1 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 690 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 220 V rated value at 24 V rated value at 24 V rated value at 25 V rated value at 27 V rated value at 28 V rated value at 29 V rated value at 20 V rated value at 20 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 29 V rated value at 48 V rated value at 49 V rated value at 40 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 10 A 10 A
arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 400 V rated value at 500 V rated value at 690 V rated value at 690 V rated value at 48 V rated value at 110 V rated value at 110 V rated value at 220 V rated value at 220 V rated value at 24 V rated value at 24 V rated value at 25 V rated value at 26 O V rated value at 27 V rated value at 28 V rated value at 29 V rated value at 20 V rated value at 21 V rated value at 21 V rated value at 22 V rated value at 24 V rated value at 25 V rated value at 27 V rated value at 28 V rated value at 48 V rated value at 49 V rated value at 49 V rated value at 40 V rated value at 40 V rated value at 410 V rated value	30 50 ms 10 10 ms Standard A1 - A2 1 1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 10 A 10 A
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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	14 A
at 600 V rated value	17 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 hp
• for 3-phase AC motor	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	15 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 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	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
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	40
— forwards	10 mm
— upwards — downwards	10 mm
	10 mm 6 mm
— at the side Connections/ Terminals	O IIIIII
type of electrical connection • for main current circuit	screw.tvne terminals
for auxiliary and control circuit	screw-type terminals screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals Screw-type terminals
of magnet coil	Screw-type terminals Screw-type terminals
type of connectable conductor cross-sections for main contacts	- 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.
solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
solid 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 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
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)
 for 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	
product function	

Safety related data	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
B10 value with high demand rate according to SN 31920	450 000
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
T1 value for proof test interval or service life according to IEC 61508	20 a
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
suitability for use	
safety-related switching OFF	Yes

Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



Functional
Safety/Safety of Machinery

Declaration of Conformity
Test Certificates



Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Test Certificates Marine / Shipping

Miscellaneous











Marine / Shipping other Railway Dangerous Good



Confirmation



Confirmation

Vibration and Shock

Transport Information

Environment

Environmental Confirmations

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

Information- and Downloadcenter (Catalogs, Brochures,...)

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2025-1NF30

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2025-1NF30}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1NF30

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

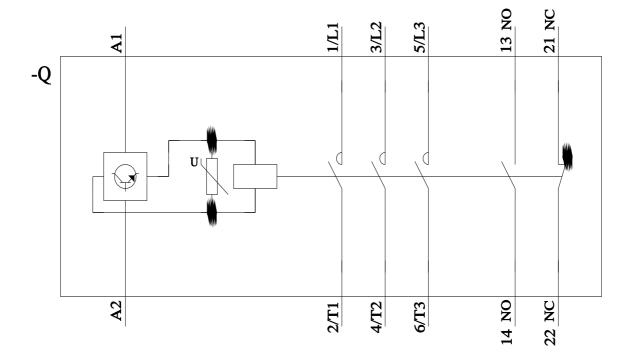
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2025-1NF30&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

 $\underline{\text{https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1NF30/char}}$

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2025-1NF30&objecttype=14&gridview=view1



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