SIEMENS

Data sheet 3RT2016-1AD01



Power contactor, AC-3 9 A, 4 kW / 400 V 1 NO, 42 V AC, 50 / 60 Hz 3-pole, Size S00 screw terminal

product brand name	SIRIUS	
product designation	Power contactor	
product type designation	3RT2	
General technical data		
size of contactor	S00	
product extension		
 function module for communication 	No	
auxiliary switch	Yes	
power loss [W] for rated value of the current		
 at AC in hot operating state 	0.9 W	
 at AC in hot operating state per pole 	0.3 W	
 without load current share typical 	4.2 W	
insulation voltage		
 of main circuit with degree of pollution 3 rated value 	690 V	
 of auxiliary circuit with degree of pollution 3 rated value 	690 V	
surge voltage resistance		
 of main circuit rated value 	6 kV	
of auxiliary circuit rated value	6 kV	
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V	
shock resistance at rectangular impulse		
• at AC	6,7g / 5 ms, 4,2g / 10 ms	
shock resistance with sine pulse		
• at AC	10,5g / 5 ms, 6,6g / 10 ms	
mechanical service life (switching cycles)		
 of contactor typical 	30 000 000	
 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 value	22 A		
• at AC-1			
 up to 690 V at ambient temperature 40 °C rated value 	22 A		
— up to 690 V at ambient temperature 60 $^{\circ}\text{C}$ rated value	20 A		
• at AC-3			
— at 400 V rated value	9 A		
— at 500 V rated value	7.7 A		
— at 690 V rated value	6.7 A		
• at AC-3e			
— at 400 V rated value	9 A		
— at 500 V rated value	7.7 A		
— at 690 V rated value	6.7 A		
• at AC-4 at 400 V rated value	8.5 A		
• at AC-5a up to 690 V rated value	19.4 A		
at AC-5b up to 400 V rated value	7.4 A		
• at AC-6a			
up to 230 V for current peak value n=20 rated value	5.3 A		
 up to 400 V for current peak value n=20 rated value 	5.3 A		
 up to 500 V for current peak value n=20 rated value 	5.3 A		
 up to 690 V for current peak value n=20 rated value at AC-6a 	5 A		
— up to 230 V for current peak value n=30 rated value	3.5 A		
 up to 400 V for current peak value n=30 rated value 	3.5 A		
 up to 500 V for current peak value n=30 rated value 	3.6 A		
— up to 690 V for current peak value n=30 rated value	3.3 A		
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating	4 mm ²		
cycles at AC-4			
at 400 V rated value	4.1 A		
at 690 V rated value	3.3 A		
operational current			
• at 1 current path at DC-1			
— at 24 V rated value	20 A		
— at 110 V rated value	2.1 A		
— at 220 V rated value	0.8 A		
— at 440 V rated value	0.6 A		
— at 600 V rated value	0.6 A		
with 2 current paths in series at DC-1	0.07.		
— at 24 V rated value	20 A		
— at 24 V rated value — at 110 V rated value	12 A		
— at 110 V rated value — at 220 V rated value	1.6 A		
— at 440 V rated value	0.8 A		
— at 600 V rated value	0.7 A		
 with 3 current paths in series at DC-1 			

at 220 V rated value at 600 V rated value at 100 V rated value at 110 V rated value at 24 V rated value at 220 V rated value at 220 V rated value at 24 V rated value	— at 24 V rated value	20 A
	— at 110 V rated value	20 A
	— at 220 V rated value	20 A
- at 12 v roted value	— at 440 V rated value	1.3 A
	— at 600 V rated value	1 A
- at 110 V rated value	 at 1 current path at DC-3 at DC-5 	
• with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value • with 3 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 220 V rated value — at 600 V rated value — at 400 V rated value — at 500 V rated v	— at 24 V rated value	20 A
	— at 110 V rated value	0.1 A
	 with 2 current paths in series at DC-3 at DC-5 	
- with 3 current paths in series at DC-3 at DC-5	— at 24 V rated value	20 A
	— at 110 V rated value	0.35 A
	 with 3 current paths in series at DC-3 at DC-5 	
	— at 24 V rated value	20 A
	— at 110 V rated value	20 A
	— at 220 V rated value	1.5 A
e at AC-3 — at 230 V rated value — at 690 V rated value — at 230 V rated value — at 690 V rated value — at 230 V rated value — at 290 V rated value — at 290 V rated value — at 500 V rated value — at 690 V	— at 440 V rated value	0.2 A
at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 500 V rated value — at 500 V rated value — at 230 V rated value — at 500 V rated value — at 600 V r	— at 600 V rated value	0.2 A
	operating power	
- at 400 V rated value - at 500 V rated value - at 600 V rated value - at 230 V rated value - 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 500 V rated value - at 690 V 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 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current peak value n=30 rated value - at 600 V for current maximum - at 600 V for current for		
- at 500 V rated value - at 690 V rated value - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 4690 V rated value - at 690 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 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	— at 230 V rated value	2.2 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 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 500 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=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • boff-time withstand current in cold operating state up to 40 °C • limited to 1 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 s switching at zero current maximum • limited to 6 switching at zero current maximum • limited to 6 switching at zero current maximum • limited to 6 switching at zero current maximum • limited to 6 switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero curr	— at 400 V rated value	4 kW
at AC-3e — at 230 V rated value — at 500 V rated value — at 690 V rated value — at 690 V rated value	— at 500 V rated value	4 kW
- at 230 V rated value - at 400 V rated value - at 590 V rated value - at 690 V rated value	— at 690 V rated value	5.5 kW
- 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 - 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=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	• 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 • 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 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 10 230 V for current peak value n=20 rated value • up to 690 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 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 peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated va	— at 230 V rated value	2.2 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 • 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 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=20 rated value • up to 590 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • 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 50 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 • limi	— at 400 V rated value	4 kW
e at AC-4 • at 40 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 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 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 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current peak value n=30 rated value • up to 600 V for current maximum • limited to 10 s switching at zero current maximum • limited to 5 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at	— at 500 V rated value	4 kW
at AC-4 • 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 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 690 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 400 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value 1.3 kVA 2.4 kVA 3.5 kVA 4.6 kVA 4.8 kVA 5.9 kVA 5.9 kVA 5.9 kVA 6.9 kVA 6.	— at 690 V rated value	5 kW
• at 400 V rated value • at 690 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 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 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 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maxim	operating power for approx. 200000 operating cycles	
operating apparent power at AC-6a o up to 230 V for current peak value n=20 rated value o up to 500 V for current peak value n=20 rated value o up to 690 V for current peak value n=20 rated value o up to 690 V for current peak value n=20 rated value o up to 230 V for current peak value n=20 rated value o up to 230 V for current peak value n=30 rated value o up to 500 V for current peak value n=30 rated value o up to 500 V for current peak value n=30 rated value o up to 500 V for current peak value n=30 rated value o up to 690 V for current peak value n=30 rated value o up to 690 V for current peak value n=30 rated value o up to 690 V for current meak value n=30 rated value o up to 690 V for current maximum o limited to 1 s switching at zero current maximum o limited to 10 s switching at zero current maximum o limited to 30 s switching at zero current maximum o limited to 60 s switching at	at AC-4	
operating apparent power at AC-6a	at 400 V rated value	2 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 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 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 500 V for current peak value n=30 rated value imited to 1 s switching at zero current maximum limited to 1 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	at 690 V rated value	2.5 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=30 rated value up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value 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 short-time withstand current in cold operating state up to 40 °C ulimited to 1 s switching at zero current maximum ulimited to 1 s switching at zero current maximum ulimited to 10 s switching at zero current maximum ulimited to 30 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching at zero current maximum ulimited to 60 s switching	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 500 V for current peak value n=30 rated value • up to 500 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • up to 690 V for current peak value n=30 rated value • 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 5 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero curr	 up to 230 V for current peak value n=20 rated value 	2 kVA
• 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 short-time withstand current in cold operating state up to 40 °C • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum on-load switching frequency • at AC-1 maximum at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-5 maximum • at AC-4 maximum • at AC-5 maximum • at AC-4 maximum • at AC-5 maximum • at AC-5 maximum • at AC-6 maximum • at AC-6 maximum • at AC-7 maximum • at AC-6 maximum • at AC-7 maximum • at AC-6 maximum • at AC-6 maximum • at AC-7 maximum • at AC-7 maximum • at AC-8 maximum • at AC-9 maximu	 up to 400 V for current peak value n=20 rated value 	3.6 kVA
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 short-time withstand current in cold operating state up to 40 °C • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60	 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 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 1000 1/h	• up to 690 V for current peak value n=20 rated value	5.9 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 70 s switching at zero current maximum limited to 80 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum 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 6	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 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 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10	• up to 230 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 imited to 1 s switching at zero current maximum imited to 5 s switching at zero current maximum imited to 10 s switching at zero current maximum imited to 30 s switching at zero current maximum imited to 60 s switching at zero current maximum imited to 60 s switching at zero current maximum imited to 60 s switching at zero current maximum imited to 60 s switching at zero current maximum imited to 60 s switching at zero current maximum imited to 60 s switching at zero current maximum imited to 60 s switching frequency at AC 10 000 1/h operating frequency at AC-1 maximum 1 000 1/h at AC-2 maximum 1 000 1/h at AC-3 maximum 750 1/h at AC-3 maximum 750 1/h at AC-4 maximum 750 1/h at AC-4 maximum 750 1/h AC		2.4 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 Ilimited to 60 s switching at zero current maximum Indicate the first product of the control supply voltage of the control s	·	
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 at AC-1 maximum 1000 1/h at AC-2 maximum at AC-3 maximum at AC-3 emaximum at AC-4 maximum at AC-6 maximum at AC-6 maximum at AC-7 maximum at AC-8 maximum at AC-9 maximum at AC-9 maximum at AC-1 maximum AC-1 maximum AC-2 maximum AC-3 maximum AC-3 maximum AC-4 maximum AC-5 maximum AC-6 maximum AC-7 maximum AC-8 maximum AC-9 maximum AC-8 maximum AC-9 maximum	• up to 690 V for current peak value n=30 rated value	4 kVA
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 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 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 at AC-4 maximum at AC-4 maximum at AC-5 maximum at AC-6 maximum at AC-7 maximum at AC-7 maximum at AC-8 maximum at AC-9 maximum at AC-9 maximum at AC-1 rated value 66 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. to AC-1 rated value 55 A; Use minimum cross-section acc. 56 A; Use minimum cross-	-	
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 at AC 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 	-	55 A; Use minimum cross-section acc. to AC-1 rated value
operating frequency • at AC-1 maximum • at AC-2 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3e maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maximum • at AC-9		40,000,411
 at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-3e maximum at AC-4 max		10 000 1/h
 at AC-2 maximum at AC-3 maximum at AC-3e maximum at AC-4 max		4 000 4 //-
 at AC-3 maximum at AC-3e maximum at AC-4 maximum at AC-4 maximum 250 1/h control circuit/ Control type of voltage of the control supply voltage AC		
 at AC-3e maximum at AC-4 maximum 250 1/h ontrol circuit/ Control type of voltage of the control supply voltage AC		
at AC-4 maximum 250 1/h ontrol circuit/ Control type of voltage of the control supply voltage AC		
type of voltage of the control supply voltage AC		
type of voltage of the control supply voltage AC		250 1/h
control supply voltage at AC		AC
	control supply voltage at AC	

at 50 Hz rated value	42 V
at 60 Hz rated value	42 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	27 VA
• at 60 Hz	24.3 VA
inductive power factor with closing power of the coil	
● at 50 Hz	0.8
● at 60 Hz	0.75
apparent holding power of magnet coil at AC	
● at 50 Hz	4.2 VA
● at 60 Hz	3.3 VA
inductive power factor with the holding power of the	
coil	0.05
• at 50 Hz	0.25
• at 60 Hz	0.25
closing delay	0. 05
• at AC	9 35 ms
opening delay	7. 40
• at AC	7 13 ms
arcing time	10 15 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
 at 230 V rated value 	10 A
 at 400 V rated value 	3 A
 at 500 V rated value 	2 A
 at 690 V rated value 	1 A
operational current at DC-12	
 at 24 V rated value 	10 A
 at 48 V rated value 	6 A
 at 60 V rated value 	6 A
at 110 V rated value	3 A
 at 125 V rated value 	2 A
at 220 V rated value	1 A
 at 600 V rated value 	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
• at 48 V rated value	2 A
• at 60 V rated value	2 A
 at 110 V rated value 	1 A
at 125 V rated value	0.9 A
at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
• at 480 V rated value	7.6 A
at 600 V rated value	9 A
yielded mechanical performance [hp]	
for single-phase AC motor	
— at 110/120 V rated value	0.33 hp
— at 230 V rated value	1 hp
for 3-phase AC motor	
e ioi e pridocitto motor	
— at 200/208 V rated value	2 hp

— at 220/230 V rated value	3 hp	
 — at 460/480 V rated value 	5 hp	
— at 575/600 V rated value	7.5 hp	
contact rating of auxiliary contacts according to UL	A600 / Q600	
Short-circuit protection		
design of the fuse link		
 for short-circuit protection of the main circuit 		
 — with type of coordination 1 required 	gG: 35A (690V,100kA), aM: 20A (690V,100kA), BS88: 35A (415V,80kA)	
 — with type of assignment 2 required 	gG: 20A (690V,100kA), aM: 16A (690V, 100kA), BS88: 20A (415V,	
	80kA)	
 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)	
Installation/ mounting/ dimensions		
	1/400° retation receible on vertical requiring ourfocal can be tilted	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface	
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail	
nactorning mounds	according to DIN EN 60715	
• side-by-side mounting	Yes	
height	58 mm	
width	45 mm	
depth	73 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	scrow type 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 type of connectable conductor cross-sections	Screw-type terminals	
for main contacts		
— solid	2v (0.5	
— solid — solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm² 2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²	
	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²), 2x 4 mm² 2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)	
 finely stranded with core end processing at AWG cables for main contacts 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
	2x (20 16), 2x (18 14), 2x 12	
connectable conductor cross-section for main contacts		
• solid	0.5 4 mm²	
stranded	0.5 4 mm²	
finely stranded with core end processing	0.5 2.5 mm ²	
connectable conductor cross-section for auxiliary		
contacts		
solid or stranded	0.5 4 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), 2x 4 mm²	
	, , , , , , , , , , , , , , , , , , , ,	

 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)	
 at AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14), 2x 12	
AWG number as coded connectable conductor cross section		
for main contacts	20 12	
 for auxiliary contacts 	20 12	
Safety related data		
product function		
 mirror contact according to IEC 60947-4-1 	Yes; with 3RH29	
B10 value with high demand rate according to SN 31920	1 000 000	
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 y	
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		

Certificates/ approvals

General Product Approval





Confirmation



<u>KC</u>



EMC S	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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Type Examination Certificate





Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













Marine / Shipping



Confirmation

other



Confirmation

Further information

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2016-1AD01

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2016-1AD01

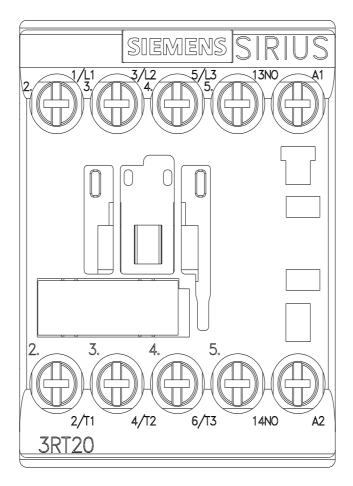
Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1AD01

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2016-1AD01&lang=en

Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2016-1AD01/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2016-1AD01&objecttype=14&gridview=view1



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