SIEMENS

Data sheet

3RT2018-1AD02



power contactor, AC-3e/AC-3, 16 A, 7.5 kW / 400 V, 3-pole, 42 V AC, 50/60 Hz, 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 	1.5 W
type of calculation of power loss depending on pole	quadratic
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,3g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	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
Weight	0.234 kg
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 %

Environmental footprint	
Environmental Product Declaration(EPD)	Yes
global warming potential [CO2 eq] total	39.6 kg
global warming potential [CO2 eq] during manufacturing	1.18 kg
global warming potential [CO2 eq] during operation	38.5 kg
global warming potential [CO2 eq] after end of life	-0.155 kg
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
 at AC-3 rated value maximum 	690 V
 at AC-3e rated value maximum 	690 V
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C rated value at AC-1 	22 A
up to 690 V at ambient temperature 40 °C rated value	22 A
— up to 690 V at ambient temperature 60 °C rated value	20 A
• 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 at AC-4 at 400 V rated value 	8.9 A 11.5 A
 at AC-4 at 400 V rated value 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	10.27
— 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	5.5.4
 at 400 V rated value at 690 V rated value 	5.5 A 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 5 current paths in series at UC-1		
	with 3 current paths in series at DC-1	
- al 400 Vrated value13 Å- al 600 Vrated value1A- al 20 V rated value20 Å- al 20 V rated value05 Å- al 20 V rated value05 Å- al 10 V rated value20 Å- al 20 V rated value75 KW- al 20 V rated value75 KW- al 20 V rated value75 KW- al 20 V rated value25 KW- al 20 V rated value31 KVA- al 20 V rated value25 KW- al 20 V rated value25 KW- al 20 V rated value25 KW- al 20 V rated value31 KVA- al 20 V rated value25 KW- al 20 V rated value25 KW- al 20 V rated value30 KVA <td></td> <td></td>		
• af 1 current path af 0-2 af 0-5- af 34 V ridet value0.5 A- af 10 V ridet value0.15 A- af 10 V ridet value20 A- af 34 V ridet value0.35 A- af 34 V ridet value0.36 A- af 340 V ridet value7.5 KW- af 340 V ridet value8.5 KM- af 340 V ridet value ==20 ridet value8.5 KM- af 340 V ridet value ==20 ridet value8.5 KM- af 340 V ridet value ==20 ridet value8.5 KM- af 340 V ridet value ==20 ridet value8.5 KM- af 340 V ridet value ==20 ridet value8.5 KM- af 340 V ridet value ==20 ridet value <td></td> <td></td>		
− − π 24 V ratid value20 A− at 60 V ratid value0.5 A− at 60 V ratid value0.5 A− at 60 V ratid value20 A− at 60 V ratid value0.5 A− at 60 V ratid value0.5 A− at 7 V ratid value7.5 KW− at 7 V ratid value8.5 KA− at 7 V ratid value8.5 KA− at 7 V ratid value9.5 KW− at 8 V ratid value9.5 KW− at 8 V ratid value9.5		1 A
- af 60 V raied value0.5 Å- af 10 V raied value0.16 Å- af 24 V raied value20 Å- af 24 V raied value20 Å- af 24 V raied value3.5 Å- af 10 V raied value20 Å- af 10 V raied value20 Å- af 10 V raied value20 Å- af 24 V raied value20 Å- af 24 V raied value20 Å- af 250 V raied value20 Å- af 240 V raied value2.2 Å- af 240 V raied value2.2 Å- af 240 V raied value7.5 KW- af 240 V raied value7.5 KW- af 240 V raied value7.5 KW- af 250 V raied value2.5 KW- af 250 V raied value3.5 KW- af 250 V raied value7.5 KW- af 250 V raied value3.5 KW- af 250 V raied value3.5 KW- af 250 V raied value3.5 KW- af 250 V raied value n=20 raied value3.5 KW- af 250 V raied value n=20 raied value3.5 KW- af 250 V raied value n=20 raied value3.5 KW- af 250 V raied value n=20 raied value3.5 KW- af 250 V for current pask value n=20 raied value3.5 KW- aied 20 V for current pask value n=20 raied	-	
 		
• with 2 current paths in series at DC-3 at DC-5O- at 24 V milet value5A- at 10 V rated value0.5A- at 10 V rated value0.5A- at 10 V rated value20A- at 24 V milet value20A- at 24 V milet value20A- at 30 V rated value20A- at 30 V rated value20A- at 30 V rated value20A- at 320 V rated value20A- at 320 V rated value0.2A- at 320 V rated value75 KW- at 320 V rated value76 KW- at 320 V rated value76 KW <td></td> <td></td>		
at 24 V relationship20 A at 30 V rated value5 A at 30 V rated value20 A at 220 V rated value20 A		0.15 A
- at 10 V rade value5 A- at 10 V rade value05 A- at 24 V rade value02 A- at 24 V rade value20 A- at 20 V rade value20 A- at 10 V rade value20 A- at 22 0 V rade value20 A- at 22 0 V rade value20 A- at 20 V rade value20 A- at 20 V rade value20 A- at 400 V rade value20 A- at 400 V rade value20 A- at 400 V rade value4 KW- at 400 V rated value75 KW- at 600 V rade value76 KW- at 600 V rade value70 KA- at 600 V rade value70 KA	-	
• with 3 current paths in series at DC-3 at DC-5- at 24 V rated value20 A- at 10 V rated value20 A- at 10 V rated value20 A- at 10 V rated value20 A- at 220 V rated value0.2 A- at 240 V rated value0.2 A- at 200 V rated value0.2 A- at 200 V rated value0.2 A- at 200 V rated value7.5 KW- at 200 V rated value7.5 KW- at 200 V rated value7.5 KW- at 600 V rated value8.5 KW- at 600 V rated value2.5 KW- at 600 V rated value8.5 KWA- at 600 V rated value n=20 rated value8.5 KWA- at 600 V for current pack value n=20 rated value8.5 KWA- at 600 V for current pack value n=20 rated value5.5 KW- at 600 V for current pack value n=20 rated value5.5 KWA- at 600 V for current pack value n=30 rated value5.5 KWA- at 600 V for current pack value n=30 rated value5.5 KWA- at 600 V for current pack value n=30 rated value5.5 KWA- at 600 V for current pack value n=30 rated value5.5 KWA <td< td=""><td></td><td></td></td<>		
- at 24 V rede value20 A- at 50 V rated value20 A- at 20 V rated value20 A- at 220 V rated value1.5 A- at 400 V rated value0.2 A- at 400 V rated value0.2 A- at 400 V rated value0.2 A- at 220 V rated value7.5 KW- at 230 V rated value7.5 KW- at 400 V rated value7.5 KW- at 600 V rated value - 7.0 rated value8.5 KW- at 600 V rated value - 7.0 rated value8.5 KW- at 600 V rated value - 7.0 rated value7.5 KW- at 600 V for current pack value - 7.0 rated value7.5 KW- at 600 V for current pack value - 7.0 rated value7.5 KW- at 60		0.35 A
- at 110 V rated value20 A- at 220 V rated value1.5 A- at 600 V rated value0.2 Aoperating power0.2 A- at 600 V rated value0.2 A- at 230 V rated value7.5 kW- at 600 V rated value8.5 kW- at 600 V rated value - 20 rated value6.6 kVA- op 10 k00 V for current pack value n=20 rated value8.3 kVA- op 10 k00 V for current pack value n=20 rated value8.3 kVA- op 10 k00 V for current pack value n=20 rated value7.6 kVA- operating apparent power at AC-6a		
- at 220 V rated value15 Å- at 400 V rated value0.2 Å- at 600 V rated value0.2 Å- at 600 V rated value3.2 Å- at 220 V rated value4 kW- at 400 V rated value7.5 kW- at 600 V rated value7.5 kW- at 600 V rated value7.5 kW- at 600 V rated value4 kW- at 600 V rated value7.5 kW- at 600 V rated value8.5 kW- at 600 V rated value = 20 rated value8.5 kW- at 600 V for current pack value = 20 rated value8.5 kW- at 600 V for current pack value = 20 rated value8.5 kW- at 600 V for current pack value = 30 rated value2.5 kW- at 600 V for current pack value = 30 rated value2.5 kW- at 600 V for current pack value = 30 rated value3.5 kW- at 600 V for current pack value = 30 rated value4.5 kW- at 600 V for current pack value = 30 rated value5.5 kW- at 600 V for current pack value = 30 rated value5.5 kW- at 600 V for current pack value = 30		
operating power at AC-3 at AC-3 at AC-3 at 320 V rated value At W at 300 V rated value At W at 300 V rated value At W at 300 V rated value At SXW at 300 V rated value At SXW at AC-3e at 230 V rated value At AC-3e at 300 V rated value At AC-3e at 300 V rated value At AC-3e at 300 V rated value At AC-3e at 400 V rated value At W at 300 V rated value At W at 300 V rated value At W at 300 V rated value	— at 440 V rated value	
• at AC-3• at AC-3 at 230 V rated value4 kW at 600 V rated value7.5 kW at 600 V rated value7.5 kW at 600 V rated value7.5 kW at 230 V rated value7.5 kW at 230 V rated value7.5 kW at 230 V rated value7.5 kW at 600 V rated value8.5 kW at 600 V rated value8.5 kW at 600 V rated value8.5 kW at 600 V for current pack value n=20 rated value6.6 kVA		0.2 A
at 500 V rated value7.5 kW at 690 V rated value7.5 kW• at AC-3e at 230 V rated value4 kW at 400 V rated value7.5 kW at 500 V rated value7.5 kW at 600 V rated value8.5 kW at 600 V rated value3.5 kW at 600 V for current peak value n=20 rated value8.6 kVA up to 230 V for current peak value n=20 rated value6.6 kVA up to 530 V for current peak value n=20 rated value8.6 kVA up to 530 V for current peak value n=20 rated value10.6 kVA up to 530 V for current peak value n=20 rated value10.6 kVA up to 530 V for current peak value n=30 rated value2.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 500 V for current peak value n=30 rated value5.5	— at 230 V rated value	
at 690 V rated value7.5 kW• at AC-3e• at 200 V rated value4 kW at 400 V rated value7.5 kW at 690 V rated value3.5 kW at 690 V rated value3.5 kW at 690 V rated value3.6 kW at 690 V for current peak value n=20 rated value3.8 kVA up to 230 V for current peak value n=20 rated value6.6 kVA up to 500 V for current peak value n=20 rated value8.3 kVA up to 500 V for current peak value n=20 rated value8.3 kVA up to 600 V for current peak value n=30 rated value8.5 kVA up to 400 V for current peak value n=30 rated value5.5 kVA up to 400 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value6.5 kVA up to 600 V for current peak value n=30 rated value7.6 kVA at 600 V for current peak value n=30 rated value7.6 kVA at 600 V for current peak value n=30 rated value7.6 kVA at 600 V for current peak value n=30 rated value7.6 kVA at 600 V for current peak value n=30 rated value7.6 kVA at 600 V for current peak value n=30 rated val		
• at AC-3e- at 230 V rated value4 KW- at 400 V rated value7.5 kW- at 600 V rated value2.5 kW- at 600 V rated value2.5 kW- at 600 V rated value2.5 kW- at 600 V rated value3.8 kVA- out pt 0230 V for current peak value n=20 rated value3.8 kVA- out pt 0230 V for current peak value n=20 rated value3.8 kVA- out pt 0500 V for current peak value n=20 rated value3.8 kVA- out pt 0500 V for current peak value n=20 rated value3.8 kVA- out pt 0500 V for current peak value n=20 rated value3.8 kVA- out pt 0500 V for current peak value n=20 rated value3.8 kVA- out pt 0500 V for current peak value n=20 rated value4.8 kVA- out pt 0500 V for current peak value n=30 rated value5.5 kVA- out pt 0500 V for current peak value n=30 rated value5.5 kVA- out pt 0500 V for current peak value n=30 rated value5.6 kVA- out pt 0500 V for current peak value n=30 rated value5.6 kVA- out pt 0500 V for current peak value n=30 rated value5.6 kVA- out pt 0500 V for current peak value n=30 rated value6.6 kVA- out pt 0500 V for current peak value n=30 rated value7.6 kVA- out pt 0500 V for current peak value n=30 rated value7.6 kVA- out pt 0500 V for current peak value n=30 rated value7.6 kVA- out pt 0500 V for current pt 0500 V for current pt 0500 V for current pt		
		7.5 kW
at 400 V rated value7.5 KW at 500 V rated value7.5 kW at 680 V rated value7.5 kW at 680 V rated value7.5 kW at 680 V rated value2.5 kW at 680 V rated value2.5 kW at 680 V rated value2.5 kW at 680 V rated value3.6 kW at 680 V rated value3.8 kVA at 680 V fracurent peak value n=20 rated value6.6 kVA up to 230 V for current peak value n=20 rated value6.6 kVA up to 690 V for current peak value n=20 rated value8.3 kVA up to 690 V for current peak value n=20 rated value6.6 kVA up to 690 V for current peak value n=20 rated value8.3 kVA up to 690 V for current peak value n=20 rated value8.3 kVA up to 690 V for current peak value n=30 rated value4.4 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak value n=30 rated value5.5 kVA up to 690 V for current peak va		
at 500 V rated value7.5 kW at 690 V rated value7.5 kWoperating power for approx. 20000 operating cycles at AC- 4 at 400 V rated value2.5 kW at 400 V rated value3.5 kW at 690 V rated value3.6 kVA operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value6.6 kVA up to 500 V for current peak value n=20 rated value6.6 kVA up to 500 V for current peak value n=20 rated value8.8 kVA up to 500 V for current peak value n=20 rated value6.6 kVA up to 500 V for current peak value n=20 rated value8.8 kVA up to 500 V for current peak value n=30 rated value8.8 kVA up to 500 V for current peak value n=30 rated value8.8 kVA up to 500 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value5.5 kVA up to 600 V for current peak value n=30 rated value6.6 kVA up to 600 V for current peak value n=30 rated value7.6 kVA up to 600 V for current peak value n=30 rated value7.6 kVA up to 600 V for current peak value n=30 rated value7.0 kVA up to		
operating power for approx. 20000 operating cycles at AC-44at 400 V rated valueat 400 V rated value2.5 kWoperating apparent power at AC-6a3.8 kVA• up to 230 V for current peak value n=20 rated value3.8 kVA• up to 500 V for current peak value n=20 rated value6.6 kVA• up to 690 V for current peak value n=20 rated value8.3 kVA• up to 500 V for current peak value n=20 rated value10.6 kVAoperating apparent power at AC-6a2.5 kVA• up to 690 V for current peak value n=30 rated value2.5 kVA• up to 500 V for current peak value n=30 rated value5.5 kVA• up to 500 V for current peak value n=30 rated value5.5 kVA• up to 500 V for current peak value n=30 rated value5.5 kVA• up to 500 V for current peak value n=30 rated value5.5 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• limited to 10 s switching at zero current maximum100 A		
444• at 400 V rated value2.5 kW• at 600 V rated value3.5 kWoperating apparent power at AC-6a		7.5 kW
• at 400 V rated value2.5 kW• at 680 V rated value3.5 kW• up to 230 V for current peak value n=20 rated value3.8 kVA• up to 500 V for current peak value n=20 rated value6.6 kVA• up to 500 V for current peak value n=20 rated value6.6 kVA• up to 500 V for current peak value n=20 rated value10.6 kVA• up to 500 V for current peak value n=30 rated value2.5 kVA• up to 230 V for current peak value n=30 rated value2.5 kVA• up to 500 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 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current peak value n=30 rated value5.5 kVA• up to 600 V for current naximum500 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum6.6 is 4.9 k.2 Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum6.0 k.2 Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum6.0 k.2 Use minimum cross-section acc. to AC-1 rated value		
operating apparent power at AC-6a3.8 kVA• up to 230 V for current peak value n=20 rated value3.8 kVA• up to 400 V for current peak value n=20 rated value6.6 kVA• up to 500 V for current peak value n=20 rated value8.3 kVA• up to 690 V for current peak value n=20 rated value10.6 kVA• up to 500 V for current peak value n=20 rated value10.6 kVA• up to 230 V for current peak value n=30 rated value2.5 kVA• up to 500 V for current peak value n=30 rated value5.5 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 value5.5 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• 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 maximum108 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 maximum128 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum10 000 1/h• at AC-110 000 1/h<	• at 400 V rated value	2.5 kW
operating apparent power at AC-6a3.8 kVA• up to 230 V for current peak value n=20 rated value3.8 kVA• up to 400 V for current peak value n=20 rated value6.6 kVA• up to 500 V for current peak value n=20 rated value8.3 kVA• up to 690 V for current peak value n=20 rated value10.6 kVA• up to 500 V for current peak value n=20 rated value10.6 kVA• up to 230 V for current peak value n=30 rated value2.5 kVA• up to 500 V for current peak value n=30 rated value5.5 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 value5.5 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• 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 maximum108 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 maximum128 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum10 000 1/h• at AC-110 000 1/h<	• at 690 V rated value	
• up to 230 V for current peak value n=20 rated value3.8 kVA• up to 400 V for current peak value n=20 rated value6.6 kVA• up to 500 V for current peak value n=20 rated value8.3 kVA• up to 690 V for current peak value n=20 rated value10.6 kVAoperating apparent power at AC-6a2.5 kVA• up to 230 V for current peak value n=30 rated value2.5 kVA• up to 400 V for current peak value n=30 rated value5.5 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 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• imited to 1 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum92 A; Use minimum cross-secti		
• up to 400 V for current peak value n=20 rated value6.6 KVA• up to 500 V for current peak value n=20 rated value8.3 kVA• up to 690 V for current peak value n=20 rated value10.6 kVAoperating apparent power at AC-6a-• up to 230 V for current peak value n=30 rated value2.5 kVA• up to 500 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 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value7.6 kVA• up to 500 V for current peak value n=30 rated value300 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 30 s switching at zero current maximum128 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 maximum1000 1/h• at AC10 000 1/h• at AC10 000 1/h• at AC-1 maximum1000 1/h• at AC-1 maximum750 1/h• at AC-3 maximum750 1/h		3.8 kVA
• up to 500 V for current peak value n=20 rated value8.3 kVA• up to 690 V for current peak value n=20 rated value10.6 kVAoperating apparent power at AC-6a-• up to 230 V for current peak value n=30 rated value2.5 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 value5.5 kVA• up to 690 V for current peak value n=30 rated value5.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value300 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum109 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 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 maximum10 000 1/h• at AC10 000 1/h• at AC10 000 1/h• at AC-1 maximum1000 1/h• at AC-2 maximum1000 1/h• at AC-3 maximum1000 1/h• at AC-3 maximum750 1/h•		
• up to 690 V for current peak value n=20 rated value10.6 kVAoperating apparent power at AC-6a.• up to 230 V for current peak value n=30 rated value2.5 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 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value7.6 kVA• up to 690 V for current peak value n=30 rated value300 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 1 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 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 10 s switching at zero current maximum74 A; Use minimum cross-section acc. to AC-1 rated value• at AC10 000 1/h• at AC10 000 1/h• at AC-1 maximum1000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h		
operating apparent power at AC-6a• up to 230 V for current peak value n=30 rated value2.5 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 maximum300 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 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 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• limited to 60 s switching at zero current maximum76 000 1/h• at AC10000 1/h <t< td=""><td></td><td>10.6 kVA</td></t<>		10.6 kVA
up to 230 V for current peak value n=30 rated value2.5 kVAup to 400 V for current peak value n=30 rated value4.4 kVAup to 500 V for current peak value n=30 rated value5.5 kVAup 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 valuee limited to 1 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated valuee limited to 1 s switching at zero current maximum128 A; Use minimum cross-section acc. to AC-1 rated valuee limited to 30 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated valuee limited to 60 s switching at zero current maximum109 A; Use minimum cross-section acc. to AC-1 rated valuee limited to 60 s switching at zero current maximum128 A; Use minimum cross-section acc. to AC-1 rated valuee limited to 60 s switching at zero current maximum10 000 1/hoperating frequency10 000 1/he at AC1000 1/he at AC-1 maximum1000 1/he at AC-1 maximum750 1/he at AC-3 maximum750 1/h		
A textA textup to 400 V for current peak value n=30 rated value5.5 kVAup to 690 V for current peak value n=30 rated value7.6 kVAshort-time withstand current in cold operating state up to do C300 A; Use minimum cross-section acc. to AC-1 rated valuei limited to 1 s switching at zero current maximum300 A; Use minimum cross-section acc. to AC-1 rated valuei limited to 1 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated valuei limited to 1 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated valuei limited to 30 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated valuei limited to 60 s switching at zero current maximum92 A; Use minimum cross-section acc. to AC-1 rated valuei limited to 60 s switching at zero current maximum100 n/horearting frequency1000 n/hi at AC-1 maximum1000 n/hi at AC-1 maximum1000 n/hi at AC-1 maximum750 n/hi at AC-1 maximum750 n/hi at AC-2 maximum750 n/h		2.5 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 maximum300 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum169 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 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 maximum1000 1/h• at AC10000 1/h• at AC-1 maximum1000 1/h• at AC-1 maximum1000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h		
• up to 690 V for current peak value n=30 rated value7.6 kVAshort-time withstand current in cold operating state up to 40 °C7.6 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 maximum128 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 maximum1000 1/h• at AC10 000 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h		
short-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 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• 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 frequency0000 1/h• at AC10 000 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h		
• 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• no-load switching frequency74 A; Use minimum cross-section acc. to AC-1 rated value• at AC10 000 1/h• at AC-1 maximum1000 1/h• at AC-2 maximum1000 1/h• at AC-3 maximum750 1/h• at AC-3 maximum750 1/h	short-time withstand current in cold operating state up to	
• 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• no-load switching frequency10 000 1/h• at AC10 000 1/h• at AC-1 maximum1 000 1/h• at AC-2 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h	 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 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 AC10 000 1/h• at AC-1 maximum1000 1/h• at AC-2 maximum1000 1/h• at AC-3 maximum750 1/h• at AC-3 maximum750 1/h	 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 maximum74 A; Use minimum cross-section acc. to AC-1 rated valueno-load switching frequency-• at AC10 000 1/hoperating frequency-• at AC-1 maximum1 000 1/h• at AC-2 maximum1 000 1/h• at AC-3 maximum750 1/h• at AC-3 maximum750 1/h	 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/h• at AC10 000 1/hoperating frequency-• at AC-1 maximum1 000 1/h• at AC-2 maximum750 1/h• at AC-3 maximum750 1/h	 limited to 30 s switching at zero current maximum 	92 A; Use minimum cross-section acc. to AC-1 rated value
• at AC 10 000 1/h operating frequency - • at AC-1 maximum 1 000 1/h • at AC-2 maximum 750 1/h • at AC-3 maximum 750 1/h	 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	no-load switching frequency	
• at AC-1 maximum 1 000 1/h • at AC-2 maximum 750 1/h • at AC-3 maximum 750 1/h	• at AC	10 000 1/h
• at AC-2 maximum 750 1/h • at AC-3 maximum 750 1/h	operating frequency	
• at AC-3 maximum 750 1/h	● at AC-1 maximum	1 000 1/h
	• at AC-2 maximum	750 1/h
• at AC-3e maximum 750 1/h	• at AC-3 maximum	750 1/h
	● at AC-3e maximum	750 1/h

● at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• 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	37 VA
at 60 Hz inductive never factor with closing never of the coil	33 VA
inductive power factor with closing power of the coil • at 50 Hz	0.8
• at 50 Hz	0.75
apparent holding power of magnet coil at AC	
• at 50 Hz	5.7 VA
• at 60 Hz	4.4 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.25
closing delay	
• at AC	9 35 ms
opening delay	
• at AC	4 15 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 60 V rated value	6A
at 110 V rated value	3A
• at 125 V rated value	2 A
at 220 V rated value	1A
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

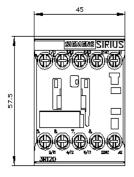
— at 230 V rated value	2 hp
 for 3-phase AC motor 	
— at 200/208 V rated value	3 hp
— at 220/230 V rated value	5 hp
— at 460/480 V rated value	10 hp
— at 575/600 V rated value	10 hp
contact rating of auxiliary contacts according to UL	A600 / Q600
Short-circuit protection	
design of the miniature circuit breaker for short-circuit protection of the auxiliary circuit up to 230 V	C characteristic: 10 A; 0.4 kA
design of the fuse link	
 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 side-by-side mounting	Yes
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
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	0 mm
	10 mm
— forwards	
— 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 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 main contacts	2x (20 16), 2x (18 14), 2x 12
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 4 mm 0.5 2.5 mm ²
	0.0 2.0 mm
type of connectable conductor cross-sections	
for auxiliary contacts	$2v (0.5 - 1.5 mm^2) 2v (0.75 - 0.5 mm^2) 2v (1.75 - 0.5 mm^2)$
— 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)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14), 2x 12
AWG number as coded connectable conductor cross	

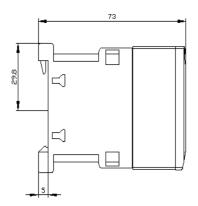
 positively driven 					
 for auxiliary con afety related data product function mirror contact a positively driven 			0 40		
afety related data product function • mirror contact a • positively driven	tacts		20 12		
product functionmirror contact apositively driven		4	20 12		
 mirror contact a positively driven 		_			_
 positively driven 					
	ccording to IEC 60947-4		fes		
	operation according to I		No		
 suitable for safe 	-		fes		
	y-related switching OFF		ſes		
service life maximum			20 a		
test wear-related service		``	fes		
proportion of danger					
	d rate according to SN 3		10 %		
	nd rate according to SN 3		73 %		
	demand rate according		000 000		
failure rate [FIT] with 31920	low demand rate accord	rding to SN	100 FIT		
ISO 13849					
device type accordin	a to ISO 12949 1	3	2		
	-				
IEC 61508	cording to ISO 13849-2	necessary	/es		
	cording to IEC 61508-2		Гуре А		
Electrical Safety	cording to iEC 01508-2		туре А		
	n the front according to		P20		
-				from the front	
approvals Certificates	the front according to I	100529	inger-safe, for vertical contact		
General Product App					
	Test Cartificates		Marine / Shinning		
EMV	Test Certificates		Marine / Shipping		
~ ~	Special Test Certific- ate	Type Test Certific ates/Test Report			
RCM			ABS	BUREAU VERITAS	
RCM			ABS	BUREAU VERITAS	
Marine / Shipping	RINA	RMRS	ABS other <u>Confirmation</u>	Miscellaneous	Confirmation
Lloyd's Register	Environment	RMRS			Confirmation
Llovd's Register us		Environmental Co firmations	Confirmation		Confirmation
LIRS Railway Special Test Certific-			Confirmation		Confirmation
Railway Special Test Certific- ate	Environment EPD	firmations	Confirmation		Confirmation
Railway Special Test Certific- ate	Environment	firmations	Confirmation		Confirmation
Railway Special Test Certific- ate	Environment	firmations	Confirmation		Confirmation
Example of the second s	Environment	<u>firmations</u> / <u>view/109813875</u> , Brochures,)	<u>Confirmation</u>		Confirmation
Example of the second s	Environment	<u>firmations</u> / <u>view/109813875</u> , Brochures,)	<u>Confirmation</u>		Confirmation
Lloyd's Register	RINA	RMPS			Confirmation

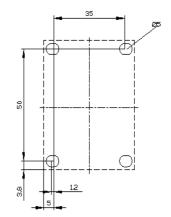
http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2018-1AD02 Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AD02 Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2018-1AD02&lang=en Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2018-1AD02/char

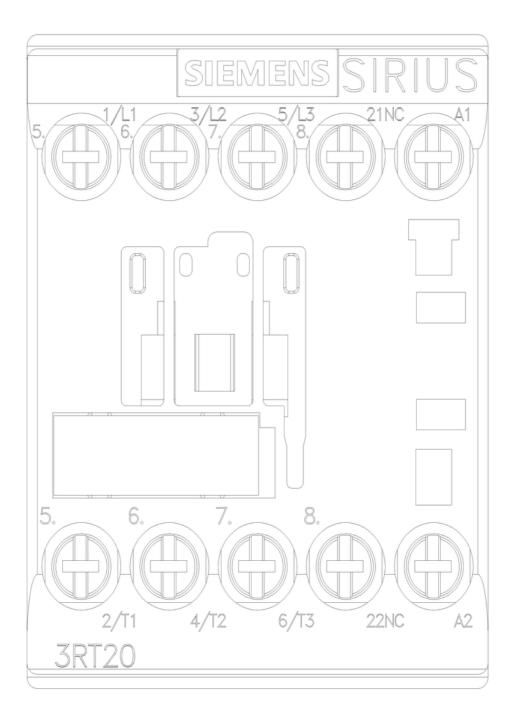
Further characteristics (e.g. electrical endurance, switching frequency)

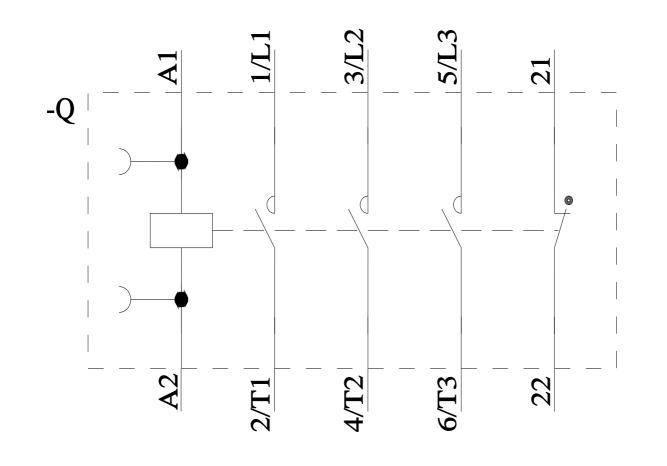
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2018-1AD02&objecttype=14&gridview=view1











last modified:

4/17/2025 🖸

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Siemens:

3RT20181AD02