SIEMENS

Data sheet 3RT2028-1AC20



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 24 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

Size of contactor SO	product brand name	SIRIUS		
Size of contactor product extension • function module for communication • auxiliary switch power loss [W] for rated value of the current • at AC in hot operating state per pole • without load current share typical • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit with degree of pollution 3 rated value • of main circuit with degree of pollution 3 rated value • of main circuit with degree of pollution 3 rated value • of main circuit rated value • of main circuit rated value • of main circuit rated value • of williary circuit rated value • of one of main circuit with degree of pollution 3 rated value • of williary circuit rated value • of williary circuit rated value • of williary circuit rated value * of one of williary circuit rated value • of onal circuit value • of williary circuit rated value •	product designation	Power contactor		
Size of contactor SO	product type designation	3RT2		
#unction module for communication function module for communication auxiliary switch Yes	General technical data			
• function module for communication • auxiliary switch ves auxiliary switch • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical • of main circuit share typical • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of main circuit rated value • of auxiliary circuit rated value • at AC shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC shock resistance shock resistance shock resistance shock resistance shock resistance shock resi	size of contactor	S0		
• auxiliary switch power loss [W] for rated value of the current • at AC in hot operating state per pole • at AC in hot operating state per pole • without load current share typical • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit rated value • at AC • at A	product extension			
power loss [W] for rated value of the current at AC in hot operating state at AC in hot operating state per pole without load current share typical of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit vith degree of pollution 3 rated value of auxiliary circuit rated value of the contactor vith sine pulse of at AC systems and auxiliary since the foperating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) unbient conditions installation altitude at height above sea level maximum of the portation of utring operation of during storage of the contactor with added auxiliary switch block typical	 function module for communication 	No		
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insulation voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit rated value of main circuit rated value of auxiliary circuit rated value of kV ### 400 V ### 500 V ### 50	 at AC in hot operating state per pole 	3.2 W		
of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of main circuit rated value of main circuit rated value of of auxiliary circuit rated value of of auxiliary circuit rated value of of auxiliary circuit rated value of auxiliary circuit rated value of work of auxiliary circuit rated value of auxiliary circuit rated value of work of auxiliary circuit rated value of work of wo	 without load current share typical 	2.7 W		
of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value aximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse ot AC s,3g / 5 ms, 5,3g / 10 ms shock resistance with sine pulse ot AC 13,5g / 5 ms, 8,3g / 10 ms mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical	insulation voltage			
surge voltage resistance of main circuit rated value of main circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse of at AC shock resistance with sine pulse of at AC shock resistance with sine pulse of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) installation altitude at height above sea level maximum ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation of during storage of according to IEC 81346-2 of uning storage of according to IEC 81346-2 of C of uning storage of according to IEC 81346-2 of C of uning storage	 of main circuit with degree of pollution 3 rated value 	690 V		
of main circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse ot AC	 of auxiliary circuit with degree of pollution 3 rated value 	690 V		
of auxiliary circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse	surge voltage resistance			
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC 13,5g / 5 ms, 8,3g / 10 ms mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor typical • of the contactor with added auxiliary switch block typical • of the contactor typical • of the contactor typical • of the contactor typical	of main circuit rated value	6 kV		
shock resistance at rectangular impulse	of auxiliary circuit rated value	6 kV		
at AC shock resistance with sine pulse at AC 13,5g / 5 ms, 8,3g / 10 ms mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically		400 V		
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mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) 10/01/2009 Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation -25 +60 °C • during storage -55 +80 °C	shock resistance with sine pulse			
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reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage Q 10/01/2009 2 000 m -25 +60 °C -55 +80 °C		5 000 000		
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage 10/01/2009 2 000 m -25 +60 °C -55 +80 °C	 of the contactor with added auxiliary switch block typical 	10 000 000		
Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage 2 000 m -25 +60 °C -55 +80 °C	reference code according to IEC 81346-2	Q		
installation altitude at height above sea level maximum ambient temperature • during operation • during storage 2 000 m -25 +60 °C -55 +80 °C	Substance Prohibitance (Date)	10/01/2009		
ambient temperature	Ambient conditions			
 during operation during storage -25 +60 °C -55 +80 °C 	installation altitude at height above sea level maximum	2 000 m		
• during storage -55 +80 °C	ambient temperature			
	 during operation 	-25 +60 °C		
	during storage	-55 +80 °C		
relative humidity minimum 10 %	relative humidity minimum	10 %		
relative humidity at 55 °C according to IEC 60068-2-30 95 % maximum		95 %		
nvironmental footprint	Environmental footprint			
Environmental Product Declaration(EPD) Yes	Environmental Product Declaration(EPD)	Yes		

Global Warming Potential [CO2 eq] total	74.2 kg
Global Warming Potential [CO2 eq] during manufacturing	1.9 kg
Global Warming Potential [CO2 eq] during operation	72.4 kg
Global Warming Potential [CO2 eq] after end of life	-0.117 kg
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 value 	50 A
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated	50 A
value	30 A
— up to 690 V at ambient temperature 60 °C rated	42 A
value	
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-4 at 400 V rated value	22 A
at AC-5a up to 690 V rated value	44 A
at AC-5b up to 400 V rated value	31.5 A
• at AC-6a	
— up to 230 V for current peak value n=20 rated value	30.8 A
— up to 400 V for current peak value n=20 rated value	30.8 A
— up to 500 V for current peak value n=20 rated value	30.8 A
— up to 690 V for current peak value n=20 rated value	21 A
• at AC-6a	20.5.4
— up to 230 V for current peak value n=30 rated value	20.5 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 	20.5 A 21.4 A
— up to 690 V for current peak value n=30 rated value	21 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	10 A
at 400 V rated value at 600 V rated value	12 A
at 690 V rated value	12 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	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
— at 600 V rated value	0.8 A
with 3 current paths in series at DC-1	

	— at 60 V rated value	35 A			
	— at 110 V rated value	35 A			
	— at 220 V rated value	35 A		at 220 V rated value 35 A	
- at 1 current path at DC-3 at DC-5 - at 24 V rated value - at 60	— 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 220 V rated value	1 A			
- with 2 current paths in series at DC-3 at DC-5 - at 24 V rated value - at 10 V rated value - at 110 V rated value - at 220 V rated value - at 220 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value - at 440 V rated value - at 600 V rated value - at 400 V rated value - at 600 V rated value - at 400 V rated value - at 400 V rated value - at 600 V rated val	— 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			
with 3 current paths in series at DC-3 at DC-5	— at 220 V rated value	3 A			
with 3 current paths in series at DC-3 at DC-5	— at 440 V rated value	0.27 A			
at 24 V rated value	— at 600 V rated value	0.16 A			
at 24 V rated value	• with 3 current paths in series at DC-3 at DC-5				
at 110 V rated value at 220 V rated value at 440 V rated value at 440 V rated value at 600 V rated value at 400 V rated value at 400 V rated value at 690 V rated value at	-	35 A			
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 400 V rated value at 400 V rated value at 690 V rated value at	— at 60 V rated value	35 A			
- at 440 V rated value	— at 110 V rated value	35 A			
- at 440 V rated value					
operating power at AC-3 — at 230 V rated value — at 600 V rated value — at 500 V rated value — at 600 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 600 V ror current peak value n=20 rated value — at 600 V for current peak value n=20 rated value — at 600 V for current peak value n=20 rated value — at 600 V for current peak value n=20 rated value — at 600 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current p	— at 440 V rated value	0.6 A			
operating power at AC-3 — at 230 V rated value — at 600 V rated value — at 500 V rated value — at 600 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 600 V ror current peak value n=20 rated value — at 600 V for current peak value n=20 rated value — at 600 V for current peak value n=20 rated value — at 600 V for current peak value n=20 rated value — at 600 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current peak value n=30 rated value — at 000 V for current p					
- at 230 V rated value - at 400 V rated value - at 690 V rated value - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 690 V rated value	operating power				
- at 400 V rated value - at 500 V rated value - at 600 V rated value - at 400 V rated value - at 600 V rated value	• at AC-3				
- at 500 V rated value - at 400 V rated value at AC-3e - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V r	— at 230 V rated value	11 kW			
- at 690 V rated value • at AC-3e - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value • at 400 V rated value • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 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	— at 400 V rated value	18.5 kW			
at AC-3e — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 6 kW — at 690 V rated value — at 6 kW — at 690 V rated value — at 6 kW — at 6 kW — at 690 V rated value — at 6 kW — at	— at 500 V rated value	18.5 kW			
- at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - up to 230 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 690 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 400 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690	— at 690 V rated value	18.5 kW			
- at 400 V rated value - at 500 V rated value - at 690 V rated value - operating apparent power at AC-6a - up to 230 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 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 - up to 690 V	• at AC-3e				
- at 500 V rated value - at 690 V rated value operating power for approx. 200000 operating cycles at AC- 4 • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 400 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 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	— at 230 V rated value	11 kW			
- 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 • 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 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 230 V for current peak value n=20 rated value operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum	— at 400 V rated value	18.5 kW			
operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=20 rated value • up to 290 V for current peak value n=20 rated value • up to 290 V for current peak value n=30 rated value • up to 200 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 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 • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum	— at 500 V rated value				
at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value 25 kVA operating apparent power at AC-6a up to 230 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 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 30 s switching at zero current maximum ilimited to 30 s switching at zero current maximum ilimited to 60 s switching at ze	— at 690 V rated value				
at 400 V rated value at 690 V rated value operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 25 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 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 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 in cold operating state up to up to 690 V for current in cold operating state up to up to 690 V for current in cold operating state up to up to 690 V for current in cold operating state up to up to 500 V for current in cold operating state up to up to 690 V for current in cold operating state up to up to 690 V for current in cold operating state up to up to 500 V for current in cold operating state up to up to 500 V for current in cold operating state up to up to 500 V for current in cold operating state up to up to 500 V for current maximum 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	operating power for approx. 200000 operating cycles at AC-				
• at 690 V rated value operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=20 rated value • up to 230 V for current peak value n=30 rated value • up to 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 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 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 • 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	4				
operating apparent power at AC-6a • up to 230 V for current peak value n=20 rated value • up to 400 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=30 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • limited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum	• at 400 V rated value	6 kW			
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 vup to 230 V for current peak value n=30 rated value vup to 400 V for current peak value n=30 rated value vup to 500 V for current peak value n=30 rated value vup to 500 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 500 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current maximum vup to 690 V for current peak value n=30 rated value vup to 690 V for current maximum vup to 690 V for current maximum vup to 690 V for current maximum vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for current peak value n=30 rated value vup to 690 V for cu	at 690 V rated value	10.3 kW			
 up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 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 limited to 60 s switching frequency at AC 5 000 1/h 	operating apparent power at AC-6a				
• up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited	 up to 230 V for current peak value n=20 rated value 				
• up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a • up to 230 V for current peak value n=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 • limited to 1 s 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 • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching frequency • at AC • Sooo 1/h	 up to 400 V for current peak value n=20 rated value 				
operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value 55 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum 109 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 109 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 109 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 109 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 109 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 109 A; Use minimum cross-section acc. to AC-1 rated value	 up to 500 V for current peak value n=20 rated value 				
up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value value n=30 rated value 18.5 kVA 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 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 Ino-load switching frequency at AC Sooo 1/h Indicated value negative value Ino-load switching frequency		25 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 short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum 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 6					
 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 30 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching frequency at AC at AC 5 000 1/h 					
 up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching frequency at AC at AC 5 000 1/h 	 up to 400 V for current peak value n=30 rated value 	14.2 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 199 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 162 A; Use minimum cross-section acc. to AC-1 rated value no-load switching frequency • at AC 5 000 1/h operating frequency	·				
• 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 162 A; Use minimum cross-section acc. to AC-1 rated value 162 A; Use minimum cross-section acc. to AC-1 rated value 163 A; Use minimum cross-section acc. to AC-1 rated value 164 A; Use minimum cross-section acc. to AC-1 rated value 165 A; Use minimum cross-section acc. to AC-1 rated value	up to 690 V for current peak value n=30 rated value	25 kVA			
 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 frequency at AC operating frequency 					
 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 to AC-1 rated value to AC-1 rated value 5 000 1/h operating frequency 	-				
 limited to 30 s switching at zero current maximum limited to 60 s switching at zero current maximum no-load switching frequency at AC operating frequency 199 A; Use minimum cross-section acc. to AC-1 rated value 5 000 1/h 5 000 1/h	-				
 ◆ limited to 60 s switching at zero current maximum no-load switching frequency ◆ at AC operating frequency 5 000 1/h					
no-load switching frequency • at AC 5 000 1/h operating frequency	 limited to 30 s switching at zero current maximum 				
◆ at AC		162 A; Use minimum cross-section acc. to AC-1 rated value			
operating frequency					
		5 000 1/h			
• at AC-1 maximum 1 000 1/h					
	• at AC-1 maximum	1 000 1/h			

-t A O O	750.4%
• at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
at AC-3e maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	**
type of voltage of the control supply voltage	AC
control supply voltage at AC	04.1/
• at 50 Hz rated value	24 V
at 60 Hz rated value	24 V
operating range factor control supply voltage rated value of magnet coil at AC	
● at 50 Hz	0.8 1.1
● at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
● at 50 Hz	81 VA
● at 60 Hz	79 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
● at 50 Hz	10.5 VA
● at 60 Hz	8.5 VA
inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
● at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
Auxiliary circuit	1
Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact	1
number of NC contacts for auxiliary contacts instantaneous	1
number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous	
number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact	1
number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum	1
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	1 10 A
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	1 10 A 10 A 3 A 2 A
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	1 10 A 10 A 3 A
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	1 10 A 10 A 3 A 2 A 1 A
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	1 10 A 10 A 3 A 2 A 1 A
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	1 10 A 10 A 3 A 2 A 1 A 10 A
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 60 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A
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 60 V rated value • at 110 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A
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 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A
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 60 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A
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 125 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A
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	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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 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 24 V rated value	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
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 24 V rated value • at 48 V rated value • at 48 V rated value	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
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	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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 220 V rated value • at 600 V rated value • at 125 V rated value	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 10 A 2 A 2 A 1 A 0.9 A
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 600 V rated value • at 600 V rated value • at 24 V rated value • at 25 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	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 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
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 60 V rated value • at 110 V rated value • at 125 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 29 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 30 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 70 V rated value	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 10 A 2 A 2 A 1 A 0.9 A 0.3 A
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 600 V rated value • at 600 V rated value • at 24 V rated value • at 25 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	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 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A

• at 480 V rated value	34 A		
at 600 V rated value	27 A		
yielded mechanical performance [hp]			
 for single-phase AC motor 			
— at 110/120 V rated value	3 hp		
— at 230 V rated value	5 hp		
 for 3-phase AC motor 			
— at 200/208 V rated value	10 hp		
— at 220/230 V rated value	10 hp		
— at 460/480 V rated value	25 hp		
— at 575/600 V rated value	25 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: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)		
 — with type of assignment 2 required 	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (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		
fastening method side-by-side mounting	Yes		
height	85 mm		
width	45 mm		
depth	97 mm		
required spacing			
 with side-by-side mounting 			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	0 mm		
 for grounded parts 			
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
— downwards	10 mm		
• for live parts			
— forwards	10 mm		
— upwards	10 mm		
— downwards	10 mm		
— at the side	6 mm		
Connections/ Terminals			
type of electrical connection			
for main current circuit	screw-type terminals		
for auxiliary and control circuit	screw-type terminals		
at contactor for auxiliary contacts	Screw-type terminals		
of magnet coil	Screw-type terminals		
type of connectable conductor cross-sections			
for main contacts			
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)		
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)		
finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²		
for AWG cables for main contacts	2x (16 12), 2x (14 8)		
connectable conductor cross-section for main contacts	, , ,		
• solid	1 10 mm²		
stranded	1 10 mm²		
finely stranded with core end processing	1 10 mm²		
connectable conductor cross-section for auxiliary contacts			
solid or stranded	0.5 2.5 mm²		
- ooila oi olianaod	0.0 <u>2.0</u> mm		

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			
mirror contact according to IEC 60947-4-1	Yes		
suitability for use safety-related switching OFF	Yes; applies only to contactor operating mechanism		
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		
failure rate [FIT] with low demand rate according to SN 31920	100 FIT		
IEC 61508			
T1 value			
 for proof test interval or service life according to IEC 61508 	20 a		
Electrical Safety			
protection class IP on the front according to IEC 60529	IP20		

Approvals Certificates

General Product Approval





touch protection on the front according to IEC 60529



Confirmation

finger-safe, for vertical contact from the front





General Product Approval	EMV	Functional Saftey	Test Certificates
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<u>KC</u>





Type Examination Certificate

Type Test Certificates/Test Report

Special Test Certificate

Marine / Shipping













other En

<u>Miscellaneous</u> <u>Confirmation</u> <u>Confirmation</u> <u>EPD Typ II/III (with life cylce assessment)</u>

Further information

Information on the packaging

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

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2028-1AC20

Cax online generator

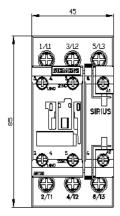
 $\underline{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2028-1AC20}$

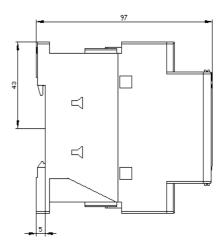
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AC20

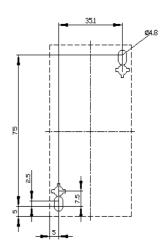
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1AC20&lang=en

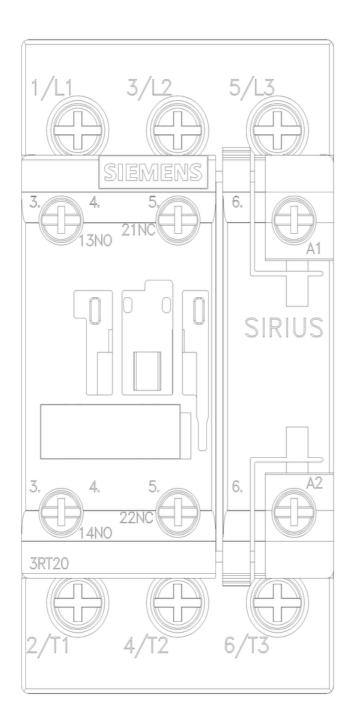
Characteristic: Tripping characteristics, I2t, Let-through current

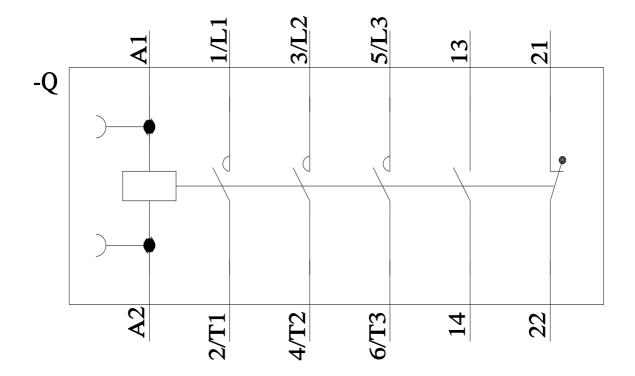
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1AC20&objecttype=14&gridview=view1











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