SIEMENS

Data sheet

3RT2018-1BE41



power contactor, AC-3e/AC-3, 16 A, 7.5 kW / 400 V, 3-pole, 60 V DC, auxiliary contacts: 1 NO, screw terminal, size: S00 $\,$

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 	3 W
 at AC in hot operating state per pole 	1 W
 without load current share typical 	4 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	7.3g / 5 ms, 4.7g / 10 ms
shock resistance with sine pulse	
• at DC	11,4g / 5 ms, 7,3g / 10 ms
mechanical service life (operating 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	22 A		
value			
• at AC-1			
 — up to 690 V at ambient temperature 40 °C rated value 	22 A		
— up to 690 V at ambient temperature 60 °C rated	20 A		
value			
• at AC-3			
— at 400 V rated value	16 A		
— at 500 V rated value	12.4 A		
— at 690 V rated value	8.9 A		
• at AC-3e			
— at 400 V rated value	16 A		
— at 500 V rated value	12.4 A		
— at 690 V rated value	8.9 A		
• at AC-4 at 400 V rated value	11.5 A		
• at AC-5a up to 690 V rated value	19.4 A		
• at AC-5b up to 400 V rated value	13.2 A		
• at AC-6a			
 — up to 230 V for current peak value n=20 rated value 	9.6 A		
 — up to 400 V for current peak value n=20 rated value 	9.6 A		
 — up to 500 V for current peak value n=20 rated value 	9.6 A		
— up to 690 V for current peak value n=20 rated value	8.9 A		
• at AC-6a			
— up to 230 V for current peak value n=30 rated value	6.6 A		
— up to 400 V for current peak value n=30 rated value	6.4 A		
— up to 500 V for current peak value n=30 rated value	6.4 A		
— up to 690 V for current peak value n=30 rated value	6.4 A		
minimum cross-section in main circuit at maximum AC-1 rated value	4 mm ²		
operational current for approx. 200000 operating cycles at AC-4			
• at 400 V rated value	5.5 A		
• at 690 V rated value	4.4 A		
operational current			
 at 1 current path at DC-1 			
— at 24 V rated value	20 A		
— at 60 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 			
— at 24 V rated value	20 A		
— at 60 V rated value	20 A		
— at 110 V rated value	12 A		
— 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 24 V rated value	20 A		
— at 60 V rated value	20 A		
— at 110 V rated value	20 A		
— at 220 V rated value	20 A		
— at 440 V rated value	1.3 A		
— at 600 V rated value	1 A		
 at 1 current path at DC-3 at DC-5 			

- at 24 V rates value 20 A - at 24 V rates value 0.5 A - at 24 V rates value 0.5 A - at 24 V rates value 20 A - at 25 V rates value 20 A - at 260 V rates value 7.5 kW - at 260 V rates value 2.5 kW - at 260 V rates valu						
	— at 24 V rated value	20 A				
• with 2 current paths inseries at DC-3 at DC-520 A- at GV Yindo Yubo5 A- at GV Yindo Yubo20 A- at GV Yindo Yubo25 KW- at GV Yindo Yubo75 KW- at GV Yindo Yubo35 K/A- at GV Yin		0.5 A				
	— at 110 V rated value	0.15 A				
	 with 2 current paths in series at DC-3 at DC-5 					
	— at 24 V rated value	20 A				
• with 3 current paths in series at DC-3 at DC-59- at 24 V rands value20 A- at 10 V rands value20 A- at 110 V rands value20 A- at 240 V rands value20 A- at 240 V rands value0.2 A- at 250 V rands value0.2 A- at 250 V rands value0.2 A- at 250 V rands value7.5 KW- at 250 V rands value7.6 KW	— at 60 V rated value	5 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 60 V rated value	20 A				
	— at 110 V rated value	20 A				
	— at 220 V rated value	1.5 A				
operating power • at AC-3 • A AC-4	— at 440 V rated value	0.2 A				
• et AC-3 4 kW - at 230 V rated value 7.5 kW - at 500 V rated value 7.5 kW - at 500 V rated value 7.5 kW - at 230 V rated value 7.5 kW - at 230 V rated value 7.5 kW - at 230 V rated value 7.5 kW - at 200 V rated value 7.5 kW - at 200 V rated value 7.5 kW - at 200 V rated value 7.5 kW - at 600 V rated value = 8.0 kW 8.5 kW - op to 500 V for current pack value n=20 rated value 5.6 kVA - op to 500 V for current pack value n=30 rated value 7.5 kVA - op to 500 V for current pack value n=30 rated value 7.5 kVA - op to 500 V for current pack value n=30 rated value 7.6 kVA <tr< td=""><td>— at 600 V rated value</td><td>0.2 A</td></tr<>	— at 600 V rated value	0.2 A				
	operating power					
	• at AC-3					
	— at 230 V rated value	4 kW				
	— at 400 V rated value	7.5 kW				
		7.5 kW				
et AC-3e - at 230 V rated value - at 230 V rated value - at 600 V rated value - 5 KW - at 600 V rated value - at 600 V rated value - at 600 V rated value - at 600 V for current peak value n=20 rated value - 6 KVA - up to 200 V for current peak value n=20 rated value - 6 KVA - up to 500 V for current peak value n=20 rated value - 10 to 600 V for current peak value n=20 rated value - 10 to 600 V for current peak value n=20 rated value - 10 to 600 V for current peak value n=30 rated value - 10 to 600 V for current peak value n=30 rated value - 5 KVA - up to 600 V for current peak value n=30 rated value - 5 KVA - up to 600 V for current peak value n=30 rated value - 5 KVA - 10 to 20 V for current peak value n=30 rated value - 5 KVA - 10 to 00 V for current peak value n=30 rated value - 5 KVA - 10 to 00 V for current peak value n=30 rated value - 5 KVA - 10 to 00 V for current peak value n=30 rated value - 5 KVA - 10 t						
		4 kW				
operating power for approx. 200000 operating cycles at AC- 4 2.5 kW • at 400 V rated value 3.5 kW operating apparent power at AC-6a 3.5 kW • up to 230 V for current peak value n=20 rated value 6.6 kVA • up to 230 V for current peak value n=20 rated value 6.8 kVA • up to 500 V for current peak value n=20 rated value 8.3 kVA • up to 600 V for current peak value n=30 rated value 10.6 kVA operating apparent power at AC-6a 2.5 kVA • up to 600 V for current peak value n=30 rated value 2.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 7.6 kVA • up to 600 V for current peak value n=30 rated value 7.6 kVA • up to 600 V for current maximum 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 10.8 kV Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 12.4 kV Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 12.4 kV Use minimum cross-section acc. to AC-1 rated value • at DC						
• at 690 V rated value 3.5 kW operating apparent power at AC-6a 3.8 kVA • up to 400 V for current peak value n=20 rated value 6.8 kVA • up to 530 V for current peak value n=20 rated value 8.3 kVA • up to 530 V for current peak value n=20 rated value 10.6 kVA operating apparent power at AC-6a						
operating apparent power at AC-6a 3.8 kVA • up to 230 V for current peak value n=20 rated value 5.8 kVA • up to 600 V for current peak value n=20 rated value 6.6 kVA • up to 630 V for current peak value n=20 rated value 8.3 kVA • up to 630 V for current peak value n=20 rated value 10.6 kVA operating apparent power at AC-6a 2.5 kVA • up to 530 V for current peak value n=30 rated value 2.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 600 V for current peak value n=30 rated value 5.5 kVA • initied to 10 s switching at zero current maximum 108 A; Use minimum cross-section acc. to AC-1 rated value • initie	• at 400 V rated value	2.5 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 6.8 KVA up to 500 V for current peak value n=20 rated value 6.8 KVA up to 500 V for current peak value n=20 rated value 8.3 kVA up to 500 V for current peak value n=20 rated value 8.3 kVA up to 520 V for current peak value n=20 rated value 2.5 kVA up to 500 V for current peak value n=30 rated value 4.4 kVA up to 690 V for current peak value n=30 rated value 5.5 kVA up to 690 V for current peak value n=30 rated value 5.5 kVA up to 690 V for current peak value n=30 rated value 5.6 kVA up to 690 V for current neak value n=30 rated value 5.6 kVA up to 690 V for current neak value n=30 rated value 5.6 kVA up to 690 V for current neak value n=30 rated value 5.6 kVA up to 690 V for current neak value n=30 rated value 5.6 kVA short-time withstand current in cold operating state up to 40 °C ilmited to 1 s switching at zero current maximum 109 k; Use minimum cross-section acc. to AC-1 rated value ilmited to 5 s switching at zero current maximum 128 k; Use minimum cross-section acc. to AC-1 rated value ilmited to 6 s switching at zero current maximum 128 k; Use minimum cross-section acc. to AC-1 rated value ilmited to 6 s switching at zero current maximum 128 k; Use minimum cross-section acc. to AC-1 rated value intiled to 6 s switching at zero current maximum 128 k; Use minimum cross-section acc. to AC-1 rated value intile to 6 s switching maximum 100 00	• at 690 V rated value	3.5 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 8.3 kVA • up to 500 V for current peak value n=20 rated value 10.6 kVA • up to 500 V for current peak value n=20 rated value 10.6 kVA • up to 230 V for current peak value n=30 rated value 2.5 kVA • up to 500 V for current peak value n=30 rated value 4.4 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 7.6 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 30 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 50 s switching at zero current maximum • limited to 50 s switching at zero current maximum • limited to 50 s switching at zero current maximum • limited to 50 s switching at zero current maximum • limited to 50 s switching at zero current maximum • limited to 50 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 50 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 50 s switching at zero current maximum • at AC-3 maximum • at AC-4 maximum • at	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 10.6 kVA operating apparent power at AC-6a • up to 230 V for current peak value n=30 rated value 2.5 kVA • up to 400 V for current peak value n=30 rated value 4.4 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 500 V for current peak value n=30 rated value 7.6 kVA • up to 500 V for current peak value n=30 rated value 7.6 kVA • up to 500 V for current peak value n=30 rated value 10.6 kVA • up to 500 V for current maximum 1028 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • at DC 10 000 1/h • at AC-3 maximum 1000 1/h • at AC-3 maximum 1000 1/h • at AC-3 maximum 50 1/h • at AC-4 maximum 50 1/h • at AC-3 maximum 50 1/h • at AC-4 maximum 50 1/h • at AC-4 maximum 50 1/h • at AC-3 maximum 60 V • operating range factor control supply voltage rated value 60 V • operating range factor control sup	 up to 230 V for current peak value n=20 rated value 	3.8 kVA				
• up to 690 V for current peak value n=20 rated value 10.6 kVA operating apparent power at AC-6a 2.5 kVA • up to 230 V for current peak value n=30 rated value 2.4 kVA • up to 500 V for current peak value n=30 rated value 5 kVA • up to 690 V for current peak value n=30 rated value 5 kVA • up to 690 V for current peak value n=30 rated value 7.6 kVA • up to 690 V for current peak value n=30 rated value 7.6 kVA short-time withstand current in cold operating state up to 40 °C 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 169 A; Use minimum cross-section acc. to AC-1 rated value • limited to 50 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • at DC 10 000 1/h • at AC-1 maximum 1 000 1/h • at AC-3 maximum 1 000 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 250 1/h • control supply voltage of the control supply voltage DC	 up to 400 V for current peak value n=20 rated value 	6.6 kVA				
operating apparent power at AC-6a 2.5 kVA • up to 230 V for current peak value n=30 rated value 2.5 kVA • up to 400 V for current peak value n=30 rated value 4.4 kVA • up to 680 V for current peak value n=30 rated value 5.5 kVA • up to 680 V for current peak value n=30 rated value 7.6 kVA short-time withstand current in cold operating state up to 40°C 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 169 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • at DC 10 000 1/h • at AC-1 maximum 1000 1/h • at AC-3 maximum 750 1/h • at AC-4 maximum 250 1/h • control circuit/ Control type of voltage of the control supply voltage Control circuit/ Control 60 V operating range factor	 up to 500 V for current peak value n=20 rated value 	8.3 kVA				
• up to 230 V for current peak value n=30 rated value 2.5 kVA • up to 400 V for current peak value n=30 rated value 4.4 kVA • up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 690 V for current peak value n=30 rated value 5.5 kVA • up to 690 V for current peak value n=30 rated value 7.6 kVA short-time withstand current in cold operating state up to 40 °C 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • at AC-1 maximum 10000 1/h • at AC-1 maximum 10000 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 250 1/h • at AC-3 maximum 250 1/h • at AC-4 maximum 250 1/h • at AC-4 maximum 60 V	 up to 690 V for current peak value n=20 rated value 	10.6 kVA				
• up to 400 V for current peak value n=30 rated value4.4 kVA• up to 500 V for current peak value n=30 rated value5.5 kVA• up to 690 V for current peak value n=30 rated value7.6 kVAshort-time withstand current in cold operating state up to 40 °C300 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum128 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum24 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum24 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• at DC10 000 1/h• at AC-1 maximum1000 1/h• at AC-3 maximum750 1/h• at AC-3 maximum750 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• control supply voltage at DC60 V• initial value0.8	operating apparent power at AC-6a					
• up to 500 V for current peak value n=30 rated value 5.5 kVA • up to 690 V for current peak value n=30 rated value 7.6 kVA short-time withstand current in cold operating state up to 40 °C 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 169 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • obc 10 000 1/h operating frequency 10 000 1/h • at AC-1 maximum 1000 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-4 maximum 250 1/h Control circult/ Control E	 up to 230 V for current peak value n=30 rated value 	2.5 kVA				
• up to 690 V for current peak value n=30 rated value7.6 kVAshort-time withstand current in cold operating state up to 40 °C300 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum128 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• at DC10 000 1/hoperating frequency10 000 1/h• at AC-3 maximum1000 1/h• at AC-3 maximum750 1/h• at AC-3 maximum750 1/h• at AC-3 maximum250 1/h• at AC-4 maximum60 V• operating range factor control supply voltage rated value of magnet coil at DC• rated value0.8	 up to 400 V for current peak value n=30 rated value 	4.4 kVA				
short-time withstand current in cold operating state up to 40 °C 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 169 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 switching frequency 10 000 1/h • at DC 10 000 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 250 1/h Control circuit/ Control DC • rated value 60 V • operating range factor control supply voltage rated value of magnet coil at DC 60 V	 up to 500 V for current peak value n=30 rated value 	5.5 kVA				
40 °C ilmited to 1 s switching at zero current maximum 300 A; Use minimum cross-section acc. to AC-1 rated value ilmited to 5 s switching at zero current maximum 169 A; Use minimum cross-section acc. to AC-1 rated value ilmited to 10 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value ilmited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value ilmited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value no-load switching frequency 74 A; Use minimum cross-section acc. to AC-1 rated value i at DC 10 000 1/h operating frequency 10 000 1/h i at AC-1 maximum 1 000 1/h i at AC-2 maximum 750 1/h i at AC-3 maximum 750 1/h i at AC-3 maximum 250 1/h Control circuit/ Control Uc type of voltage of the control supply voltage DC i control supply voltage at DC 60 V operating range factor control supply voltage rated value of magnet coil at DC 60 V	• up to 690 V for current peak value n=30 rated value	7.6 kVA				
• limited to 1 s switching at zero current maximum300 A; Use minimum cross-section acc. to AC-1 rated value• limited to 5 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum28 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• at DC10 000 1/h• at DC10 000 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximum60 V• operating range factor control supply voltage rated value60 V• operating range factor control supply voltage rated value60 V	short-time withstand current in cold operating state up to					
• limited to 5 s switching at zero current maximum 169 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • at DC 10 000 1/h operating frequency 1 000 1/h • at AC-1 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 250 1/h • at AC-4 maximum 250 1/h • at AC-4 maximum 250 1/h • at AC-4 maximum 20 1/h • at AC-4 maximum 20 V • operating range factor control supply voltage DC • control circuit/ Control 60 V • operating range factor control supply voltage rated value of magnet coil at DC 0.8	40 °C					
• limited to 10 s switching at zero current maximum 128 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value no-load switching frequency 74 A; Use minimum cross-section acc. to AC-1 rated value • at DC 10 000 1/h operating frequency 10 000 1/h • at AC-1 maximum 1 000 1/h • at AC-2 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-4 maximum 250 1/h Control circuit/ Control Uc type of voltage of the control supply voltage DC • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	 limited to 1 s switching at zero current maximum 	300 A; Use minimum cross-section acc. to AC-1 rated value				
 limited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value no-load switching frequency at DC 10 000 1/h operating frequency at AC-1 maximum 1000 1/h at AC-2 maximum 1000 1/h at AC-2 maximum 1000 1/h at AC-3 maximum 50 1/h at AC-3 maximum 50 1/h at AC-4 maximum 250 1/h Control circuit/ Control type of voltage of the control supply voltage Control supply voltage at DC at AC-4 maximum 60 V operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8 	 limited to 5 s switching at zero current maximum 	169 A; Use minimum cross-section acc. to AC-1 rated value				
• limited to 60 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value no-load switching frequency 10 000 1/h • at DC 10 000 1/h operating frequency 1 000 1/h • at AC-1 maximum 1 000 1/h • at AC-2 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-4 maximum 250 1/h • at AC-4 maximum 250 1/h Control circuit/ Control DC type of voltage of the control supply voltage DC • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	 limited to 10 s switching at zero current maximum 	128 A; Use minimum cross-section acc. to AC-1 rated value				
no-load switching frequency 10 000 1/h e at DC 10 000 1/h operating frequency 1 000 1/h e at AC-1 maximum 1 000 1/h e at AC-2 maximum 750 1/h e at AC-3 maximum 750 1/h e at AC-4 maximum 250 1/h e at AC-4 maximum 250 1/h control circuit/ Control DC type of voltage of the control supply voltage DC control supply voltage at DC 60 V operating range factor control supply voltage rated value of magnet coil at DC 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	 limited to 30 s switching at zero current maximum 	92 A; Use minimum cross-section acc. to AC-1 rated value				
• at DC10 000 1/hoperating frequency1 000 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h• at AC-3 maximum750 1/h• at AC-3 maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximumDC• control circuit/ ControlDC• rated value60 V• rated value60 V• initial value0.8	 limited to 60 s switching at zero current maximum 	74 A; Use minimum cross-section acc. to AC-1 rated value				
operating frequency1 000 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h• at AC-3e maximum750 1/h• at AC-3e maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• control circuit/ ControlDCcontrol supply voltage at DC60 V• rated value60 V• operating range factor control supply voltage rated value of magnet coil at DC0.8	no-load switching frequency					
• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h• at AC-3e maximum750 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• control circuit/ ControlDCControl supply voltage at DC0• rated value60 V• operating range factor control supply voltage rated value of magnet coil at DC0.8	• at DC	10 000 1/h				
• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h• at AC-3e maximum750 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/hControl circuit/ ControlDCcontrol supply voltage at DC0• rated value60 V• operating range factor control supply voltage rated value of magnet coil at DC0.8	operating frequency					
• at AC-3 maximum750 1/h• at AC-3e maximum750 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/hControl circuit/ ControlDCcontrol supply voltage at DC0• rated value60 V• operating range factor control supply voltage rated value of magnet coil at DC0.8	• at AC-1 maximum	1 000 1/h				
• at AC-3e maximum 750 1/h • at AC-4 maximum 250 1/h Control circuit/ Control 250 1/h control supply voltage of the control supply voltage DC control supply voltage at DC 60 V • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	• at AC-2 maximum	750 1/h				
• at AC-4 maximum 250 1/h Control circuit/ Control DC type of voltage of the control supply voltage DC control supply voltage at DC 60 V • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	• at AC-3 maximum	750 1/h				
Control circuit/ Control type of voltage of the control supply voltage DC control supply voltage at DC 60 V • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	• at AC-3e maximum	750 1/h				
type of voltage of the control supply voltage DC control supply voltage at DC 60 V • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	• at AC-4 maximum	250 1/h				
control supply voltage at DC 60 V • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	Control circuit/ Control					
control supply voltage at DC 60 V • rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 0.8	type of voltage of the control supply voltage	DC				
rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC initial value 0.8						
operating range factor control supply voltage rated value of magnet coil at DC 0.8		60 V				
	operating range factor control supply voltage rated value of					
• full-scale value 1.1	• initial value	0.8				
	• full-scale value	1.1				

closing power of magnet coil at DC	4 W
holding power of magnet coil at DC	4 W
closing delay	
• at DC	30 100 ms
opening delay	
• at DC	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 	1A
operational current at DC-12	
at 24 V rated value	10 A
at 48 V rated value	6 A
at 40 V rated value at 60 V rated value	6 A
at 50 V rated value at 110 V rated value	3 A
	3 A 2 A
at 125 V rated value	
at 220 V rated value	1 A 0 45 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 	14 A
 at 600 V rated value 	11 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	1 hp
— at 230 V rated value	2 hp
 for 3-phase AC motor 	
- at 200/208 V rated value	3 hp
- at 220/230 V rated value	5 hp
- at 460/480 V rated value	10 hp
— at 575/600 V rated value	10 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: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
• for short-circuit protection of the auxiliary switch required	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
side-by-side mounting	Yes
height	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	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 (0.5 1.5 mm²), 2x (0.75 2.5 mm²), 2x 4 mm²			
solid or stranded	2x (0,5 1,5 mm ²), 2x (0,75 2,5 mm ²), 2x 4 mm ²			
 finely stranded with core end processing 	2x (0.5 1.5 mm ²), 2x (0.75 2.5 mm ²)			
connectable conductor cross-section for main contacts				
• solid	0.5 4 mm²			
stranded	0.5 4 mm ²			
 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 mm ²			
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 mm ²), 2x (0.75 2.5 mm ²)			
 for 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 a			
protection class IP on the front according to IEC 60529	IP20			
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front			
-				
suitability for use				
suitability for usesafety-related switching OFF	Yes			
-	Yes			

SP Sm	CCC	<u>Confirmation</u>	(UL) UL	<u>KC</u>	EHC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confor	mity	Test Certificates	
RCM	<u>Type Examination Cer-</u> tificate	CE EG-Konf.	UK CA	Special Test Certific- ate	<u>Type Test Certific-</u> ates/Test Report
Marine / Shipping					
ABS	BUREAU VERITAS		Llovd's Kegister uis	PRS	RINA
Marine / Shipping	other		Railway	Dangerous Good	Environment
RMRS	<u>Confirmation</u>		<u>Vibration and Shock</u>	Transport Information	Environmental Con- firmations
Further information Siemens has decided to exit the Russian market (see here). https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business					
Siemens is working on the renewal of the current EAC certificates. Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).					
Information on the packaging https://support.industry.siemens.com/cs/ww/en/view/109813875 Information- and Downloadcenter (Catalogs, Brochures,) https://www.siemens.com/ic10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2018-1BE41 Cax online generator					
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1BE41 Service&Support (Manuals, Certificates, Characteristics, FAQs,)					

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1BE41

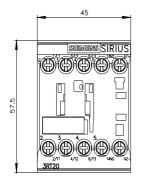
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-1BE41&lang=en

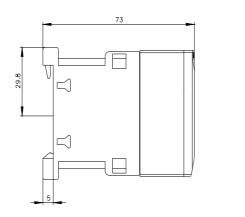
Characteristic: Tripping characteristics, I²t, Let-through current

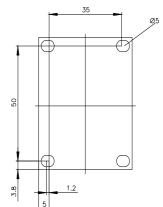
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1BE41/char

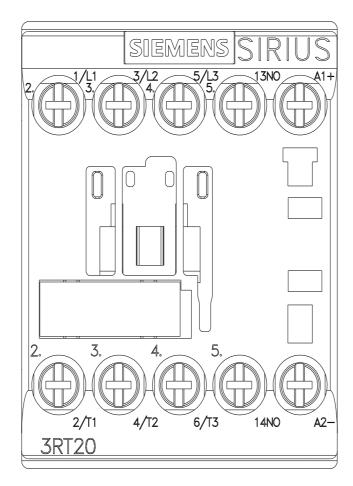
Further characteristics (e.g. electrical endurance, switching frequency)

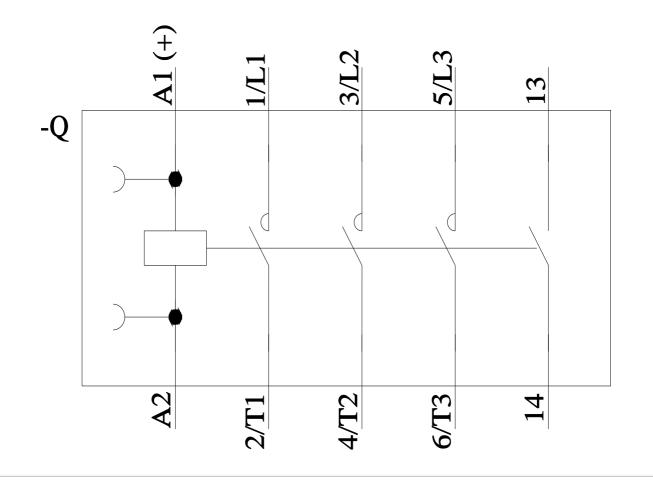
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-1BE41&objecttype=14&gridview=view1











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