SIEMENS

Data sheet

3RT2025-1AK60



power contactor, AC-3 17 A, 7.5 kW / 400 V 1 NO + 1 NC, 110 V AC, 50 Hz, 120 V, 60 Hz, 3-pole, Size S0, screw terminal

product brand name product designation product type designation	SIRIUS Power contactor 3RT2
product type designation	
	3RT2
General technical data	
size of contactor	S0
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	2.7 W
• per pole	0.9 W
power loss [W] for rated value of the current without load current share typical	7.9 W
insulation voltage	
 of main circuit with degree of pollution 3 rated value 	690 V
 of auxiliary circuit with degree of pollution 3 rated value 	690 V
surge voltage resistance	
 of main circuit rated value 	6 kV
 of auxiliary circuit rated value 	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	7,5g / 5 ms, 4,7g / 10 ms
shock resistance with sine pulse	
• at AC	11,8g / 5 ms, 7,4g / 10 ms
mechanical service life (switching cycles)	
 of contactor typical 	10 000 000
 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009
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 acc. to IEC 60068-2-30	95 %

maximum	
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
operational current	
 at AC-1 at 400 V at ambient temperature 40 °C 	40 A
rated value	
• at AC-1	
— up to 690 V at ambient temperature 40 °C rated value	40 A
 up to 690 V at ambient temperature 60 °C rated value 	35 A
• at AC-3	
— at 400 V rated value	17 A
— at 500 V rated value	17 A
— at 690 V rated value	13 A
• at AC-4 at 400 V rated value	15.5 A
 at AC-5a up to 690 V rated value 	35.2 A
 at AC-5b up to 400 V rated value 	14.1 A
● at AC-6a	
 up to 230 V for current peak value n=20 rated value 	11.4 A
 — up to 400 V for current peak value n=20 rated value 	11.4 A
 — up to 500 V for current peak value n=20 rated value 	11.4 A
— up to 690 V for current peak value n=20 rated value	11.3 A
● at AC-6a	
 — up to 230 V for current peak value n=30 rated value 	7.6 A
 — up to 400 V for current peak value n=30 rated value 	7.6 A
— up to 500 V for current peak value n=30 rated value	7.6 A
— up to 690 V for current peak value n=30 rated value	7.6 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm ²
operational current for approx. 200000 operating cycles at AC-4	
at 400 V rated value	7.7 A
at 690 V rated value	7.7 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
• with 3 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A

	• at 1 current path at DC-3 at DC-5	
- at 10 V rade value 2.5 Å - at 400 V rade value 0.00 Å - at 400 V rade value 0.00 Å - at 600 V rade value 0.06 Å - at 24 V rade value 35 Å - at 22 V rade value 35 Å - at 22 V rade value 36 Å - at 20 V rade value 0.06 Å - at 40 V rade value 0.07 Å - at 40 V rade value 0.07 Å - at 20 V rade value 0.06 Å - at 24 V rade value 0.06 Å - at 24 V rade value 0.06 Å - at 24 V rade value 0.06 Å - at 22 V rade value 0.06 Å - at 22 V rade value 0.6 Å - at 22 V rade value 0.6 Å - at 23 V rade value 0.6 Å - at 23 V rade value 0.6 Å - at 420 V rade value 0.6 Å - at 420 V rade value 0.6 Å - at 630 V rade value 7.5 kW - at 630 V rade value		20 A
with 2 current paths in series at DC-3 at DC-3 - at 24 V rated value - at 220 V rated value - a		
	•	35 A
• with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value - at 220 V rated value - at 240 V rated value - at 250 V rated value - at 260 V rated value - at 260 V rated value - at 260 V rated value - at 600 V rated value - up to 400 V for current pack value m=20 rated value - up to 500 V for current pack value m=20 rated value - up to 400 V for current pack value m=20 rated value - up to 500 V for current pack value m=20 rated value - up to 500 V for current pack value m=20 rated value - up to 600 V for current pack value m=20 rated value - up to 600 V for current pack value m=30 rated value - up t	— at 440 V rated value	0.27 A
	— at 600 V rated value	0.16 A
- at 110 V rated value 35 Å - at 220 V rated value 10 Å - at 400 V rated value 06 Å operating power 0.6 Å - at 230 V rated value 0.6 Å - at 200 V rated value 7.5 kW - at 500 V rated value 7.5 kW - at 600 V rated value 6 kW operating power for approx. 200000 operating cycles 4 kV A at 400 V rated value 6 kW operating apparent power at AC-6a 6 kW operating apparent power at AC-6a 7 kV-A up to 500 V for current peak value m=20 rated value 7 kV-A up to 500 V for current peak value m=20 rated value 7 kV-A up to 500 V for current peak value m=20 rated value 7 kV-A up to 500 V for current peak value m=20 rated value 3 kV-A up to 600 V for current peak value m=20 rated value 5 kV-A up to 500 V for current peak value m=30 rated value 5 kV-A up to 600 V for current peak value m=30 rated value 5 kV-A up to 600 V for current peak value m=30 rated value 5 kV-A up to 600 V for current peak value m=30 rated value	 with 3 current paths in series at DC-3 at DC-5 	
	— at 24 V rated value	35 A
	— at 110 V rated value	35 A
	— at 220 V rated value	10 A
operating power • at AC-3	— at 440 V rated value	0.6 A
• at AC-3 - at 200 V rated value 4 kW - at 400 V rated value 7.5 kW - at 600 V rated value 7.5 kW - at 600 V rated value 7.5 kW - at 600 V rated value 11 kW operating power for approx. 20000 operating cycles at AC-4 3.5 kW • at 400 V rated value 3.5 kW • at 400 V rated value 6 kW operating apparent power at AC-6a 9 kV A • up to 200 V for current peak value n=20 rated value 9 kV A • up to 500 V for current peak value n=20 rated value 9 kV A • up to 500 V for current peak value n=20 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current peak value n=30 rated value 3 kV A • up to 500 V for current t	— at 600 V rated value	0.6 A
	operating power	
	• at AC-3	
at 500 V rated value 7.5 kW at 630 V rated value 11 kW operating power for approx. 200000 operating cycles 3.5 kW • at 400 V rated value 6 kW operating apparent power at AC-6a 6 kW • up to 230 V for current peak value n=20 rated value 7.8 kV A • up to 500 V for current peak value n=20 rated value 9.8 kV A • up to 500 V for current peak value n=20 rated value 9.8 kV A • up to 500 V for current peak value n=20 rated value 3.8 kV A • up to 500 V for current peak value n=30 rated value 3.8 kV A • up to 500 V for current peak value n=30 rated value 6.6 kV A • up to 500 V for current peak value n=30 rated value 6.6 kV A • up to 500 V for current peak value n=30 rated value 6.6 kV A • up to 500 V for current peak value n=30 rated value 9.1 kV A short-time withstand current in cold operating state 9.1 kV A short-time withstand current maximum 108 A; Use minimum cross-section acc. to AC-1 rated value 110 A; Use minimum cross-section acc. to AC-1 rated value 96 A; Use minimum cross-section acc. to AC-1 rated value • at AC 5 000 1/h 5 000 1/h • at AC 5 000 1/h 5 000 1/h • at AC-2 maximum 1000 1/h • at AC-2 maximum • at AC-4 maximum 1000 1/h <td>— at 230 V rated value</td> <td>4 kW</td>	— at 230 V rated value	4 kW
	— at 400 V rated value	7.5 kW
operating power for approx. 200000 operating cycles at AC-4 3.5 kW • eit 400 V rated value 3.5 kW • eit 400 V rated value 6 kW operating apparent power at AC-6a 6 kW • up to 230 V for current peak value n=20 rated value 7.8 kV A • up to 500 V for current peak value n=20 rated value 9.8 kV A • up to 500 V for current peak value n=20 rated value 9.8 kV A • up to 500 V for current peak value n=30 rated value 3.6 kV A • up to 500 V for current peak value n=30 rated value 3.6 kV A • up to 500 V for current peak value n=30 rated value 9.1 kV A • up to 500 V for current peak value n=30 rated value 9.1 kV A • up to 500 V for current peak value n=30 rated value 9.1 kV A • up to 500 V for current maximum 8.6 kV A • up to 500 V for current maximum 9.1 kV A • up to 500 V for current maximum 9.1 kV A • up to 500 v for current maximum 115 A; Use minimum cross-section acc. to AC-1 rated value • at AC 5 switching at zero current maximum • limited to 10 s switching at zero current maximum 15 A; Use minimum cross-section acc. to AC-1 rated value • at AC-1 maximum 1 000 1/h 115 A; Use minimum cross-sectio	— at 500 V rated value	7.5 kW
at 400 V rated value 3.5 kW • at 400 V rated value 6 kW operating apparent power at AC-6a 6 kW • up to 230 V for current peak value n=20 rated value 4.5 kV A • up to 500 V for current peak value n=20 rated value 7.8 kV A • up to 500 V for current peak value n=20 rated value 9.9 kV A • up to 500 V for current peak value n=30 rated value 3.6 kV A • up to 500 V for current peak value n=30 rated value 3.6 kV A • up to 500 V for current peak value n=30 rated value 3.6 kV A • up to 500 V for current peak value n=30 rated value 5.2 kV A • up to 500 V for current peak value n=30 rated value 9.1 kV A short-time withstand current in cold operating state value 9.1 kV A short-time withstand current maximum 225 A; Use minimum cross-section acc. to AC-1 rated value 115 Å; Use minimum cross-section acc. to AC-1 rated value 9.6 Å; Use minimum cross-section acc. to AC-1 rated value 126 AC 5 000 1/h 96 Å; Use minimum cross-section acc. to AC-1 rated value 115 Å; Use minimum cross-section acc. to AC-1 rated value 9.6 Å; Use minimum cross-section acc. to AC-1 rated value 136 AC 5 000 1/h 96 Å; Use minimum cross-section acc. to AC-1 rated value 9.1 kC-2 m		11 kW
• at 400 V rated value 3.5 kW • at 690 V rated value 6 kW operating apparent power at AC-5a 6 kW • up to 230 V for current peak value n=20 rated value 4.5 kV A • up to 400 V for current peak value n=20 rated value 7.8 kV A • up to 500 V for current peak value n=20 rated value 9.9 kV A • up to 500 V for current peak value n=30 rated value 3.6 kV A operating apparent power at AC-5a 3 kV A • up to 400 V for current peak value n=30 rated value 5 kV A • up to 630 V for current peak value n=30 rated value 5 kV A • up to 630 V for current peak value n=30 rated value 5 kV A • up to 630 V for current peak value n=30 rated value 5 kV A • up to 630 V for current peak value n=30 rated value 9.1 kV A short-time withstand current in cold operating state up to 40 °C 9.1 kV A • imited to 1s switching at zero current maximum 100 k. Use minimum cross-section acc. to AC-1 rated value • imited to 5 s switching at zero current maximum 100 t/h • at AC 5 000 t/h operating frequency 6 A Use minimum cross-section acc. to AC-1 rated value • at AC-2 maximum 1 000 t/h • at AC-3 maximum		
• at 690 V rated value 6 kW operating apparent power at AC-6a 4.5 kV A • up to 230 V for current peak value n=20 rated value 7.8 kV A • up to 500 V for current peak value n=20 rated value 9.9 kV A • up to 230 V for current peak value n=20 rated value 9.9 kV A • up to 230 V for current peak value n=30 rated value 3.6 kV A operating apparent power at AC-6a 3 kV A • up to 230 V for current peak value n=30 rated value 5.2 kV A • up to 500 V for current peak value n=30 rated value 6.6 kV A • up to 690 V for current peak value n=30 rated value 9.1 kV A short-time withstand current neak value n=30 rated value 9.1 kV A short-time withstand current neak value n=30 rated value 9.1 kV A • limited to 1 s switching at zero current maximum 225 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 15 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 96 A; Use minimum cross-section acc. to AC-1 rated value • at AC-1 5 000 1/h operating frequency • at AC-1 • at AC-2 maximum 1000 1/h • at AC-3 maximum 1000 1/h <td></td> <td>3.5 kW</td>		3.5 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 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 to 500 V for current peak value n=30 rated value to 500 V for current peak value n=30 rated value to 500 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current maximum limited to 1 s switching at zero current maximum limited to 50 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-	at 690 V rated value	6 kW
 up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value up to 500 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 to 500 V for current peak value n=30 rated value to 500 V for current peak value n=30 rated value to 500 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current peak value n=30 rated value to 690 V for current maximum limited to 1 s switching at zero current maximum limited to 50 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum at AC-1 maximum at AC-2 maximum at AC-3 maximum at AC-3 maximum at AC-4 maximum at AC-	operating apparent power at AC-6a	
 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 680 V for current peak value n=20 rated value up to 230 V for current peak value n=30 rated value up to 230 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value for this solution of the current peak value n=30 rated value up to 500 V for current peak value n=30 rated value for this solution of the current in cold operating state up to 40 °C ilmited to 1 s switching at zero current maximum filmited to 5 s switching at zero current maximum filmited to 50 s switching at zero current maximum filmited to 60 s switching at zero current maximum filmited to 60 s switching at zero current maximum filmited to 60 s switching at zero current maximum filmited to 60 s switching at zero current maximum filmited to 60 s switching at zero current maximum filmited to 60 s switching at zero current maximum filmited to 60 s switching at zero current maximum for the current frequency at AC for the current symmem for the current		4.5 kV·A
 up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value operating apparent power at AC-6a up to 230 V for current peak value n=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 short-time withstand current in cold operating state up to 40 °C ilmited to 1 s switching at zero current maximum ilmited to 10 s switching at zero current maximum ilmited to 10 s switching at zero current maximum ilmited to 10 s switching at zero current maximum ilmited to 10 s switching at zero current maximum ilmited to 50 s switching at zero current maximum ilmited to 60 s switching at zero current maximum ilmited to 60 s switching at zero current maximum at AC st AC 5 000 1/h operating frequency at AC-1 maximum at AC-3 maximum at AC-4 maximum<!--</td--><td></td><td>7.8 kV·A</td>		7.8 kV·A
• up to 690 V for current peak value n=20 rated value 13.6 kV-A operating apparent power at AC-6a 3 kV-A • up to 230 V for current peak value n=30 rated value 3 kV-A • up to 500 V for current peak value n=30 rated value 6.6 kV-A • up to 690 V for current peak value n=30 rated value 6.6 kV-A • up to 690 V for current peak value n=30 rated value 9.1 kV-A short-time withstand current in cold operating state 9.1 kV-A • limited to 1 s switching at zero current maximum 225 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 180 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 180 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 96 A; Use minimum cross-section acc. to AC-1 rated value • at AC 5 000 1/h operating frequency 6 at AC-2 maximum • at AC-4 maximum 1 000 1/h • at AC-4 maximum 1 000 1/h • at AC-4 maximum 1 000 1/h • at AC-4 maximum 300 1/h • at AC-4 maximum 1 000 1/h • at AC-4 maximum 1 000 1/h • at AC		9.9 kV·A
 up to 230 V for current peak value n=30 rated value up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value up to 690 V for current peak value n=30 rated value short-time withstand current in cold operating state up to 40 °C limited to 1 s witching at zero current maximum limited to 5 s witching at zero current maximum limited to 10 s witching at zero current maximum limited to 10 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum limited to 60 s witching at zero current maximum 15 Å; Use minimum cross-section acc. to AC-1 rated value 6 Å; Use minimum cross-section acc. to AC-1 rated value 16 Å; Use minimum cross-section acc. to AC-1 rated value 16 Å; Use minimum cross-section acc. to AC-1 rated value 16 Å; Use minimum cross-section acc. to AC-1 rated value 16 Å; Use minimum cross-section acc. to AC-1 rated value 16 Å; Use minimum cross-section acc. to AC-1 rated value 10 00 1/h at AC-1 maximum 1000 1/h at AC-4 maximum<td></td><td>13.6 kV·A</td>		13.6 kV·A
 up to 400 V for current peak value n=30 rated value up to 500 V for current peak value n=30 rated value 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 40 °C limited to 1 s switching at zero current maximum limited to 1 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum limited to 60 s switching at zero current maximum at AC foot as the foot and the foot as the foot and the foot as the foot and the foot as the foot and the foot as the	operating apparent power at AC-6a	
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• up to 690 V for current peak value n=30 rated value9.1 kV-Ashort-time withstand current in cold operating state up to 40 °C9.1 kV-A• 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 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 ta zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum 	 up to 400 V for current peak value n=30 rated value 	5.2 kV·A
short-time withstand current in cold operating state up to 40 °C 225 A; Use minimum cross-section acc. to AC-1 rated value • limited to 1 s switching at zero current maximum 225 A; Use minimum cross-section acc. to AC-1 rated value • limited to 10 s switching at zero current maximum 225 A; Use minimum cross-section acc. to AC-1 rated value • limited to 30 s switching at zero current maximum 180 A; Use minimum cross-section acc. to AC-1 rated value • limited to 60 s switching at zero current maximum 96 A; Use minimum cross-section acc. to AC-1 rated value • at AC 5 000 1/h operating frequency 5 000 1/h • at AC-1 maximum 1 000 1/h • at AC-2 maximum 1 000 1/h • at AC-3 maximum 1 000 1/h • at AC-4 maximum 300 1/h • at AC-4 maximum 300 1/h • at AC-4 maximum 1000 1/h • at AC-4 maximum 1000 1/h • at AC-4 maximum 200 1/h • at 50 Hz rated value 110 V • at 50 Hz rated value 110 V • at 50 Hz 0.8 1.1	 up to 500 V for current peak value n=30 rated value 	6.6 kV·A
up to 40 °C• limited to 1 s switching at zero current maximum• limited to 5 s switching at zero current maximum• limited to 5 s switching at zero current maximum• limited to 10 s switching at zero current maximum• limited to 10 s switching at zero current maximum• limited to 30 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• at AC• at AC• at AC• at AC• at AC-1 maximum• at AC-1 maximum• at AC-2 maximum• at AC-3 maximum• at AC-3 maximum• at AC-4 maximum• at AC-4 maximum• at AC-4 maximum• at AC-4 maximum• at 60 Hz rated value• at 50 Hz rated value• at 50 Hz rated value• at 50 Hz• a	 up to 690 V for current peak value n=30 rated value 	9.1 kV·A
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 at 50 Hz rated value at 60 Hz rated value 110 V 120 V operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz 0.8 1.1 		
• at 60 Hz rated value 120 V operating range factor control supply voltage rated value of magnet coil at AC 0.8 1.1		110 V
• at 50 Hz 0.8 1.1		
• at 60 Hz 0.8 1.1	• at 50 Hz	0.8 1.1
	● at 60 Hz	0.8 1.1

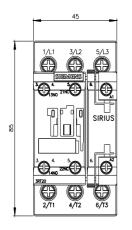
apparent pick-up power of magnet coil at AC	
• at 50 Hz	68 V·A
• at 60 Hz	67 V·A
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
• at 50 Hz	7.9 V·A
• at 60 Hz	6.5 V·A
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
 at 230 V rated value 	10 A
• at 400 V rated value	3 A
 at 500 V rated value 	2 A
 at 690 V rated value 	1 A
operational current at DC-12	
at 24 V rated value	10 A
 at 48 V rated value 	6 A
 at 60 V rated value 	6 A
 at 110 V rated value 	3 A
 at 125 V rated value 	2 A
at 220 V rated value	1 A
at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
• at 48 V rated value	2 A
at 60 V rated value	2 A
at 110 V rated value	1 A
at 110 V lated value 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	17 A
yielded mechanical performance [hp]	
 for single-phase AC motor 	
— at 110/120 V rated value	1 hp
— at 230 V rated value	3 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	15 hp

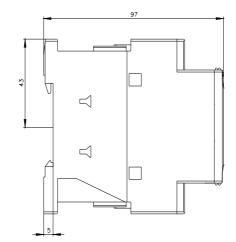
contact rating of auxiliary contacts according to UL	A600 / P600
Short-circuit protection	
design of the fuse link	
for short-circuit protection of the main circuit	
- with type of coordination 1 required	gG: 63A (690V,100kA), aM: 32A (690V,100kA), BS88: 63A (415V,80kA)
— with type of assignment 2 required	gG: 25A (690V,100kA), aM: 20A (690V,100kA), BS88: 25A (415V,80kA)
 for short-circuit protection of the auxiliary switch 	gG: 10 A (500 V, 1 kA)
required	
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 standard mounting rail according to DIN EN 60715
 side-by-side mounting 	Yes
height	85 mm
width	45 mm
depth	97 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
 for grounded parts 	40
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
for live parts	10
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	acrow two terminals
for main current circuit for auxiliany and control circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil type of connectable conductor cross-sections	Screw-type terminals
for main contacts	
• for main contacts — solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid — solid or stranded	2x (1 2.5 mm ²), 2x (2.5 10 mm ²) 2x (1 2.5 mm ²), 2x (2.5 10 mm ²)
 — solid or stranded — finely stranded with core end processing 	2x (1 2.5 mm ²), 2x (2.5 6 mm ²), 1x 10 mm ²
at AWG cables for main contacts	2x (1 2.5 mm), 2x (2.5 6 mm), 1x 10 mm 2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	
solid	1 10 mm²
stranded	1 10 mm ²
 finely stranded with core end processing 	1 10 mm ²
connectable conductor cross-section for auxiliary	
contacts	
 solid or stranded 	0.5 2.5 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)
 finely stranded with core end processing 	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 at AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross	
section	

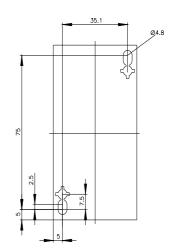
 for main contact 	oto		16 8			
 for main contact for auxiliary co 			20 14			
Safety related data	Tildelis		20 14			
	demand rate acc. to SN	21020	450 000		_	
proportion of dange		31920	450 000			
		2	10 %			
 with low demand rate acc. to SN 31920 with high demand rate acc. to SN 31920 		40 % 73 %				
0	low demand rate acc. to		100 FIT			
	est interval or service		20 y			
IEC 61508			20 }			
protection class IP	on the front acc. to IEC	60529	IP20			
touch protection on	the front acc. to IEC 6	60529	finger-safe, for vertical contact from the front			
suitability for use						
 safety-related s 	switching OFF		Yes			
Certificates/ approva	ls					
General Product A	pproval					
S.		<u>Confirmatic</u>		KC	EHC	
EMC	Functional Safety/Safety of Machinery	Declaration o	f Conformity	Test Certificates		
RCM	<u>Type Examination</u> <u>Certificate</u>	C C EG-Konf.	UK Declaration Conformity	of <u>Type Test Certific-</u> ates/Test Report	<u>Special Test Certific-</u> <u>ate</u>	
Marine / Shipping						
ABS	BUREAU VERITAS		Lloyd's Register uis	RINA	KMRS RARES	
other						
<u>Confirmation</u>		<u>Confirmatic</u>	<u>n</u>			
Further information	ownloadcenter (Catalo	gs, Brochures,.)			
https://www.siemens.com/ic10 Industry Mall (Online ordering system) https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2025-1AK60						
Cax online generate http://support.automa Service&Support (N	Cax online generator http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2025-1AK60 Service&Support (Manuals, Certificates, Characteristics, FAQs,) https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1AK60					
Image database (pr	oduct images, 2D dime	ension drawings		cuit diagrams, EPLAN ma <u>=en</u>	acros,)	
	ping characteristics, I ²	_				

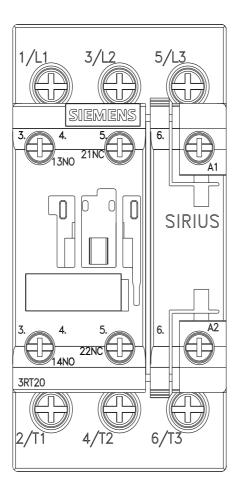
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1AK60/char

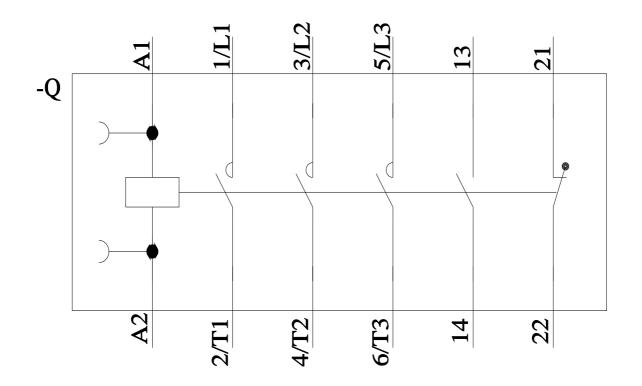
Further characteristics (e.g. electrical endurance, switching frequency) http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2025-1AK60&objecttype=14&gridview=view1











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12/23/2021 🖸