SIEMENS

Data sheet 3RT2028-1NP30



Power contactor, AC-3 38 A, 18.5 kW / 400 V 1 NO + 1 NC AC (50 - 60 Hz) / DC 200-280 V AC / DC, 3-pole Size S0, screw terminals Size S0, screw terminals

product brand name	SIRIUS
product designation	Power contactor
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 	9.6 W
 at AC in hot operating state per pole 	3.2 W
 without load current share typical 	4.3 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 according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at AC	8,3g / 5 ms, 5,3g / 10 ms
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• at AC	13,5g / 5 ms, 8,3g / 10 ms
• at DC	15g / 5 ms, 10g / 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 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 minimum relative humidity at 55 °C according to IEC 60068-2-30	95 %
maximum	00 /0
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 	50 A
 — up to 690 V at ambient temperature 40 °C rated value — up to 690 V at ambient temperature 60 °C 	50 A 42 A
rated value	· - ··
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
 at AC-4 at 400 V rated value 	22 A
 at AC-5a up to 690 V rated value 	44 A
 at AC-5b up to 400 V rated value 	31.5 A
• at AC-6a	
 up to 230 V for current peak value n=20 rated value 	30.8 A
 up to 400 V for current peak value n=20 rated value 	30.8 A
 up to 500 V for current peak value n=20 rated value 	30.8 A
 up to 690 V for current peak value n=20 rated value 	21 A
• at AC-6a	
 up to 230 V for current peak value n=30 rated value 	20.5 A
— up to 400 V for current peak value n=30 rated value	20.5 A
— up to 500 V for current peak value n=30 rated value	21.4 A
up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operational current for approx. 200000 operating cycles at AC-4	
 at 400 V rated value 	12 A
at 690 V rated value	12 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

 limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum limited to 30 s switching at zero current maximum 186 A; Use minimum cross-se 186 A; Use minimum cross-se 	11 35 A 35 A 35 A 29 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 33 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 35 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 11 kW 18.5		
• with 3 current paths in series at DC-1 — at 124 V rated value	35 A 35 A 35 A 2.9 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 3 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 3 A 0.27 A 0.16 A 35 A 35 A 36 A 37 A 38 A 39 A 39 A 30 A 30 A 30 A 30 A 31 A 32 A 33 A 34 A 35 A 36 A 37 A 38 A 39 A 39 A 39 A 30	— at 440 V rated value	1 A
	35 A 35 A 35 A 2.9 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 35	— at 600 V rated value	0.8 A
	35 A 35 A 2.9 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 35	with 3 current paths in series at DC-1	
	35 A 2.9 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 35 A 35 A 36 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 11 kW 18.5 k	— at 24 V rated value	35 A
at 440 V rated value	2.9 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 35 A 15 A 3 A 0.27 A 0.16 A 36 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 11 kW 18.5	— at 110 V rated value	35 A
- at 440 V rated value	2.9 A 1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 35 A 15 A 3 A 0.27 A 0.16 A 36 A 37 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 k	— at 220 V rated value	35 A
	1.4 A 20 A 2.5 A 1 A 0.09 A 0.06 A 3 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 0.8 A 11 kW 18.5 kW		
• at 1 current path at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value — at 20 V rated value — at 440 V rated value — at 600 V rated value — at 220 V rated value — at 220 V rated value — at 110 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 — at 600 V rated value — at 110 V rated value — at 110 V rated value — at 110 V rated value — at 440 V rated value — at 440 V rated value — at 220 V rated value — at 100 V rated value — at 100 V rated value — at 220 V rated value — at 600 V	20 A 2.5 A 1 A 0.09 A 0.06 A 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5		
	2.5 A 1 A 0.09 A 0.06 A 0.06 A 3 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 18.		
- at 110 V rated value	2.5 A 1 A 0.09 A 0.06 A 0.06 A 3 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 18.	-	20 Δ
— at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value ■ with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 1110 V rated value — at 220 V rated value — at 460 V rated value — at 600 V rated value — at 110 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 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 400 V rated value — at 400 V rated value — at 690 V rated	1 A 0.09 A 0.06 A 0.06 A 3 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 11 kW 18.5 kVA 10 rated value 25 kVA 10 rated value 25 kVA 10 rated value 25 kVA 10 rated value 26 A; Use minimum cross-section acc. to AC-1 rated value 18 A; Use minimum cross-section acc. to AC-1 rated value 18 t maximum 18 A; Use minimum cross-section acc. to AC-1 rated value 18 t maximum 18 A; Use minimum cross-section acc. to AC-1 rated value 18 A; Use minimum cross-section acc. to AC-1 rated value 18 t maximum 18 A; Use minimum cross-section acc. to AC-1 rated value		
— at 440 V rated value — at 600 V rated value 35 A 35 A 36 A 37 A 38	0.09 A 0.06 A 0.06 A 0.06 A 15 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 18.		
■ with 2 current paths in series at DC-3 at DC-5 □ at 24 V rated value □ at 110 V rated value □ at 220 V rated value □ at 240 V rated value □ at 440 V rated value □ at 440 V rated value □ at 440 V rated value □ at 220 V rated value □ at 24 V rated value □ at 24 V rated value □ at 210 V rated value □ at 220 V rated value □ at 440 V rated value □ at 440 V rated value □ at 4600 V rated value □ at 4600 V rated value □ at 460 V rated value □ at 460 V rated value □ at 4500 V rated value □ at 500 V rated value □ at 500 V rated value □ at 500 V rated value □ at 400 V rated value □ at 500 V rated value □ at 690 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=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 400 V for current peak value	3 at DC-5 35 A 15 A 3 A 0.27 A 0.16 A 3 at DC-5 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 0.6 A 0.6 A 0.1 kW 18.5 kW		
with 2 current paths in series at DC-3 at DC-5 — at 24 V rated value — at 110 V rated value — at 220 V rated value — at 240 V rated value — at 600 V rated value — at 600 V rated value — 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 4600 V rated value — at 4600 V rated value — at 250 V rated value — at 250 V rated value — at 250 V rated value — at 400 V rated value — at 690 V rated value	35 A 15 A 36 A 15 A 37 A 0.27 A 0.16 A 38 A 39 A 30		
— at 24 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 24 V rated value — at 24 V rated value — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 120 V rated value — at 220 V rated value — at 440 V rated value — at 460 V rated value — at 600 V rated value — at 600 V rated value — at 500 V rated value — at 400 V rated value — at 400 V rated value — at 500 V rated value — at 600 V rated value — at 400 V rated value — at 600 V rated value —	35 A 15 A 3 A 0.27 A 0.16 A 35 A 35 A 36 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 19.0 rated value 10 rated value 20 rated value 25 kVA 25 kVA 25 kVA 26 rated value 26 kVA 27 rated value 28 kVA 28 rated value 39 5 A; Use minimum cross-section acc. to AC-1 rated value maximum 395 A; Use minimum cross-section acc. to AC-1 rated value maximum 395 A; Use minimum cross-section acc. to AC-1 rated value maximum 186 A; Use minimum cross-section acc. to AC-1 rated value th maximum 186 A; Use minimum cross-section acc. to AC-1 rated value th maximum 186 A; Use minimum cross-section acc. to AC-1 rated value th maximum 186 A; Use minimum cross-section acc. to AC-1 rated value		U.06 A
at 110 V rated value at 220 V rated value at 240 V rated value at 600 V rated value at 24 V rated value at 24 V rated value at 220 V rated value at 220 V rated value at 440 V rated value at 4600 V rated value at 400 V rated value at 600 V rated value at 690 V rated value at 690 V rated value at 690 V rated value at 300 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 500 V rated value at 500 V rated value at 690 V rated value at	15 A 3 A 0.27 A 0.16 A 3 at DC-5 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 25 kVA 260 rated value 27 rated value 280 rated value 280 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value maximum 395 A; Use minimum cross-section acc. to AC-1 rated value th maximum 395 A; Use minimum cross-section acc. to AC-1 rated value th maximum 45 A; Use minimum cross-section acc. to AC-1 rated value th maximum 45 A; Use minimum cross-section acc. to AC-1 rated value th maximum 45 A; Use minimum cross-section acc. to AC-1 rated value th maximum 45 A; Use minimum cross-section acc. to AC-1 rated value th maximum 45 A; Use minimum cross-section acc. to AC-1 rated value	•	
- at 220 V rated value - at 440 V rated value - at 4600 V rated value • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value - at 110 V rated value - at 220 V rated value - at 220 V rated value - at 440 V rated value - at 4600 V rated value - at 600 V rated value - at 4600 V rated value - at 400 V rated value - at 500 V rated value - at 400 V rated value - at 690 V rated value - at 690 V rated value - at 690 V rated value - at 600 V rate	3 A 0.27 A 0.16 A 35 A 35 A 35 A 10 A 0.6 A 0.6 A 11 kW 18.5 kW 20 rated value 25 kVA 25 kVA 25 kVA 26 rated value 37 rated value 38 1 kVA 41.2 kVA 42.5 kVA 42.5 kVA 43.5 kVA 44.2 kVA 45.5 kVA 45.5 kVA 45.5 kVA 46 rated value 47 rated value 48 1 kVA 48		
- at 440 V rated value - at 600 V rated value - at 600 V rated value • with 3 current paths in series at DC-3 at DC-5 - at 24 V rated value - at 110 V rated value - at 220 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 400 V rated value - at 500 V rated value - at 400 V rated value - at 500 V rated value - at 690 V ro 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 690 V for current peak value n=20 rated value - up to 690 V for current peak value n=30 rated value - up to	0.27 A 0.16 A 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 20 rated value 25 kVA 25 kVA 25 kVA 26 rated value 37 rated value 38 rate 39 rated value 30 rated		
 with 3 current paths in series at DC-3 at DC-5 — at 24 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 400 V rated value — at 690 V rated value — at 400 V rated value — at 690 V ror current peak value n=20 rated value • at 690 V ror 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 690 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 • 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 switching at zero current maximum • limited to 10 s switc	3 at DC-5 35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kVA 19.0 rated value 10.0 rated value 1		
with 3 current paths in series at DC-3 at DC-5 — 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 600 V rated value — at 230 V rated value — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V routed value — at 690 V for current peak value n=20 rated value — at 690 V for current peak value n=20 rated value — at 690 V for current peak value n=20 rated value — at 690 V for current peak value n=20 rated value — at 690 V for current peak value n=20 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for current peak value n=30 rated value — at 690 V for curre	35 A 35 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 k		
- 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 600 V rated value operating power • at AC-3 - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value - at 690 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 690 V ror 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 690 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 - 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 - 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	35 A 35 A 36 A 36 A 37 A 38 A 38 A 38 A 39 A 30	— at 600 V rated value	0.16 A
- 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 Operating power • at AC-3 - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 690 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rocurrent peak value n=20 rated value - up to 230 V for current peak value n=20 rated value - up to 500 V for current peak value n=20 rated value - up to 690 V for current peak value n=20 rated value - up to 690 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 - 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 pea	35 A 10 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 20 rated value 20 rated value 20 rated value 21.3 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 260 rated value 27 rated value 28 rated value 29 rated value 20 r	 with 3 current paths in series at DC-3 at DC-5 	
- at 220 V rated value - at 440 V rated value - at 600 V rated value - at 600 V rated value operating power • at AC-3 - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 230 V rated value - at 230 V rated value - at 230 V rated value - at 690 V rated value - at 500 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=20 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current peak value n=30 rated value - at 690 V for current pea	10 A 0.6 A 0.6 A 0.6 A 0.6 A 11 kW 18.5 kW 18.5 kW 18.5 kW 18.5 kW 18.5 kW 18.5 kW 10.3 kW 10.3 kW 10.3 kW 10.3 kW 10.4 to rated value 10.5 to rated value 10.5 to rated value 10.5 to rated value 10.6 to rated value 10.7 to ra	— at 24 V rated value	35 A
- at 440 V rated value - at 600 V rated value operating power • at AC-3 - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 690 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value - at 500 V rated value - at 690 V rated	11 kW 18.5 kW 18.5 kW 11 kW 18.5 kVA 1	— at 110 V rated value	35 A
operating power at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 400 V rated value — at 690 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 400 V rated value — at 690 V rated va	11 kW 18.5 kW 10.7 rated value 20 rated value 20 rated value 21.3 kVA 22 kVA 25 kVA 25 kVA 25 kVA 25 kVA 26 rated value 27 rated value 38 rated value 39 rated value 30 rated v	— at 220 V rated value	10 A
operating power • at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 230 V rated value — at 230 V rated value — at 690 V rated value — at 400 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value • at 400 V rated value • at 400 V rated value • at 400 V rated value • at 690 V rated value • at 900 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 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 690 V for current peak value n=30	11 kW 18.5 kW 18.5 kW 11 kW 18.5 kVA 18.5 kW 18.	— at 440 V rated value	0.6 A
at AC-3 — at 230 V rated value — at 400 V rated value — at 500 V rated value — at 690 V rated value — at 230 V rated value — at 230 V rated value — at 400 V rated value — at 400 V rated value — at 400 V rated value — at 500 V rated value — at 500 V rated value — at 690 V rated value	18.5 kW 10.3 kW 10.3 kW 10.2 rated value 20 rated value 20 rated value 21.3 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 26.6 kVA 27 rated value 28.1 kVA 28.1 kVA 29.0 rated value 29.0 rated value 20 rated value 20 rated value 21.3 kVA 22 kVA 23 kVA 25 kVA 25 kVA 26.0 rated value 27 kVA 28 kVA 29.0 rated value 29.0 rated value 20 rated	— at 600 V rated value	0.6 A
- at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value - at 690 V rated value - at 230 V rated value - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value	18.5 kW 10.3 kW 10.3 kW 10.2 rated value 20 rated value 20 rated value 21.3 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 26.6 kVA 27 rated value 28.1 kVA 28.1 kVA 29.0 rated value 29.0 rated value 20 rated value 20 rated value 20 rated value 25 kVA 25 kVA 26.0 rated value 26.0 rated value 27.0 rated value 28.1 kVA 28.1 kVA 29.0 rated value 29.0 rated value 20 rated	operating power	
- at 400 V rated value - at 500 V rated value - at 690 V rated value - at 690 V rated value - at 230 V rated value - at 400 V rated value - at 400 V rated value - at 400 V rated value - at 500 V rated value - at 500 V rated value - at 500 V rated value - at 690 V rated value	18.5 kW 10.3 kW 10.3 kW 10.2 rated value 20 rated value 21.3 kVA 26.6 kVA 25 kVA 25 kVA 25 kVA 26.0 rated value 37 rated value 38.1 kVA 39 rated value 40.0 rated value 41.2 kVA 42.0 rated value 43.1 kVA 44.2 kVA 45.0 rated value 45.5 kVA 46.0 rated value 46.0 rated value 47 rated value 48.5 kVA 48.5 kVA 48.6 rated value 48.7 kVA 48.6 rated value 48.7 kVA 48.6 rated value 48.7 kVA 48.7 kVA 48.8 rated value 48.8 rated value 48.8 rated value 48.9 rated value 48.9 rated value 48.9 rated value 48.9 rated value 48.1 kVA 48.1 kVA 48.2 kVA 48.3 kVA 48.4 kVA 48.5 kVA 48.6 rated value 48.7 kVA 48.7 kVA 48.7 kVA 48.7 kVA 48.8 kVA	• at AC-3	
- at 500 V rated value - at 690 V rated value • at AC-3e - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value • at 400 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 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 p	18.5 kW 10.3 kW 10.3 kW 10.2 rated value 20 rated value 20 rated value 21.3 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 26.0 rated value 37 rated value 38.1 kVA 39 rated value 39 kVA 30 rated value 30 rated value 30 rated value 31.5 kVA 31.5 kVA 32.5 kVA 33.5 kVA 34.5 kVA 35.5 kVA 36.5 rated value 37.5 kVA 37.5 kVA 38.5 kVA 38.6 kVA 39.5 kVA	— at 230 V rated value	11 kW
- at 500 V rated value - at 690 V rated value • at AC-3e - at 230 V rated value - at 400 V rated value - at 500 V rated value - at 690 V rated value • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • up to 230 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 500 V for current peak value n=20 rated value • up to 690 V for current peak value n=20 rated value • up to 690 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 690 V for current peak value n=30 rated value • up	18.5 kW 10.3 kW 10.3 kW 10.2 rated value 20 rated value 20 rated value 21.3 kVA 25 kVA 25 kVA 25 kVA 25 kVA 25 kVA 26.6 kVA 27 rated value 28.1 kVA 28.1 kVA 29.1 rated value 29.2 rated value 20 rated value 20 rated value 21.3 kVA 22 kVA 23 kVA 25 kVA 25 kVA 26.6 kVA 27 rated value 28.1 kVA 28.1 kVA 29.1 rated value 29.2 rated value 20 rated value 20 rated value 21.3 kVA 22 kVA 23 kVA 25 kVA 26.6 kVA 27 rated value 28.7 kVA 28.7 kVA 29.7 rated value 29.8 rated value 20 rated value 21.3 kVA 22 kVA 23 kVA 24 rated value 25 kVA 26 rated value 26 rated value 26 rated value 27 rated value 28 rated value 28 rated value 29 rated value 20 rated value 20 rated value 20 rated value 20 rated value 21.3 kVA 22 kVA 23 kVA 24 rated value 25 kVA 26 rated value 26 rated value 26 rated value 27 rated value 28 rated value 28 rated value 29 rated value 20 rated value 21.3 kVA 22 rated value 23 rated value 24 rated value 25 rated value 26 rated value 26 rated value 27 rated value 28 r	— at 400 V rated value	18.5 kW
- at 690 V rated value • at AC-3e — at 230 V rated value — 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 operating power for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 V rated value • at 690 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 690 V for current peak value n=20 rated value • up to 690 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 690 V for current peak value n=30 r	18.5 kW 18.5 kW 18.5 kW 18.5 kW 18.5 kW 10.3 kW 10.3 kW 10.2 kVA 20. rated value 30. rated value		
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• limited to 30 s switching at zero current maximum 186 A; Use minimum cross-se	t maximum 186 A; Use minimum cross-section acc. to AC-1 rated value	up to 40 °C	
• limited to 30 s switching at zero current maximum 186 A; Use minimum cross-se	t maximum 186 A; Use minimum cross-section acc. to AC-1 rated value	up to 40 °C ■ limited to 1 s switching at zero current maximum	593 A; Use minimum cross-section acc. to AC-1 rated value
		 up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value
■ IIITIILEU LO DU S SWILCTIITIQ AL ZETO CUTTETIL MAXIMUM 152 A: USE MINIMUM CROSS-SE	, , , , , , , , , , , , , , , , , , , ,	 up to 40 °C limited to 1 s switching at zero current maximum limited to 5 s switching at zero current maximum limited to 10 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value
		 up to 40 °C limited to 1 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 30 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 186 A; Use minimum cross-section acc. to AC-1 rated value
0	1 500 1/h	 up to 40 °C limited to 1 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 30 s switching at zero current maximum limited to 60 s switching at zero current maximum 	593 A; Use minimum cross-section acc. to AC-1 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 186 A; Use minimum cross-section acc. to AC-1 rated value
• at AC 1 500 1/h		up to 40 °C • limited to 1 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum no-load switching frequency	593 A; Use minimum cross-section acc. to AC-1 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 186 A; Use minimum cross-section acc. to AC-1 rated value 152 A; Use minimum cross-section acc. to AC-1 rated value
			25 kVA
• at AC 1 500 1/h		up to 40 °C • limited to 1 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 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum no-load switching frequency	593 A; Use minimum cross-section acc. to AC-1 rated value 395 A; Use minimum cross-section acc. to AC-1 rated value 260 A; Use minimum cross-section acc. to AC-1 rated value 186 A; Use minimum cross-section acc. to AC-1 rated value 152 A; Use minimum cross-section acc. to AC-1 rated value

a th AC-1 maximum		
* at AC-2 maximum	operating frequency	
* at AC-3e maximum		
* at AC-3e maximum		
### ACA-4 maximum Control Exercisin Control Supply voltage of the control supply voltage at 50 Hz reted value 200 280 V at 60 Hz rated value 201 11 at 60 Hz rated value 207 1.1 at 60 Hz rated value 208 280 Rated value 208 Rated v		
Control circuit/ Control AC/DC control supply voltage at AC at 60 Hz rated value 200 280 V at 60 Hz rated value 200 280 V at 60 Hz rated value 200 280 V control supply voltage at DC 200 280 V a rated value 200 280 V operating range factor control supply voltage rated value of magnet coll at AC 1.1 a till-scale value 0.7 1.1 operating range factor control supply voltage rated value of magnet coll at AC 1.1 a till 50 Hz 0.7 1.1 a till 50 Hz 0.1 A a till 50 Hz 0.1 A bocked-rotor current peak 0.1 A duration of tocked-rotor current 180 ms holding current mean value 0.1 A a till 50 Hz 1.2.7 VA a till 50 Hz 0.38 a till 60 Hz 1.3 VA a		
Sype of voltage of the control supply voltage at AC at 50 Hz rated value 200 280 V	at AC-4 maximum	250 1/h
Control supply voltage at AC	Control circuit/ Control	
* at 60 Hz rated value 200 280 V 200		AC/DC
	control supply voltage at AC	
control supply voltage at DC	at 50 Hz rated value	200 280 V
a rated value 200 280 V		200 280 V
Operating range factor control supply voltage rated value of magnet coil at DC		
value of magnet coil at DC • fill-scale value • full-scale value • full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 60 Hz • at 60 Hz • at 60 Hz design of the surge suppressor inrush current peak douration of inrush current peak clocked-rotor current peak duration of inrush current peak duration of locked-rotor current full booked-rotor current peak duration of locked-rotor current full booked-rotor current peak duration of locked-rotor current full booked-rotor current mean value apparent pick-up power of magnet coil at AC • at 50 Hz • at 60 Hz • at 60 Hz a fol 0 Hz • at 60 Hz a fol 0 Hz • at 60 Hz • at 7 Hz • at 60 Hz • at 7 Hz • at 8 Hz • at 10 Hz • at 10 Hz • at 10 Hz • at 10 Hz • at 20 Hz • at 10 Hz • at 10 Hz • at 20 V rated value • at 20 V rated value • at 20 V rated value • at 40 V rated value • at 20 V rated value		200 280 V
• full-scale value operating range factor control supply voltage rated value of magnet coil at AC • at 60 Hz	value of magnet coil at DC	
Operating range factor control supply voltage rated value of magnet coil at AC • at 50 Hz 0.7 1.1 Oz 1.1		
value of magnet coll at AC at 50 Hz 0.7 1.1 design of the surge suppressor with varistor inrush current peak 25 A duration of inrush current peak 30 µs locked-rotor current mean value 0.1 A locked-rotor current man value 1.3 A duration of locked-rotor current 180 ms holding current mean value 17 mA apparent pick-up power of magnet coll at AC 12.7 VA • at 50 Hz 14.7 VA inductive power factor with closing power of the coll 0.38 • at 60 Hz 0.98 apparent holding power of magnet coll at AC 4.3 VA • at 60 Hz 0.98 apparent holding power of magnet coll at AC 1.3 VA • at 60 Hz 0.51 • at 60 Hz 0.51 • at 50 Hz 0.56 closing power of magnet coll at DC 14.3 W holding power of magnet coll at DC 19.9 W closing delay 1.3 VA • at DC 30 50 ms • at DC 30 50 ms • at DC <td< td=""><th></th><td>1.1</td></td<>		1.1
• at 60 Hz 0.7 1.1 design of the surge suppressor with varistor inrush current peak 25 A duration of inrush current peak 30 μs locked-rotor current mean value 0.1 A locked-rotor current mean value 1.3 A duration of locked-rotor current 180 ms holding current mean value 17 mA apparent pick-up power of magnet coil at AC 41 50 Hz • at 50 Hz 0.98 • at 60 Hz 0.98 inductive power factor with closing power of the coil 3.9 VA • at 50 Hz 3.9 VA • at 60 Hz 3.9 VA inductive power factor with the holding power of the coil 4.3 VA • at 50 Hz 0.51 • at 80 Hz 0.56 closing power of magnet coil at DC 14.3 W holding power of magnet coil at DC 19.9 W closing delay • at DC 50 80 ms • at DC 30 50 ms		
design of the surge suppressor with variator		
Inrush current peak 25 A		
duration of inrush current peak 30 µs locked-rotor current mean value 0.1 A locked-rotor current mean value 0.13 A duration of locked-rotor current 180 ms holding current mean value 17 mA apparent pick-up power of magnet coil at AC at 50 Hz		
locked-rotor current mean value 0.1 A locked-rotor current peak 0.13 A duration of locked-rotor current 180 ms holding current mean value 17 mA apparent pick-up power of magnet coil at AC at 50 Hz 14.7 VA inductive power factor with closing power of the coil at 50 Hz 0.98 at 60 Hz 0.98 apparent holding power of magnet coil at AC at 50 Hz 0.98 apparent holding power of magnet coil at AC at 50 Hz 3.9 VA at 60 Hz 3.9 VA at 60 Hz 0.51 at 50 Hz 0.56 closing power of magnet coil at DC 14.3 W holding power of magnet coil at DC 19.9 W closing power of magnet coil at DC 19.9 W at AC 50 80 ms at AC 50 80 ms at AC 30 50 ms at DC 30		
Inductive power factor with the holding power of the coil at 50 Hz	duration of inrush current peak	30 µs
duration of locked-rotor current 180 ms 17 mA	locked-rotor current mean value	0.1 A
holding current mean value apparent pick-up power of magnet coil at AC at 50 Hz at 60 Hz inductive power factor with closing power of the coil at 50 Hz at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz apparent holding power of magnet coil at AC at 50 Hz at 60 Hz at 60 Hz at 60 Hz at 60 Hz building power of magnet coil at AC at 50 Hz at 60 Hz building power of the coil at 50 Hz at 60 Hz building power of the coil at 50 Hz at 60 Hz building power of magnet coil at DC closing power of magnet coil at DC closing power of magnet coil at DC tolosing delay at AC at AC at DC opening delay at AC at DC so 50 ms arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-15 at 200 V rated value at 400 V rated value	locked-rotor current peak	0.13 A
apparent pick-up power of magnet coil at AC	duration of locked-rotor current	180 ms
■ at 50 Hz ■ at 60 Hz 14.7 VA inductive power factor with closing power of the coil ■ at 50 Hz ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at 60 Hz ■ at 50 Hz ■ at 60 Hz ■ at 50 Hz ■ at 60 Hz 3.9 VA ■ at 60 Hz 3.9 VA inductive power factor with the holding power of the coil ■ at 50 Hz ■ at 50 Hz ■ at 60 Hz ■ at 400 V rated value	holding current mean value	17 mA
e at 60 Hz Inductive power factor with closing power of the coil e at 50 Hz e at 60 Hz apparent holding power of magnet coil at AC e at 50 Hz e at 60 Hz 3.9 VA 4.3 VA Inductive power factor with the holding power of the coil e at 50 Hz e at 60 Hz O.51 e at 60 Hz O.56 Closing power of magnet coil at DC Idoing power of magnet coil at DC Idoing power of magnet coil at DC Idoing delay e at AC e at DC Opening delay e at AC at DC 30 50 ms arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact Operational current at AC-12 maximum Operational current at AC-15 e at 230 V rated value e at 400 V rated value O.98 O.99 O.90 O.90 O.51 O.50 O.51 O.51 O.51 O.50 O.5	apparent pick-up power of magnet coil at AC	
inductive power factor with closing power of the coil at 50 Hz at 60 Hz apparent holding power of magnet coil at AC at 60 Hz at 60 Hz at 60 Hz at 60 Hz at 60 Hz at 60 Hz at 60 Hz at 60 Hz building power factor with the holding power of the coil at 50 Hz at 60 Hz at 60 Hz closing power of magnet coil at DC closing power of magnet coil at DC closing power of magnet coil at DC closing delay at AC at DC opening delay at AC at DC arcing time control version of the switch operating mechanism control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-15 at 230 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 400 V rated value at 60 Hz a.9 W a	● at 50 Hz	12.7 VA
		14.7 VA
apparent holding power of magnet coil at AC at 50 Hz at 60 Hz inductive power factor with the holding power of the coil at 50 Hz at 60 Hz 50.51 at 60 Hz 10.56 closing power of magnet coil at DC holding power of magnet coil at DC 14.3 W holding power of magnet coil at DC 1.9 W closing delay at AC at DC 50 80 ms at DC opening delay at AC at DC 30 50 ms arcing time control version of the switch operating mechanism Auxillary circuit number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-15 at 230 V rated value 10 A operational current at AC-15 at 230 V rated value 10 A operational current at AC-15 at 230 V rated value 10 A		
apparent holding power of magnet coil at AC at 50 Hz at 60 Hz at 60 Hz building power factor with the holding power of the coil at 50 Hz at 60 Hz building power of magnet coil at DC building power of magnet coil at DC closing power of magnet coil at DC building power of magnet coi		
		0.98
at 60 Hz inductive power factor with the holding power of the coil at 50 Hz at 60 Hz 0.56 closing power of magnet coil at DC 14.3 W holding power of magnet coil at DC 19 W closing delay at AC at DC 50 80 ms at DC opening delay at AC at DC 30 50 ms arcing time 20 arcing time 21 arcing time 22 arcing time 23 arcing time 24 availlary circuit 25 arcing time 26 arcing time 27 arcing time 28 arcing time 29 arcing time 20 arcing time 30 arcing time 40 arcing time 41 arcing time 40 arcing		0.0.1/4
inductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz Closing power of magnet coil at DC holding power of magnet coil at DC 1.9 W closing delay • at AC • at DC opening delay • at AC • at DC opening time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value a 0.51 1.50		
coil • at 50 Hz • at 60 Hz Closing power of magnet coil at DC holding power of magnet coil at DC 1.9 W closing delay • at AC • at DC opening delay • at AC • at DC 30 50 ms arcing time control version of the switch operating mechanism Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value 10 A		4.3 VA
at 50 Hz at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC closing delay at AC at DC opening delay at AC at DC at DC arcing time control version of the switch operating mechanism number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 at 230 V rated value at 43. W 14.3 W 14.3 W 15.0 W 15.0 80 ms 30 50 ms 30 50 ms 30 50 ms 31 10 ms Standard A1 - A2 Auxiliary circuit 1		
o at 60 Hz closing power of magnet coil at DC holding power of magnet coil at DC closing delay o at AC o at DC opening delay o at AC opening delay opening del		0.51
closing power of magnet coil at DC holding power of magnet coil at DC closing delay • at AC • at DC • at 230 V rated value • at 400 V rated value • at 400 V rated value • at 400 V rated value • at 400 V rated value • at 400 V rated value • at 400 V rated value	● at 60 Hz	
holding power of magnet coil at DC closing delay		
closing delay • at AC • at DC 50 80 ms 50 75 ms opening delay • at AC • at DC 30 50 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 number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value 30 50 ms 30 50 ms 31 ms 10 ms 11 ms 10 A 31 ms 11 ms 11 ms 12 ms 13 ms 14 ms 15 ms 16 ms 17 ms 18 m		
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Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value 3 A	arcing time	10 10 ms
number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value 3 A	control version of the switch operating mechanism	Standard A1 - A2
instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value 3 A	Auxiliary circuit	
instantaneous contact operational current at AC-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value 3 A		1
operational current at AC-15 • at 230 V rated value • at 400 V rated value 3 A		1
 at 230 V rated value at 400 V rated value 3 A 	operational current at AC-12 maximum	10 A
• at 400 V rated value 3 A	operational current at AC-15	
	• at 230 V rated value	10 A
at 500 V rated value 2 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 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	, s		
full-load current (FLA) for 3-phase AC motor			
at 480 V rated value	34 A		
	34 A 27 A		
at 600 V rated value violed machanical performance [hp]	21 A		
yielded mechanical performance [hp]			
• for single-phase AC motor			
— at 110/120 V rated value	3 hp		
— at 230 V rated value	5 hp		
• for 3-phase AC motor			
— at 200/208 V rated value	10 hp		
 — at 220/230 V rated value 	10 hp		
— at 460/480 V rated value	25 hp		
— at 575/600 V rated value	25 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: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)		
 — with type of assignment 2 required 	gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (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 standard mounting rail according to DIN EN 60715		
side-by-side mounting	Yes		
height	85 mm		
width	45 mm		
depth	107 mm		
required spacing			
with side-by-side mounting			
— forwards	10 mm		
— upwards	10 mm		
— upwards — downwards	10 mm		
	0 mm		
— at the side	V IIIII		
• for grounded parts	10		
— forwards	10 mm		
— upwards	10 mm		
— at the side	6 mm		
	40		
— 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 (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 • at AWG cables for main contacts 2x (16 ... 12), 2x (14 ... 8) connectable conductor cross-section for main contacts solid 1 ... 10 mm² stranded 1 ... 10 mm² • finely stranded with core end processing 1 ... 10 mm² 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 contacts 16 ... 8 • for auxiliary contacts 20 ... 14 Safety related data product function • mirror contact according to IEC 60947-4-1 Yes B10 value with high demand rate according to SN 31920 450 000 proportion of dangerous failures • with low demand rate according to SN 31920 40 % • with high demand rate according to SN 31920 73 % failure rate [FIT] with low demand rate according to SN 100 FIT 31920 T1 value for proof test interval or service life according to 20 y IEC 61508 protection class IP on the front according to IEC IP20 60529 touch protection on the front according to IEC 60529 finger-safe, for vertical contact from the front suitability for use · safety-related switching OFF Yes Certificates/ approvals

General Product Approval



Confirmation





<u>KC</u>



EMC Functional De	claration of Conformity	Test Certificates
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Safety/Safety of Machinery



Type Examination Certificate





Type Test Certificates/Test Report

Special Test Certific-<u>ate</u>

Test Certificates

Marine / Shipping

Miscellaneous











Marine / Shipping

other

Dangerous Good



Confirmation



Confirmation

Transport Informa-<u>tion</u>

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=3RT2028-1NP30

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-1NP30

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1NP30

Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...) http://www.automation.siemens.com/bilddb/cax de.aspx?mlfb=3RT2028-1NP30&lang=en

Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1NP30/char

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

http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1NP30&objecttype=14&gridview=view1

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