SIEMENS

Data sheet 3RT2028-1AH20



Power contactor, AC-3 38 A, 18.5 kW / 400 V 1 NO + 1 NC, 48 V AC 50/60 Hz, 3-pole 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 	10.5 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	
shock resistance with sine pulse		
• at AC	13,5g / 5 ms, 8,3g / 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 at 55 °C according to IEC 60068-2-30 maximum	95 %	

Main circuit			
number of poles for main current circuit	3		
number of NO contacts for main contacts	3		
operating voltage			
at AC-3 rated value maximum	690 V		
at AC-3e rated value maximum	690 V		
operational current	090 V		
at AC-1 at 400 V at ambient temperature 40 °C rated value	50 A		
• at AC-1			
 up to 690 V at ambient temperature 40 °C rated value 	50 A		
— up to 690 V at ambient temperature 60 °C rated value	42 A		
• 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 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 operational current for approx. 200000 operating	10 mm ²		
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	0.207		
— at 24 V rated value	35 A		
	35 A		
— at 110 V rated value			
— at 220 V rated value	5 A		
— at 440 V rated value	1 A		
— at 600 V rated value	0.8 A		
 with 3 current paths in series at DC-1 			

— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
 at 1 current path at DC-3 at DC-5 	
— at 24 V rated value	20 A
— at 110 V rated value	2.5 A
— at 220 V rated value	1 A
— 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 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 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	18.5 kW
• at AC-3	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
• at AC-3e	
— at 230 V rated value	11 kW
— at 400 V rated value	18.5 kW
— at 500 V rated value	18.5 kW
— at 690 V rated value	18.5 kW
operating power for approx. 200000 operating cycles at AC-4	
• at 400 V rated value	6 kW
• at 690 V rated value	10.3 kW
operating apparent power at AC-6a	
• up to 230 V for current peak value n=20 rated value	12.2 kVA
• up to 400 V for current peak value n=20 rated value	21.3 kVA
• up to 500 V for current peak value n=20 rated value	26.6 kVA
• up to 690 V for current peak value n=20 rated value	25 kVA
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	8.1 kVA
• up to 400 V for current peak value n=30 rated value	14.2 kVA
• up to 500 V for current peak value n=30 rated value	18.5 kVA
• up to 690 V for current peak value n=30 rated value	25 kVA
short-time withstand current in cold operating state	
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
 limited to 5 s switching at zero current maximum 	395 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 10 s switching at zero current maximum 	260 A; Use minimum cross-section acc. to AC-1 rated value
 limited to 30 s switching at zero current maximum 	186 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	152 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	750 1/h

• at AC-3 maximum	750 1/h
• at AC-3e maximum	750 1/h
at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz rated value	48 V
 at 60 Hz rated value 	48 V
operating range factor control supply voltage rated value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	
• at 50 Hz	81 VA
• at 60 Hz	79 VA
inductive power factor with closing power of the coil	
• at 50 Hz	0.72
• at 60 Hz	0.74
apparent holding power of magnet coil at AC	
• at 50 Hz	10.5 VA
• at 60 Hz	8.5 VA
inductive power factor with the holding power of the coil	
• at 50 Hz	0.25
● at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
constant various or the awiton operating incomanish	Cianada / Ci / Ci
Auxiliary circuit	1
Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact	1
Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NO contacts for auxiliary contacts instantaneous contact	1
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	
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	1 10 A
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	1 10 A 10 A
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	1 10 A 10 A 3 A
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 • at 500 V rated value	1 10 A 10 A 3 A 2 A
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 • at 500 V rated value • at 690 V rated value	1 10 A 10 A 3 A
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 • at 500 V rated value	1 10 A 10 A 3 A 2 A
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 • at 500 V rated value • at 690 V rated value	1 10 A 10 A 3 A 2 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12	1 10 A 10 A 3 A 2 A 1 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value	1 10 A 10 A 3 A 2 A 1 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value	1 10 A 10 A 3 A 2 A 1 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 110 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 60 V rated value • at 60 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • 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 • at 220 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • 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 • at 220 V rated value • at 600 V rated value • at 600 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A
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	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 2 A 1 A 0.15 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • 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 • at 600 V rated value • at 600 V rated value • at 220 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 2 A 1 A 0.15 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 24 V rated value • at 24 V rated value • at 24 V rated value • at 25 V rated value • at 260 V rated value • at 27 V rated value • at 28 V rated value • at 29 V rated value • at 24 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 48 V rated value • at 48 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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 • at 500 V rated value • at 690 V rated value operational current at DC-12 • at 24 V rated value • at 48 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 600 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 600 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 V rated value • at 48 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 0.15 A
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	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A
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 at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 110 V rated value at 125 V rated value at 600 V rated value at 125 V rated value at 125 V rated value at 127 V rated value at 128 V rated value at 129 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A
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 • at 500 V rated value • at 690 V rated value • at 24 V rated value • at 24 V rated value • at 110 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 600 V rated value • at 24 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 220 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 29 V rated value • at 29 V rated value • at 20 V rated value • at 30 V rated value • at 48 V rated value • at 48 V rated value • at 48 V rated value • at 60 V rated value • at 10 V rated value • at 110 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A
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 at 500 V rated value at 690 V rated value operational current at DC-12 at 24 V rated value at 48 V rated value at 110 V rated value at 125 V rated value at 600 V rated value at 125 V rated value at 125 V rated value at 127 V rated value at 128 V rated value at 129 V rated value	1 10 A 10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A 2 A 1 A 0.15 A 10 A 2 A 2 A 1 A 0.9 A 0.3 A 0.1 A

* al 600 V rated value 27 A	a at 490 V rotad value	24 A		
yielded mechanical performance (hp) • for single-phase AC motor — at 110/120 Y rated value — at 200/230 Y rated value — at 200/230 Y rated value — at 200/230 Y rated value — at 400/480 Y rated value — at 400/480 Y rated value — at 400/480 Y rated value — at 575/500 Y rated value — with yee of coordination 1 required — with yee of coordination 1 required — with yee of assignment 2 required space of short-circuit protection of the auxiliary switch required — with yee of assignment 2 required space of short-circuit protection of the auxiliary switch required returning position 1 -/-180* rotation possible on vertical mounting surface; can be titled forward and backward by 9-/-22.5° on vertical mounting surface; can be titled forward and backward by 9-/-22.5° on vertical mounting surface server and snap-on mounting onto 35 mm standard mounting rate according to INE N 60715 Yes height — at 580 de yes — at 580 de y	at 480 V rated value	34 A		
• for single-phase AC motor — at 110/120 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 420/480 V rated value — 25 hp — at 575/800 V rated value — 25 hp — at 575/800 V rated value — 25 hp — at 575/800 V rated value — 25 hp — at 575/800 V rated value — 25 hp — at 575/800 V rated value — 25 hp — at 575/800 V rated value — with type of coordination of the main circuit — with type of coordination 1 required — with type of assignment 2 required — with type of assignment 2 required — with type of assignment 2 required — of short-circuit protection of the auxiliary switch required — with type of assignment 2 required — of short-circuit protection of the auxiliary switch required — with type of assignment 2 required — of short-circuit protection of the auxiliary switch required — side-by-side mounting — forwards — side-by-side mounting — side-by-side mounting — forwards — to main surface — at the side — downwards — at the side — downwards — to main current circuit — to required spacing — to five parts — to main surface — to main current circuit — of main current circuit — of main current circuit — of or main contacts — of main current circuit — of or main contacts — of main current circuit — of or main contacts — of main con		21 A		
al 10/120 V rated value				
at 230 V related value • for 3-phase AC motor at 200/208 V rated value at 200/208 V rated value at 200/208 V rated value at 420/408 V rated value at 575/600 V rated value with type of continuits of the main circuit with type of coordination 1 required with type of assignment 2 required with type of assignment 2 required for short-circuit protection of the auxiliary switch required at 67 short-circuit protection of the auxiliary switch required side-by-side mounting forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and backward by +- 22.5° on vertical mounting surface can be tilted forward and ba	5 .	2 hm		
• for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 480/480 V rated value — at 480/480 V rated value — at 575/000 V rated value — 25 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required — solide—by-side mounting — with type of assignment 2 required — solide — solide—by-side mounting — with side-by-side mountin		·		
at 200/208 V rated value		5 пр		
at 220/230 V rated value	•	40.1		
		·		
contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link		·		
Short-circuit protection Gosign of the fuse link		·		
design of the fuse link • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required — with type of assignment 2 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch equired — for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch equired • for short-circuit protection of the auxiliary switch • for main current circuit • for wards • for main current circuit • for auxiliary and control circuit • for main current circuit • for main curren		A600 / P600		
• for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position #/-180" rotation possible on vertical mounting surface; can be tilted forward and backward by 4/- 22.5" on vertical mounting surface screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 • side-by-side mounting • side-by-side mounting — forwards — downwards — downwards — at the side — downwards — at the side — downwards — downwards — forwards — downwards — forwards — the side — downwards — forwards — forwards — the side — downwards — forwards — the side — downwards — forwards — the side — downwards — for main current circuit • at contactor for auxiliary contacts • solid — solid — solid — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts Connectable conductor cross-sections • for main contacts connectable conductor cross-section for main	Short-circuit protection			
with type of coordination 1 required with type of assignment 2 required with type of assignment 2 required with type of assignment 2 required for short-circuit protection of the auxiliary switch stable shows a side of some short of the auxiliary switch stable short of some short of the auxiliary switch stable short of some short of the auxiliary switch stable short of short	design of the fuse link			
- with type of assignment 2 required • for short-circuit protection of the auxiliary switch required • for short-circuit protection of the auxiliary switch required Installation/ mounting/ dimensions mounting position fastening method • side-by-side mounting • with side-by-side mounting • with side-by-side mounting • with side-by-side mounting • with side-by-side mounting • or ownwards — upwards — at the side — downwards — of or wavids — of or ize parts • for five parts — forwards — the side — downwards — to five parts — forwards — the side — downwards — to five parts — forwards — the side — downwards — to five parts — forwards — the side — downwards — to five parts — for wards — the side — downwards — to five parts — for wards — the side — downwards — of or ize parts — forwards — the side — downwards — to mm — at the side — for main current circuit • for auxiliary and control circuit • of or auxiliary and control circuit • of or auxiliary and control circuit • of main current circuit • for or auxiliary and control circuit • of main current circuit • for or main current circuit • for five parts • for main current circuit • for five parts • for main current circuit • for five parts • for main current circuit • for five parts • for main current circuit • for five parts • for main current circuit • for five parts • for main current circuit • for five parts • five	 for short-circuit protection of the main circuit 			
• for short-circuit protection of the auxiliary switch required Instalation/ mounting/ dimensions mounting position fastening method • side-by-side mounting • height width depth required spacing • with side-by-side mounting — forwards — upwards — at the side — downwards — at the side — downwards — to five parts — forwards — upwards — to five parts — forwards — to five parts — forwards — upwards — the side — downwards — to five parts — forwards — upwards — to five parts — forwards — the side — downwards — to five parts — forwards — the side — downwards — to mm — the side — downwards — to mm — the side — downwards — to five parts — forwards — upwards — to mm — the side — downwards — to mm — the side — for in a in current circuit • for a in a i	 — with type of coordination 1 required 			
required mounting position mounting position #/-180* rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5* on vertical mounting surface; screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 #/	— with type of assignment 2 required			
mounting position #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by */- 22.5° on vertical mounting surface screw and and backward by */- 22.5° on vertical mounting surface screw and and pands and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 **Pes**		gG: 10 A (500 V, 1 kA)		
mounting position #/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by */- 22.5° on vertical mounting surface screw and and backward by */- 22.5° on vertical mounting surface screw and and pands and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 **Pes**	Installation/ mounting/ dimensions			
screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715 vestide mounting	mounting position			
height 85 mm width 45 mm depth 97 mm required spacing • with side-by-side mounting — forwards — upwards — at the side — downwards — upwards — 10 mm — of orwards — upwards — forwards — 10 mm — of orwards — 10 mm — of orwards — 10 mm — of orwards — of or inverting of or inverting of or inverting of or main current circuit — at the side — of ormain current circuit — at the side — of ormain current circuit — at the side — of ormain current circuit — of or magnet coil type of electrical connectable conductor cross-sections — solid — solid or stranded — finely stranded with core end processing — at AWG cables for main contacts connectable conductor cross-section for main at AWG cables for main contacts — solid — solid or stranded — at AWG cables for main contacts connectable conductor cross-section for main at AWG cables for main contacts — solid — solid cables for main contacts — solid cables for main conta	fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715		
Neight width	• side-by-side mounting			
width 45 mm depth 97 mm required spacing 97 mm • with side-by-side mounting 10 mm — forwards 10 mm — downwards 10 mm — at the side 0 mm • for grounded parts 10 mm — upwards 10 mm — at the side 6 mm — downwards 10 mm • for live parts 10 mm — forwards 10 mm — upwards 10 mm — downwards 10 mm — for partilials screw-type terminals type of electrical connection screw-type terminals • for main current circuit screw-type terminals • for auxiliary and control circuit screw-type terminals • of magnet coil Screw-type terminals type of connectable conductor cross-sections • for main contacts — solid 2x (1 2.5		85 mm		
required spacing		45 mm		
required spacing with side-by-side mounting - forwards - upwards - downwards - at the side for grounded parts - forwards - upwards - upwards - at the side - downwards - at the side - downwards - upwards - at the side - downwards 10 mm - at the side - downwards 10 mm for live parts - for rowards - upwards - downwards 10 mm for live parts - for auther side - downwards - at the side - downwards - at the side - for main current circuit for auxiliary and control circuit for auxiliary and control circuit of magnet coil type of connectable conductor cross-sections for main contacts - solid - solid - solid or stranded - finely stranded with core end processing at AWG cables for main contacts connectable conductor cross-section for main at AWG cables for main contacts connectable conductor cross-section for main		97 mm		
with side-by-side mounting — forwards — upwards — downwards — at the side of or grounded parts — forwards — upwards — 10 mm of or grounded parts — forwards — upwards — at the side — downwards — 10 mm of or live parts — forwards — upwards — torwards — 10 mm of or live parts — forwards — upwards — upwards — 10 mm of or live parts — forwards — upwards — upwards — 10 mm — upwards — at the side — downwards — at the side Connections/ Terminals type of electrical connection of or main current circuit of main current circuit of or auxiliary and control circuit of or auxiliary and control circuit of or main contacts of magnet coil type of connectable conductor cross-sections of or main contacts — solid — solid or stranded — finely stranded with core end processing of the forwards of the forwards at AWG cables for main contacts connectable conductor cross-section for main at AWG cables for main contacts connectable conductor cross-section for main	•			
- forwards				
- downwards - at the side of or grounded parts - forwards - upwards - at the side 10 mm - at the side - downwards 10 mm - at the side - downwards 10 mm of or live parts - forwards 10 mm of or live parts - forwards 10 mm - upwards 10 mm - downwards 10 mm - downwards 10 mm - at the side 6 mm Connections/ Terminals type of electrical connection of ramin current circuit of rauxillary and control circuit at contactor for auxillary contacts of magnet coil type of connectable conductor cross-sections of main contacts - solid - solid or stranded - finely stranded with core end processing other was a strangle of main contacts - at AWG cables for main contacts connectable conductor cross-section for main		10 mm		
- downwards - at the side of or grounded parts - forwards - upwards - at the side - downwards - at the side - downwards - forwards - forwards - forwards - forwards - forwards - forwards - upwards - downwards - downwards - at the side - downwards - at the side - forwards - upwards - formards - the side - formaric urrent circuit of or auxiliary and control circuit of or auxiliary and control circuit - for auxiliary and control circuit - for main current circuit - for main contacts - solid - solid or stranded - finely stranded with core end processing - at AWG cables for main contacts - the side - for main contacts - at contactor for auxiliary contacts - solid connectable conductor cross-sections - finely stranded with core end processing - at AWG cables for main contacts - at AWG cables for main contacts - connectable conductor cross-section for main	— upwards	10 mm		
 for grounded parts forwards upwards at the side downwards for live parts for wards upwards upwards upwards downwards to mm downwards at the side mm connections/ Terminals type of electrical connection for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil screw-type terminals of main contacts of magnet coil screw-type terminals connectable conductor cross-sections for main contacts a contactor for auxiliary contacts screw-type terminals connectable conductor cross-sections for main contacts a contactor for auxiliary contacts connectable conductor cross-sections for main contacts a contactor for auxiliary contacts connectable for main contacts at AWG cables for main contacts at AWG cables for main contacts connectable conductor cross-section for main 	·	10 mm		
 for grounded parts forwards upwards at the side downwards for live parts for wards upwards upwards upwards downwards to mm downwards at the side mm connections/ Terminals type of electrical connection for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil screw-type terminals of main contacts of magnet coil screw-type terminals connectable conductor cross-sections for main contacts a contactor for auxiliary contacts screw-type terminals connectable conductor cross-sections for main contacts a contactor for auxiliary contacts connectable conductor cross-sections for main contacts a contactor for auxiliary contacts connectable for main contacts at AWG cables for main contacts at AWG cables for main contacts connectable conductor cross-section for main 	— at the side			
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 upwards 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) 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				
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- at the side - downwards - downwards • for live parts - forwards - upwards - upwards - downwards - at the side - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts - and the side 10 mm - domm -				
- downwards • for live parts - forwards - upwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts Connectable conductor cross-section for main 10 mm 10 crew-type terminals 10 crew-type terminals 2crew-type terminals 2c	·			
 for live parts forwards upwards downwards at the side Connections/ Terminals type of electrical connection for main current circuit for auxiliary and control circuit at contactor for auxiliary contacts of magnet coil type of connectable conductor cross-sections for main contacts solid solid or stranded finely stranded with core end processing at AWG cables for main contacts connectable conductor cross-section for main 10 mm 10 mm 2 crew-type terminals screw-type terminals screw-type terminals Screw-type terminals 2 x (1 2.5 mm²), 2x (2.5 10 mm²) 2 x (1 2.5 mm²), 2x (2.5 10 mm²) 2 x (1 2.5 mm²), 2x (2.5 10 mm²) 2 x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2 x (16 12), 2x (14 8) 				
- forwards - upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts - connectable conductor cross-section for main		1V 11811		
- upwards - downwards - at the side Connections/ Terminals type of electrical connection • for main current circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts - solid - solid or stranded - finely stranded with core end processing • at AWG cables for main contacts - downwards - form main contacts - 10 mm - 6 mm - 7 crew-type terminals - Screw-type terminals - Screw	·	10 mm		
downwards at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts solid solid or stranded finely stranded with core end processing • at AWG cables for main contacts at the side form for				
— at the side Connections/ Terminals type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — solid or stranded with core end processing • at AWG cables for main contacts connectable conductor cross-section for main 6 mm 6 mm 6 mm Screw-type terminals Screw-type terminals Screw-type terminals 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (1	•			
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type of electrical connection • for main current circuit • for auxiliary and control circuit • at contactor for auxiliary contacts • of magnet coil type of connectable conductor cross-sections • for main contacts — solid — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts connectable conductor cross-section for main screw-type terminals Screw-type terminals Screw-type terminals 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²		O IIIIII		
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 ◆ at contactor for auxiliary contacts ♦ of magnet coil Screw-type terminals Screw-type terminals Screw-type terminals Screw-type terminals ★ for main contacts — solid — solid or stranded — solid or stranded — finely stranded with core end processing ♦ at AWG cables for main contacts ★ at AWG conductor cross-section for main Screw-type terminals 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) 		•		
 ◆ of magnet coil Screw-type terminals type of connectable conductor cross-sections ◆ for main contacts — solid — solid or stranded — finely stranded with core end processing ◆ at AWG cables for main contacts 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (14 8) 	-			
type of connectable conductor cross-sections	-			
 for main contacts — solid — solid or stranded — finely stranded with core end processing ● at AWG cables for main contacts 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (1 2.5 mm²), 2x (1 2.5 mm²) 2x (1 2.		Screw-type terminals		
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 — solid or stranded — finely stranded with core end processing • at AWG cables for main contacts 2x (1 2.5 mm²), 2x (2.5 10 mm²) 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) connectable conductor cross-section for main	• for main contacts			
 — finely stranded with core end processing • at AWG cables for main contacts 2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm² 2x (16 12), 2x (14 8) connectable conductor cross-section for main 	— solid			
• at AWG cables for main contacts 2x (16 12), 2x (14 8) connectable conductor cross-section for main	— solid or stranded			
connectable conductor cross-section for main	 finely stranded with core end processing 			
	 at AWG cables for main contacts 	2x (16 12), 2x (14 8)		
Contacto	connectable conductor cross-section for main contacts			
• solid 1 10 mm ²	• solid	1 10 mm²		

stranded	1 10 mm²	
finely stranded with core end processing	1 10 mm²	
connectable conductor cross-section for auxiliary	1 10 111111	
contacts		
 solid or stranded 	0.5 2.5 mm ²	
 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 31920	100 FIT	
T1 value for proof test interval or service life according to IEC 61508	20 y	
protection class IP on the front according to IEC 60529	IP20	
touch protection on the front according to IEC 60529	finger-safe, for vertical contact from the front	
suitability for use		

Certificates/ approvals

General Product Approval

• safety-related switching OFF



Confirmation





<u>KC</u>



EMC Sa	Functional Safety/Safety of Machinery	Declaration of Conformity	Test Certificates
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Yes



Type Examination Certificate



Special Test Certificate

Type Test Certificates/Test Report

Marine / Shipping













other





Further information

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=3RT2028-1AH20

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2028-1AH20}}$

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AH20

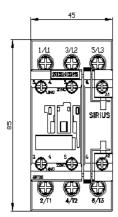
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

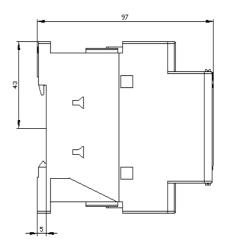
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1AH20&lang=en

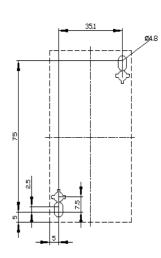
Characteristic: Tripping characteristics, I2t, Let-through current

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AH20/char

Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1AH20&objecttype=14&gridview=view1







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