SIEMENS

Data sheet 3RT2025-1AK64



power contactor, AC-3e/AC-3, 17 A, 7.5 kW / 400 V, 3-pole, 110 V AC, 50 Hz / 120 V, 60 Hz, auxiliary contacts: 2 NO + 2 NC, screw terminal, size: S0, removable auxiliary switch

product designation product type designation General technical data size of contactor product extension • function module for communication • auxiliary switch power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole • without load current share typical type of calculation of power loss depending on pole insulation voltage • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance • of main circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized	SIRIUS Power contactor 3RT2 S0 No No No 1.8 W 0.6 W 2 W quadratic 690 V 690 V 6 kV 6 kV 400 V
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without load current share typical type of calculation of power loss depending on pole insulation voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit rated value of main circuit rated value of auxiliary circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse at AC shock resistance with sine pulse at AC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized	2 W quadratic 690 V 690 V 6 kV 6 kV
type of calculation of power loss depending on pole insulation voltage	quadratic 690 V 690 V 6 kV 6 kV
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of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse at AC shock resistance with sine pulse at AC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized	690 V 6 kV 6 kV
of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse at AC shock resistance with sine pulse at AC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized	690 V 6 kV 6 kV
surge voltage resistance of main circuit rated value of auxiliary circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse of at AC shock resistance with sine pulse of AC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized	6 kV 6 kV
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coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized	400 V
at AC shock resistance with sine pulse at AC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized	
shock resistance with sine pulse • at AC mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized	
at AC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized	7,5g / 5 ms, 4,7g / 10 ms
mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized	
 of contactor typical of the contactor with added electronically optimized	11,8g / 5 ms, 7,4g / 10 ms
of the contactor with added electronically optimized	
	10 000 000
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 %
Environmental footprint	

Global Warming Peterhal (COZ ed) buts 74 2 kg	Environmental Product Declaration(EPD)	Yes
1.9 kg 1		
Cicked Warming Protential (COZ erg) during operation 72.4 kg		
Global Warming Potential (CO2 eq) after end of life		
Main current circuit 3	<u> </u>	·
number of poles for main current circuit 3 number of NO contacts for main contacts 3 operating vottage		-0.117 kg
number of NO contacts for main contacts operating voltage		3
operating voltage ● at AC-3 rated value maximum ● at AC-3 rated value maximum For at AC-3 rated value maximum ● at AC-1 4 40 V at ambient temperature 40 "C rated value ■ up to 690 V at ambient temperature 40 "C rated value ■ up to 690 V at ambient temperature 60 "C rated value ■ up to 690 V at ambient temperature 60 "C rated value ■ at AC-3 ■ at 400 V rated value ■ at 690 V rated value ■ at AC-3 ■ at AC-3 at AC-3 ■ at AC-3 to 7 rated value ■ at AC-3 to 9 to 690 V rated value ■ at AC-5 to p to 400 V rated value ■ at AC-5 to p to 400 V rated value ■ at AC-5 to p to 400 V rated value ■ at AC-5 to p 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 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 ■ at 600 V rated value ■	<u> </u>	
• at AC-3 related value maximum • at AC-3 related value maximum • at AC-3 related value maximum • at AC-1 at 400 V at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 60 °C rated value • up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at 600 V rated value — at 690 V rated value — up to 230 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — at 600 V rated value		·
• at AC-3e rated value maximum operational current • at AC-1 at 400 V at ambient temperature 40 °C rated value • at AC-1 — up to 690 V at ambient temperature 60 °C rated value — up to 690 V at ambient temperature 60 °C rated value • at AC-3 — at 400 V rated value • at AC-3 — at 400 V rated value • at AC-3 — at 690 V rated value — at 590 V rated value — at 690 V rated value — at 690 V rated value • at AC-3 — at 400 V rated value — at 690 V rated value — at 690 V rated value • at AC-5 up to 690 V rated value • at AC-5 up to 690 V rated value • at AC-5 up to 690 V rated value • at AC-5 up to 690 V rated value • at AC-5 up to 690 V rated value • at AC-6 up to 690 V rated value • at AC-6 up to 690 V rated value • at AC-6 up to 690 V rated value • at AC-6 up to 690 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V rated value • at AC-6 up to 590 V for current peak value n=20 rated value — up to 590 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 400 V for current peak value • at 600 V rated value • at 400 V rated value • at 400 V rated value • at 600 V rated value — at 400 V rated value — at 400 V rated value — at 600 V rated value — a		690 V
operational current		
at AC-1 at 400 V at ambient temperature 40 °C rated value		
— up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C rated value — at 20 V rated value 17 A — at 690 V rated value 18 A — at 600 V rated value 18 A — at 600 V rated value 18 A — at 600 V rated value — at 60-60 a — 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=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 — 7.6 A — up to 500 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 500 V for current peak value n=30 rated value 7.6 A — up to 500 V for current peak value n=30 rated value 7.7 A — at 600 V rated value — at 100 V rated value — at 600 V	• at AC-1 at 400 V at ambient temperature 40 °C rated	40 A
value — up to 890 V at ambient temperature 60 °C rated value ■ at AC-3 — at 400 V rated value — at 590 V rated value — at 590 V rated value — at 990 V rated value — at 900 V rated value — at 800 V 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 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 600 V for current peak value n=30 rated value — up to 600 V for current peak value n=30 rated value 7.6 A up to 600 V for current peak value n=30 rated value 7.7 A at 600 V rated value 35 A at 600 V rated value — at 100 V rated value — at 100 V rated value — at 400 V rated value — at 50 V rated value — at 600 V rated value — at 60	• at AC-1	
value ■ at AC-3 — at 400 V rated value — at 869 0 V rated value — up to 400 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=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 — at 800 V for current peak value n=30 rated value — at 800 V for current peak value n=30 rated value — at 800 V rat		40 A
	value	35 A
at 500 V rated value at 600 V rated value at 500 V rated value at 500 V rated value at 600 V rated value at		47.0
■ at AC-3e — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 690 V rated value — at 690 V rated value ■ at AC-4 at 400 V rated value ■ at AC-5a up to 690 V rated value ■ at AC-5a up to 690 V rated value ■ at AC-5a up to 400 V rated value ■ up to 230 V for current peak value n=20 rated value — up to 400 V for current peak value n=20 rated value — up to 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 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — operational current for approx. 200000 operating cycles at AC-4 ■ at 400 V rated value — at 60 V rated valu		
at 400 V rated value		13 A
at 500 V rated value at 690 V rated value at 26 V rated value at 690 V rated value at 6		17 A
at AC-4 at 400 V rated value at AC-5a up to 690 V rated value at AC-5a up to 690 V rated value at AC-5a — 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 590 V for current peak value n=20 rated value — up to 230 V for current peak value n=30 rated value — up to 900 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 800 V for current peak value n=30 rated value — up to 800 V for current peak value n=30 rated value — up to 800 V for current peak value n=30 rated value — at 400 V rated value — at 100 V rated value — at 24 V rated value — at 22 V rated value — at 22 V rated value — at 22 V rated value — at 440 V rated value — at 220 V rated value — at 24 V rated value — at 220 V rated value — at 240 V ra		
at AC-4 at 400 V rated value at AC-5a up to 690 V rated value at AC-5a up to 690 V rated value at AC-6a at AC-6a — 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 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 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 — at 400 V rated value — at 400 V rated value — at 600 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 440 V rated value — at 24 V rated value — at 24 V rated value — at 600 V rated value — at 600 V rated value — at 24 V rated value — at 20 V rated value		
at AC-5a up to 690 V rated value at AC-5b up to 400 V rated value at AC-6a — up to 230 V for current peak value n=20 rated value — up to 400 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 230 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — at 690 V rated value — at 690 V rated value — at 690 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 60 V rated value — at 6		
■ at AC-5b up to 400 V rated value ■ at AC-6a — 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 690 V for current peak value n=30 rated value ● 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 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — operational current for approx. 200000 operating cycles at AC-4 ■ at 400 V rated value ■ at 600 V rated value ■ at 600 V rated value ■ at 110 V rated value — at 60 V rated value — at 110 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 24 V rated value — at 600 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 25 V rated value — at 27 V rated value — at 28 V rated value — at 29 V rated value — at 20 V rated value		
■ at AC-6a — up to 230 V for current peak value n=20 rated value — up to 500 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 690 V for current peak value n=20 rated value — up to 230 V for current peak value n=20 rated value ● at AC-6a — up to 230 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — 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 — operational current for approx. 200000 operating cycles at AC-4 ● at 690 V rated value — at 1400 V rated value — at 690 V rated value — at 500 V rated value — at 110 V rated value — at 220 V rated value — at 220 V rated value — at 600 V rated val	·	
- up to 400 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 690 V for current peak value n=20 rated value - up to 230 V for current peak value n=30 rated value - up to 230 V for current peak value n=30 rated value - up to 400 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 500 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value - ve to 690 V for current peak value n=30 rated value - ve to 600 V rated value - ve to 400 V rated value - at 400 V rated value - at 260 V rated value - at 24 V rated value - at 24 V rated value - at 200 V rated value - at 400 V rated value - at 200 V rated value - at 200 V rated value - at 600 V rated value - at 200 V rated value - at 400 V rated value - at 200 V rated value - at 200 V rated value - at 200 V rated value - at 400 V rated va	·	
	— up to 230 V for current peak value n=20 rated value	11.4 A
— up to 690 V for current peak value n=20 rated value • at AC-6a — up to 230 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value — up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 400 V rated value • at 1 current path at DC-1 — at 24 V rated value — at 10 V rated value — at 110 V rated value — at 40 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 220 V rated value — at 110 V rated value — at 110 V rated value — at 220 V rated value — at 40 V rated value	— up to 400 V for current peak value n=20 rated value	11.4 A
• at AC-6a — up to 230 V for current peak value n=30 rated value — up to 400 V for current peak value n=30 rated value — up to 500 V for current peak value n=30 rated value — up to 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 minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 24 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value - at 220 V rated value - at 440 V rated value - at 600 V rated value - at 220 V rated value - at 440 V rated value - at 220 V rated value - at 220 V rated value - at 440 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value	— up to 500 V for current peak value n=20 rated value	11.4 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 - up to 690 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value 7.6 A 7.6 A 7.6 A 7.7 A 10 mm² operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 400 V rated value • at 1 current path at DC-1 - at 24 V rated value - at 110 V rated value - at 220 V rated value - at 440 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value - a	— up to 690 V for current peak value n=20 rated value	11.3 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 minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 - at 24 V rated value - at 60 V rated value - at 60 V rated value - at 400 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value - at 220 V rated value - at 220 V rated value - at 24 V rated value - at 25 V rated value - at 26 V rated value - at 27 V rated value - at 27 V rated value - at 28 V rated value - at 29 V rated value - at 44 V rated value	• at AC-6a	
- up to 500 V for current peak value n=30 rated value - up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 1 current path at DC-1 - at 24 V rated value - at 110 V rated value - at 220 V rated value - at 440 V rated value - at 440 V rated value - at 600 V rated value - at 220 V rated value - at 60 V rated value	 up to 230 V for current peak value n=30 rated value 	7.6 A
— up to 690 V for current peak value n=30 rated value minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 440 V rated value — at 440 V rated value — at 400 V rated value — at 50 V rated value — at 20 V rated value — at 20 V rated value — at 400 V rated value — at 400 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 220 V rated value — at 220 V rated value — at 220 V rated value — at 60 V rated value	 up to 400 V for current peak value n=30 rated value 	7.6 A
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 220 V rated value — at 24 V rated value — at 25 A • with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 60 V rated value — at 440 V rated value	 up to 500 V for current peak value n=30 rated value 	7.6 A
operational current for approx. 200000 operating cycles at AC-4	— up to 690 V for current peak value n=30 rated value	7.6 A
• at 400 V rated value • 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 60 V rated value 20 A — at 110 V rated value 4.5 A — at 220 V rated value 1 A — at 440 V rated value 20 A — at 40 V rated value 35 A — at 600 V rated value 35 A — at 600 V rated value 35 A — at 220 V rated value 35 A — at 110 V rated value 35 A • with 2 current paths in series at DC-1 — at 24 V rated value 35 A — at 10 V rated value 35 A — at 110 V rated value 35 A — at 110 V rated value 35 A — at 120 V rated value 35 A — at 140 V rated value 35 A		10 mm²
● at 690 V rated value operational current ■ at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 60 V rated value — at 60 V rated value — at 24 V rated value — at 60 V rated value — at 20 V rated value — at 20 V rated value — at 20 V rated value — at 440 V rated value 1 A		
operational current • at 1 current path at DC-1	• at 400 V rated value	7.7 A
 at 1 current path at DC-1 at 24 V rated value at 60 V rated value at 110 V rated value at 220 V rated value at 440 V rated value at 600 V rated value at 600 V rated value at 600 V rated value at 24 V rated value at 24 V rated value at 60 V rated value at 110 V rated value at 110 V rated value at 220 V rated value at 240 V rated value 		7.7 A
- at 24 V rated value 35 A - at 60 V rated value 20 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 60 V rated value 35 A - at 110 V rated value 35 A - at 220 V rated value 35 A - at 440 V rated value 1 A	•	
- at 60 V rated value 20 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 60 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	-	05.4
 — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value — at 1A 		
 — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value — at 440 V rated value 		
 — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value 1 A 		
 — at 600 V rated value ● with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value 1 A 		
● with 2 current paths in series at DC-1 — at 24 V rated value 35 A — at 60 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 24 V rated value 35 A — at 60 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		0.20 A
 at 60 V rated value at 110 V rated value at 220 V rated value at 440 V rated value 1 A 	-	35 A
 at 110 V rated value at 220 V rated value at 440 V rated value 1 A 		
— at 220 V rated value— at 440 V rated value5 A1 A		
— at 440 V rated value 1 A		
— at 000 v fated value	— at 600 V rated value	0.8 A
with 3 current paths in series at DC-1		

at 24 V rated value	25 A
— at 24 V rated value	35 A
— at 60 V rated value	35 A 35 A
— at 110 V rated value	
— at 220 V rated value — at 440 V rated value	35 A 2.9 A
— at 600 V rated value	1.4 A
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 220 V rated value	1.4
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
with 3 current paths in series at DC-3 at DC-5	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
 at AC-2 at 400 V rated value 	7.5 kW
• at AC-3	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
• at AC-3e	
— at 230 V rated value	4 kW
— at 400 V rated value	7.5 kW
— at 500 V rated value	7.5 kW
— at 690 V rated value	11 kW
operating power for approx. 200000 operating cycles at AC-	
	2.5 MW
 at 400 V rated value at 690 V rated value 	3.5 kW 6 kW
	U NVV
 operating apparent power at AC-6a up to 230 V for current peak value n=20 rated value 	4.5 kVA
 up to 230 V for current peak value n=20 rated value up to 400 V for current peak value n=20 rated value 	7.8 kVA
up to 500 V for current peak value n=20 rated value up to 500 V for current peak value n=20 rated value	9.9 kVA
 up to 500 V for current peak value n=20 rated value up to 690 V for current peak value n=20 rated value 	13.6 kVA
	10.0 NVA
operating apparent power at AC-6a	3 kVA
up to 230 V for current peak value n=30 rated value	5.2 kVA
up to 400 V for current peak value n=30 rated value	6.6 kVA
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	9.1 kVA
short-time withstand current in cold operating state up to 40 °C	
 limited to 1 s switching at zero current maximum 	225 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 5 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 	189 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	140 A; Use minimum cross-section acc. to AC-1 rated value
limited to 60 s switching at zero current maximum	115 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at AC	5 000 1/h

operating frequency	
• at AC-1 maximum	1 000 1/h
• at AC-2 maximum	1 000 1/h
at AC-3 maximum	1 000 1/h
at AC-3e maximum	1 000 1/h
at AC-4 maximum	300 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
at 50 Hz rated value	110 V
at 60 Hz rated value	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	0.8 1.1
	0.6 1.1
apparent pick-up power of magnet coil at AC • at 50 Hz	68 VA
• at 60 Hz	67 VA
inductive power factor with closing power of the coil	or vit
at 50 Hz	0.72
• at 60 Hz	0.72
apparent holding power of magnet coil at AC	0.74
• at 50 Hz	7.9 VA
• at 60 Hz	6.5 VA
inductive power factor with the holding power of the coil	0.3 VA
at 50 Hz	0.25
• at 60 Hz	0.28
closing delay	0.20
• 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	2
number of NO contacts for auxiliary contacts instantaneous contact	2
operational current at AC-12 maximum	10 A
operational current at AC-15	
at 230 V rated value	6 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 220 V rated valueat 600 V rated value	
at 220 V rated value at 600 V rated value operational current at DC-13	1 A
at 220 V rated valueat 600 V rated value	1 A 0.15 A 6 A
at 220 V rated value at 600 V rated value operational current at DC-13	1 A 0.15 A
at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value	1 A 0.15 A 6 A
at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value	1 A 0.15 A 6 A 2 A
at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value	1 A 0.15 A 6 A 2 A 2 A
at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value	1 A 0.15 A 6 A 2 A 2 A 1 A
at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value	1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
at 220 V rated value at 600 V rated value operational current at DC-13 at 24 V rated value at 48 V rated value at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value	1 A 0.15 A 6 A 2 A 2 A 1 A 0.9 A 0.3 A

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 / Q600
Short-circuit protection	7,0007 (000
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 required	gG: 10 A (500 V, 1 kA)
Installation/ mounting/ dimensions	
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and
	backward by +/- 22.5° on vertical mounting surface
fastening method	screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	85 mm
width	45 mm
depth	141 mm
required spacing	
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
 for grounded parts 	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	2 // 25 2) 2 /25 2
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid or stranded	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
for AWG cables for main contacts	2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	4 40 2
• solid	1 10 mm²
• stranded	1 10 mm²
finely stranded with core end processing	1 10 mm²
connectable conductor cross-section for auxiliary contacts	25. 25. 2
solid or stranded	0.5 2.5 mm²

finely stranded with core end processing	0.5 2.5 mm ²
type of connectable conductor cross-sections	
for auxiliary contacts	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
 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)
AWG number as coded connectable conductor cross section	
• for main contacts	16 8
for auxiliary contacts	20 14
Safety related data	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	_
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
T1 value	
 for proof test interval or service life according to IEC 61508 	20 a
Electrical Safety	
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
Approvals Certificates	

General Product Approval







Confirmation



<u>KC</u>

General Product Approval

EMV

Functional Saftey

Test Certificates

Marine / Shipping





Type Examination Certificate Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping









Miscellaneous

Confirmation

Confirmation

Railway

Environment



Environmental Confirmations

Further information

Information on the packaging

https://support.industry.siemens.com/cs/ww/en/view/109813875

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2025-1AK64

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2025-1AK64

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1AK64

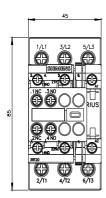
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

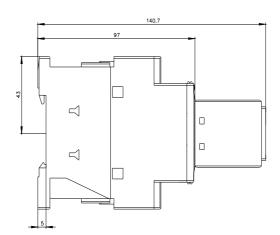
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2025-1AK64&lang=en

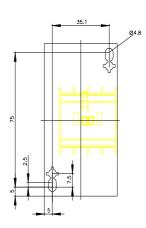
Characteristic: Tripping characteristics, I²t, Let-through current https://support.industry.siemens.com/cs/ww/en/ps/3RT2025-1AK64/characteristics, I²t, Let-through current

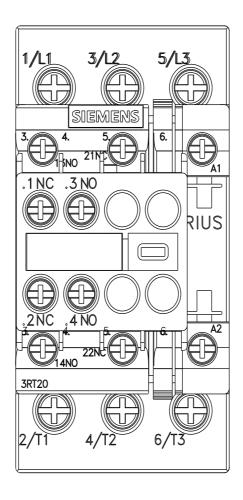
Further characteristics (e.g. electrical endurance, switching frequency)

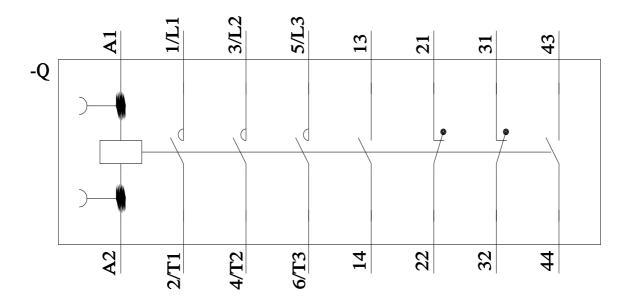
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2025-1AK64&objecttype=14&gridview=view1











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