SIEMENS

Data sheet

3RT2018-1BE42



power contactor, AC-3e/AC-3, 16 A, 7.5 kW / 400 V, 3-pole, 60 V DC, auxiliary contacts: 1 NC, 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 	

- all dV miled value 20 A - all dV miled value 0.5 A - all dV miled value 0.5 A - all dV miled value 20 A - all dV miled value 75 NV - all dV miled value 25 NV - all dV						
	— at 24 V rated value	20 A				
• with 2 current path in sories at DC-3 at DC-5 20 A - at 24 V rated value 0.35 A - at 11 U V rated value 0.35 A - at 24 V rated value 20 A - at 240 V rated value 22 A - at 250 V rated value 75 W - at 400 V rated value 25 KW - at 400 V rated value 25 KW - at 400 V rated value 25 KW - at 400 V rated value 38 N/A - at 600 V frated value 38 N/A - at 600 V frated value 38 N/A <td></td> <td colspan="5"></td>						
- # 24 V rate value 20 Å - # 110 V rated value 0.35 Å - # 110 V rated value 20 Å - # 120 V rated value 0.2 Å - # 120 V rated value 7.5 kW - # 120 V rated value		0.15 A				
	-					
	— at 24 V rated value					
 with 3 current paths in series at DC-3 at DC-5 at 24 V rated value at 30 V rated value 20 A at 10 V rated value 20 A at 40 V rated value 20 A at 40 V rated value 20 A at 40 V rated value 22 A at 40 V rated value 22 A at 40 V rated value 22 A at 40 V rated value 23 A at 40 V rated value 24 A at 40 V rated value 25 W at 40 V rated value 75 W at 60 V rated value 75 W at 80 V rated value 75 W at 800 V rated value 75 W at 800 V rated value 75 W at 800 V rated value 56 W at 800 V rated value 80 V rated value 90 b 200 V for current pake value n=20 rated value 90 b 200 V for current pake value n=20 rated value 90 b 500 V for current pake value n=30 rated value 90 b 500 V for current pake value n=30 rated value 90 b 500 V for current pake value n=30 rated value 90 b 500 V for current pake value n=30 rated value 90 b 500 V for current pake value n=30 rated value 90 b 600 V for current pake value n=30 rated val	— 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 AC3 at AC3 at AC3 at AC3 at AC3 bt AC3 at AC3 V rated value 7.5 KW at AC30 V rated value 7.5 KW at AC3 at AC3 V rated value at 600 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pack value n=20 rated value bit b 00 V for current pa	— at 440 V rated value	0.2 A				
er at 2-3 - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 500 V for current pask value n=20 rated value - at 500 V for current pask value n=20 rated value - at 500 V for current pask value n=20 rated value - at 500 V for current pask value n=20 rated value - at 500 V for current pask value n=20 rated value - at 500 V for current pask value n=20 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 500 V for current pask value n=30 rated value - at 600 V for current pask value n=30 rated value - at 600 V for current	— 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				
e at AC-3e - at 230 V rated value - at 230 V rated value - at 600 V rated value - at 600 V rated value - at 600 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=20 rated value - up to 500 V for current peak value n=20 rated value - up to 600 V for current peak value n=30 rated value - up to 600 V for current peak value n=30 rated value - up to 600 V for current peak value n=30 rated value - for 40°C - up to 600 V for current peak value n=30 rated value - for 40°C - inhited to 1 s switching at zero current maximum - inhited to 1 s switching at zero current maximum - inhited to 1 s switching at zero current maximum - inhited to 10 s switching at zero current maximum - at AC-3 maximum	— at 500 V rated value	7.5 kW				
	— at 690 V rated value	7.5 kW				
	• at AC-3e					
	— at 230 V rated value	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 3.8 kVA • up to 230 V for current peak value n=20 rated value 6.6 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 500 V for current peak value n=30 rated value 2.5 kVA • up to 500 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 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 7.6 kVA • up to 500 V for current peak value n=30 rated value 7.6 kVA • up to 500 V for current maximum 300 A: Use minimum cross-section acc. to AC-1 rated value • limited to 5 s switching at zero current maximum 19.4 Use minimum cross-section acc. to AC-1 rated value • limited to 00 s switching at zero current maximum 10.000 1/h • at AC-2 maximum 10000 1/h • at AC-3 maximum						
A tool V rated value at 600 V for current peak value n=20 rated value au p to 500 V for current peak value n=20 rated value au p to 500 V for current peak value n=20 rated value au p to 500 V for current peak value n=20 rated value au p to 500 V for current peak value n=20 rated value au p to 500 V for current peak value n=20 rated value au p to 500 V for current peak value n=20 rated value au p to 500 V for current peak value n=30 rated value au p to 500 V for current peak value n=30 rated value au p to 500 V for current peak value n=30 rated value au p to 500 V for current peak value n=30 rated value au p to 500 V for current peak value n=30 rated value for 5 switching at zero current maximum au initied to 1 s switching at zero current maximum alimited to 1 s switching at zero current maximum alimited to 3 s switching at zero current maximum alimited to 3 s switching at zero current maximum alimited to 30 s switching at zero current maximum alimited to 30 s switching at zero current maximum alimited to 30 s switching at zero current maximum alimited to 30 s switching at zero current maximum alimited to 30 s switching at zero current maximum alimited to 30 s switching at zero current maximum alimited to 40 s switching at zero current maximum ali AC-4 ma						
• at 690 V rated value 3.5 kW operating apparent power at AC-6a 3.8 kVA • up to 230 V for current peak value n=20 rated value 6.6 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 10.6 kVA operating apparent power at AC-6a 0 • up to 500 V for current peak value n=30 rated value 2.5 kVA • up to 500 V for current peak value n=30 rated value 5.6 kVA • up to 500 V for current peak value n=30 rated value 5.6 kVA • up to 500 V for current peak value n=30 rated value 5.6 kVA • up to 600 V for current peak value n=30 rated value 5.6 kVA • up to 600 V for current peak value n=30 rated value 7.6 kVA short-time withstand current neximum 300 A: Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 128 A: Use minimum cross-section acc. to AC-1 rated value • limited to 1 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 128 A: Use minimum cross-section acc. to AC-1 rated value • limited to 61 S switching at zero current maximum 128 A: Use minimum cross-section acc. to AC-1 rated value • limited to 61 S switching at zero current maximum 1000 1/h • at AC-2 maximum <td< td=""><td></td><td></td></td<>						
operating apparent power at AC-6a 3.8 kVA • up to 230 V for current peak value n=20 rated value 6.6 kVA • up to 500 V for current peak value n=20 rated value 8.3 kVA • up to 690 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 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 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-firms withstand current in cold operating state up to 40 °C 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 199 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 74 A; Use minimum cross-section acc. to AC-1 rated value • at AC-1 maximum 1000 1/h • at AC-2 maximum 1000 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-3 maximum 750 1/h<	 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 • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 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 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 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 1s 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 • locad switching frequency • at	• 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 • 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 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 • Us 55 switching at zero current maximum • limited 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 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 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 • ta 4C-1 maximum • ta 4C-1 maximum • at AC-3 maximum • at AC-3 maximum • at AC-3 maximum • at AC-4 maximum • at AC-4 maximum • at AC-4 maxim	operating apparent power at AC-6a					
• up to 500 V for current peak value n=20 rated value 8.3 kVA • up to 630 V for current peak value n=30 rated value 10.6 kVA operating apparent power at AC-6a 2.5 kVA • up to 500 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 600 V for current peak value n=30 rated value 7.6 kVA short-time withstand current in cold operating state up to 40° C 7.6 kVA • limited to 1 s switching at zero current maximum 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 108 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 28 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 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 10 000 1/h • at AC-3 maximum 750 1/h • at AC-4 maximum 250 1/h	 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-Ga 2.5 kVA • up to 230 V for current peak value n=30 rated value 4.4 kVA • up to 500 V for current peak value n=30 rated value 5.6 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 7.6 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 10.8 kVA • limited to 1 s switching at zero current maximum 300 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 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 128 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-2 maximum 1 000 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 supply voltage at DC 60 V	 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 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 5.5 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 22 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 • 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-2 maximum 750 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 Uppe of voltage of the control supply voltage DC DC	 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 • 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 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 in cold operating state up to 40 °C • ilmited to 1 s switching at zero current maximum • limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 10 s switching at zero current maximum • 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 • to 20 1/h • at AC-1 maximum • at AC-3 maximum • at AC-3 maximum * at AC-4 maximum * at AC-3 maximum * at AC-4 maximum * a	 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 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 7.6 kVA short-time withstand current in cold operating state up to 40 °C imited to 1 s switching at zero current maximum • 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 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 92 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 750 1/h • at AC-3 maximum 750 1/h • at AC-4 maximum 250 1/h Control circuit/ Control EV type of voltage of the control supply voltage DC control supply voltage	operating apparent power at AC-6a					
• 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 maximum300 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 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 maximum75 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum1 000 1/h• at AC-3 maximum750 1/h• at AC-3 maximum250 1/h• at AC-3 maximum250 1/h• at AC-4 maximum250 1/h• control supply voltage at DC60 V• operating range factor control supply voltage rated value of manget col at DC60 V• operating range factor control supply voltage rated value of manget col at DC0.8	 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 frequency100 00 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 maximum50 V• control supply voltage at DC60 V• rated value60 V• operating range factor control supply voltage rated value of magnet col at DC• initial 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 03 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 • at DC 10 000 1/h • at AC-1 maximum 1000 1/h • at AC-2 maximum 750 1/h • at AC-3 maximum 750 1/h • at AC-4 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 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 • at DC 10 000 1/h • at AC-1 maximum 1 00 01/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 250 1/h Control circuit/ Control Uc • per 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 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 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• at DC10 000 1/h• at AC-1 maximum1 000 1/h• at AC-1 maximum1 000 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• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximum60 V• control supply voltage at DC60 V• rated value60 V• initial value0.8	short-time withstand current in cold operating state up to					
Imited to 5 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated valueImited to 10 s switching at zero current maximum128 A; Use minimum cross-section acc. to AC-1 rated valueImited to 30 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated valueImited to 60 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated valueImited to 60 s switching frequency74 A; Use minimum cross-section acc. to AC-1 rated valueImited to 60 s switching frequency10 000 1/hImited to 60 s aximum1000 1/hImited to 60 s maximum1000 1/hImited	40 °C					
• 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 valueno-load switching frequency10 000 1/h• at DC10 000 1/h• at AC-1 maximum1 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-4 maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/h• at AC-4 maximum60 V• at AC-4 maximum60 V• at AC-4 maximum60 V• at AC-4 maximum60 V	 limited to 1 s switching at zero current maximum 					
 Iimited to 30 s switching at zero current maximum 92 A; Use minimum cross-section acc. to AC-1 rated value Iimited 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 50 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 	 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 forthol circuity control 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 frequency10 000 1/hoperating frequency-at AC-1 maximum1 000 1/hat AC-2 maximum750 1/hat AC-3 maximum750 1/hat AC-3 maximum750 1/hat AC-3e maximum750 1/hat AC-3e maximum250 1/hat AC-4 maximum250 1/hcontrol circuit/ ControlDCfype of voltage of the control supply voltageDCcontrol supply voltage at DC60 Voperating range factor control supply voltage rated value of magnet coil at DC0.8	 limited to 30 s switching at zero current maximum 					
• at DC10 000 1/hoperating frequency• 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• control supply voltage at DC60 V• rated value60 V• operating range factor control supply voltage rated value of magnet coil at DC0.8	 limited to 60 s switching at zero current maximum 	74 A; Use minimum cross-section acc. to AC-1 rated value				
operating frequencyI• 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 maximum750 1/h• at AC-4 maximum250 1/h• at AC-4 maximum250 1/hControl circuit/ ControlDCtype of voltage of the control supply voltageDC• rated value60 V• rated value60 Voperating 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• at AC-4 maximum250 1/h• control circuit/ ControlDCtype of voltage of the control supply voltageDC• 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-3e maximum250 1/h• at AC-4 maximum250 1/hControl circuit/ ControlDCcontrol supply voltage at DC0• rated value60 V• rated value60 V• initial value0.8	operating frequency					
• at AC-3 maximum750 1/h• at AC-3e maximum750 1/h• at AC-4 maximum250 1/hControl circuit/ Control250 1/hControl circuit/ ControlDCcontrol supply voltage at DC60 V• rated value60 Voperating range factor control supply voltage rated value of magnet coil at DC0.8	• at AC-1 maximum	1 000 1/h				
• at AC-3e maximum750 1/h• at AC-4 maximum250 1/hControl circuit/ Control250 1/htype of voltage of the control supply voltageDCcontrol supply voltage at DC60 V• rated value60 Voperating range factor control supply voltage rated value of magnet coil at DC0.8	• 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		DC				
• rated value 60 V operating range factor control supply voltage rated value of magnet coil at DC 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 NC 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 24 V rated value at 48 V rated value	6 A		
at 48 V fated value at 60 V rated value	6 A		
at 50 V rated value 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 	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	aG: 504 (600)/ 100k4) aM: 254 (600)/ 100k4) RS00 504 (415)/ 00k4)		
	gG: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)		
 — with type of assignment 2 required for short circuit protection of the auxiliant civitab 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			
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		
side-by-side mounting	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715 Yes		
-	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715		

required spacing • with side-by-side mounting - forwards - upwards - downwards - at the side • for grounded parts - forwards - upwards - at the side - downwards • for live parts - forwards - upwards - at the side - downwards - at the side - at th	10 mm 10 mm 10 mm 0 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm 10 mm
 forwards upwards downwards at the side for grounded parts forwards forwards at the side downwards for live parts forwards for live parts upwards at the side 	10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm
 upwards downwards at the side for grounded parts forwards upwards at the side downwards for live parts forwards upwards at the side 	10 mm 10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm
 downwards at the side for grounded parts forwards upwards at the side downwards for live parts forwards upwards at the side at the side at the side at the side 	10 mm 0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm
 at the side for grounded parts forwards upwards at the side downwards for live parts forwards upwards upwards at the side at the side 	0 mm 10 mm 10 mm 6 mm 10 mm 10 mm 10 mm 10 mm
 for grounded parts forwards upwards at the side downwards for live parts forwards upwards upwards at the side at the side 	10 mm 10 mm 6 mm 10 mm 10 mm 10 mm
 forwards upwards at the side downwards for live parts forwards upwards downwards at the side 	10 mm 6 mm 10 mm 10 mm 10 mm
 upwards at the side downwards for live parts forwards upwards downwards at the side 	10 mm 6 mm 10 mm 10 mm 10 mm
 at the side downwards for live parts forwards upwards downwards at the side 	6 mm 10 mm 10 mm 10 mm 10 mm
 downwards for live parts forwards upwards downwards at the side 	10 mm 10 mm 10 mm 10 mm
 for live parts forwards upwards downwards at the side 	10 mm 10 mm 10 mm
 forwards upwards downwards at the side 	10 mm 10 mm
— upwards — downwards — at the side	10 mm 10 mm
— downwards — at the side	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 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)
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 mm²
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)
 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
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	
 safety-related switching OFF 	Yes
Certificates/ approvals	
General Product Approval	

	<u>Confirmation</u>			<u>KC</u>	EAC
EMC	Functional Safety/Safety of Ma- chinery	Declaration of Confor	mity	Test Certificates	
RCM	Type Examination Cer- tificate	UK CA	CE EG-Konf.	Type Test Certific- ates/Test Report	Special Test Certific- ate
Marine / Shipping					
ABS	BUREAU VERITAS		Lloyd's Register uts	PRS	RINA
Marine / Shipping	other		Railway	Dangerous Good	Environment
RMRS	<u>Confirmation</u>	UDE VDE	Vibration and Shock	Transport Information	Environmental Con- firmations
https://press.siemens. Siemens is working of Please contact your lo EAC relevant market (Information on the particular of the particular	d to exit the Russian mark com/global/en/pressrelease on the renewal of the curr cal Siemens office on the s other than the sanctioned E ackaging v.siemens.com/cs/ww/en/vie	/siemens-wind-down-rus ent EAC certificates. tatus of validity of the EA AEU member states Rus	C certification if you inten	d to import or offer to supp	ly these products to an

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=3RT2018-1BE42

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1BE42

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1BE4

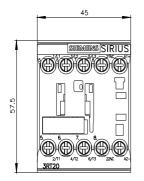
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-1BE42&lang=en

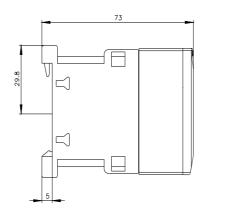
Characteristic: Tripping characteristics, I2t, Let-through current

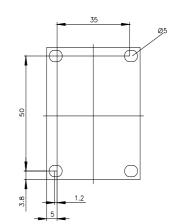
https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1BE42/char

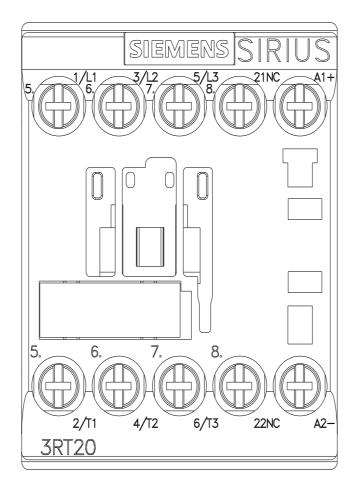
Further characteristics (e.g. electrical endurance, switching frequency)

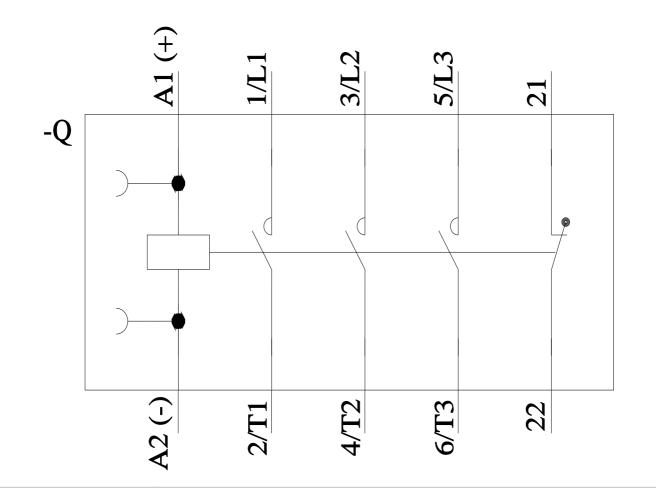
http://www.automation.sien ns.com/bilddb/index.aspx?view= . &mlft











last modified:

2/10/2023 🖸