SIEMENS

Data sheet 3RT2028-1BJ80



Power contactor, AC-3 38 A, 18.5 kW / 400 V 1 NO + 1 NC, 72 V DC 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	No
power loss [W] for rated value of the current at AC in hot operating state	11.4 W
• per pole	3.8 W
power loss [W] for rated value of the current without load current share typical	5.9 W
surge voltage resistance	
 of main circuit rated value 	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at DC	10g / 5 ms, 7,5g / 10 ms
shock resistance with sine pulse	
• 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 acc. to IEC 81346-2	Q
Substance Prohibitance (Date)	01.10.2009 00:00:00
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature during operation	-25 +60 °C
ambient temperature during storage	-55 +80 °C
Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage at AC-3 rated value maximum	690 V

operational current	F0.A
 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-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 at AC-6a 	21 A
— 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 mm ²
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	1A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A
with 3 current paths in series at DC-1	05.4
— 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
operational current	
at 1 current path at DC-3 at DC-5 at 24 V retail value.	20. A
— 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
operating power for approx. 200000 operating cycles	
at AC-4	G IAM
at 400 V rated valueat 690 V rated value	6 kW 10.3 kW
	10.3 KVV
operating apparent power at AC-6a ■ up to 230 V for current peak value n=20 rated value	12.2 kV·A
 up to 400 V for current peak value n=20 rated value 	21.3 kV·A
 up to 500 V for current peak value n=20 rated value 	26.6 kV·A
 up to 690 V for current peak value n=20 rated value 	25 kV·A
operating apparent power at AC-6a	201077
up to 230 V for current peak value n=30 rated value	8.1 kV·A
• up to 400 V for current peak value n=30 rated value	14.2 kV·A
up to 500 V for current peak value n=30 rated value	18.5 kV·A
• up to 690 V for current peak value n=30 rated value	25 kV·A
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
Iimited to 60 s switching at zero current maximum	152 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	4 500 4 5
• at DC	1 500 1/h
operating frequency	4 000 4/1-
• at AC-2 maximum	1 000 1/h
• at AC-2 maximum	750 1/h
at AC-3 maximum at AC-4 maximum	750 1/h
at AC-4 maximum Control signific Control	250 1/h
Control circuit/ Control	DC
type of voltage of the control supply voltage	DC
control supply voltage at DC • rated value	72 V
operating range factor control supply voltage rated value of magnet coil at DC	12 4
• initial value	0.8
• full-scale value	1.1
- Idii Oddo Yarao	

notiding power of magnet coil at DC closing delay	closing power of magnet coil at DC	5.9 W
closing delay		
## CDC 50 170 ms		
opening delay * at DC * at DC * at DC arcing time control version of the switch operating mechanism Standard A1 - A2 Assistance of NC contacts for auxiliary contacts instantaneous contact rumber of NC contacts for auxiliary contacts instantaneous contact operational current at AC-15 maximum operational current at AC-16 maximum operational current at AC-18 maximum operational current at AC-19 maximum operational current at AC-10 maximum operational current at AC-12 maximum operational current at AC-12 maximum operational current at AC-12 maximum at 48 V rated value at 100 V rated value at 200 V rated value at 500 V rated value at 200 V rated value at 500 V rated value at 200 V rated value at 500 V rate		50 170 ms
a cring time control version of the switch operating mechanism Auxiliary circuit Immeder of NC contacts for auxiliary contacts instantaneous contact Instantaneous contact Instantaneous contact Operational current at AC-12 maximum Operational current at AC-18 • al 230 V rated value • at 600 V rated value • at 125 V rated value • at 125 V rated value • at 600 V rated value • at 60 V rated value • at 600 V ra		
acriting time		15 17 5 ms
Abxillary circuit		
Auxillary 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 oporational current at AC-12 maximum 10 A operational current at AC-15 at 230 V rated value at 400 V rated value at 690 V rated value be at 690 V rated value at 48 V rated value at 48 V rated value at 60 V rated value at 600 V rated value be at 600 V rated value at 600 V rated v	-	
Immber of NC contacts for auxiliary contacts Instantaneous contact Instantaneous		Canada (1717)
instantaneous contact number of No contacts for auxiliary contacts instantaneous contact operational current at AC-15 • at 230 V rated value • at 580 V rated value • at 680 V rated value • at 68 V rated value • at 152 V rated value • at 152 V rated value • at 220 V rated value • at 68 V rated value • at 680 V rated value		1
instantaneous contact operational current at AC-15 * at 230 V rated value * at 690 V rated value * at 110 V rated value * at 125 V rated value * at 125 V rated value * at 120 V rated value * at 600 V rated value * at 600 V rated value * at 48 V rated value * at 140 V rated value * at 110 V rated value * at 110 V rated value * at 125 V rated value * at 125 V rated value * at 125 V rated value * at 120 V rated value * at 120 V rated value * at 600 V rated val	instantaneous contact	
Sectional current at AC-15		
• at 230 V rated value • at 400 V rated value • at 690 V rated value • at 800 V rated value • at 80 V rated value • at 8 V rated value • at 8 V rated value • at 60 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 60 V rated value • at 20 V rated value • at 150 V rated value • at 150 V rated value • at 150 V rated value • at 120 V rated value • at 200 V rated value • at 200 V rated value • at 600 V rated value • at 200 V rated value • at 600 V rated	operational current at AC-12 maximum	10 A
• at 400 V rated value 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2 A 2	operational current at AC-15	
• at 500 V rated value	at 230 V rated value	10 A
• at 690 V rated value 10 A	 at 400 V rated value 	3 A
0	 at 500 V rated value 	2 A
• at 24 V rated value 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6	at 690 V rated value	1 A
• at 48 V rated value 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6 A 6	operational current at DC-12	
• 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 80 V rated value • at 60 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 • at 125 V rated value • at 120 V rated value • at 220 V rated value • at 600 V rated value yielded mechanical performance [hp] • for single-phase AC motor • at 100120 V rated value • for 3-phase AC motor • at 2007280 V rated value • for 3-phase AC motor • at 2007280 V rated value • for 3-phase AC motor • at 2007280 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 2007200 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated value • for 3-phase AC motor • at 600 V rated va	 at 24 V rated value 	10 A
• at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 200 V rated value • at 24 V rated value • at 24 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 48 V rated value • at 10 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 220 V rated value • at 250 V rated value • at 600 V rated value • at 200 V rated value • for 3-phase AC motor — at 200 V rated value • for 400,480 V rated value • at 480,480 V rated value • at 600,00 V rated value • at 575/600 V rated value • at 575/600 V rated value • at 575/600 V rated value • for short-circuit protection design of the fuse link • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch	at 48 V rated value	6 A
• at 125 V rated value 1 A 1A	at 60 V rated value	6 A
• at 220 V rated value • at 600 V rated value • at 600 V rated value operational current at DC-13 • at 24 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 • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 480 V rated value • at 480 V rated value • at 600 V rated value • 5 hp • for single-phase AC motor • at 230 V rated value • for 3-phase AC motor • at 200/208 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • 5 hp • for 3-phase AC motor • at 460/480 V rated value • 25 hp • at 675/600 V rated value • 25 hp • at 675/600 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 • for short-circuit protection of the main circuit • with type of assignment 2 required • for short-circuit protection of the auxiliary switch	at 110 V rated value	3 A
• at 220 V rated value • at 600 V rated value • at 600 V rated value operational current at DC-13 • at 24 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 • at 125 V rated value • at 125 V rated value • at 220 V rated value • at 600 V rated value • at 480 V rated value • at 480 V rated value • at 600 V rated value • 5 hp • for single-phase AC motor • at 230 V rated value • for 3-phase AC motor • at 200/208 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • for 3-phase AC motor • at 200/230 V rated value • 5 hp • for 3-phase AC motor • at 460/480 V rated value • 25 hp • at 675/600 V rated value • 25 hp • at 675/600 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 • for short-circuit protection of the main circuit • with type of assignment 2 required • for short-circuit protection of the auxiliary switch		
• at 600 V rated value operational current at DC-13 • at 24 V rated value at 48 V rated value at 60 V rated value at 100 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 200 V rated value at 200 V rated value at 600 V rated value bfor single-phase AC motor at 110/120 V rated value at 27 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 3-phase AC motor at 200/208 V rated value bfor 4-brow 4-b	at 220 V rated value	1 A
or at 24 V rated value or at 48 V rated value or at 10 V rated value or at 110 V rated value or at 125 V rated value or at 220 V rated value or at 220 V rated value or at 600 V rated value or at 480 V rated value or at 480 V rated value or at 480 V rated value or at 600 V rated value or at 600 V rated value or at 600 V rated value or at 220 V rated value or at 230 V rated value or at 200/208 V rated value or at 200/208 V rated value or at 200/208 V rated value or at 480/480 V rated value or at 480/480 V rated value or at 575/600 V rated value or at 575/600 V rated value or at 575/600 V rated value or at 600 V rated value or at 600 V rated value or at 575/600 V rated value or at 600 V rated value or at 600/480 V rated va		
 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 480 V rated value at 600 V rated value at 7 A for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 220/230 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 200/208 V rated value for 5-for5/600 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 gG: 125A (690V, 100kA), aM: 50A (690V, 100kA), BS88: 125A (415V, 80kA) of or short-circuit protection of the auxiliary switch 		
• 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 80 V rated value • at 600 V rated value • at 800 V rated value • at 600 V rated value • at 600 V rated value • at 600 V rated value • at 230 V rated value • at 230 V rated value • for 3-phase AC motor - at 230 V rated value • for 3-phase AC motor - at 220/208 V rated value • for 3-phase AC motor - 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 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 gG: 50A (690V,100kA), aM: 50A (690V, 100kA), BS88: 50A (415V, 80kA) • for short-circuit protection of the auxiliary switch	•	10 A
 at 60 V rated value at 110 V rated value at 125 V rated value at 220 V rated value at 800 V rated value at 600 V rated value at 480 V rated value at 480 V rated value at 600 V rated value at 600 V rated value at 7 A Full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 220/230 V rated value for 3-phase AC motor at 220/230 V rated value 10 hp at 460/480 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 assignment 2 required gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 50A (415V,80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) 		
 at 110 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 480 V rated value at 480 V rated value at 480 V rated value at 600 V rated value at 7 A so r single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 220/230 V rated value at 220/230 V rated value at 460/480 V rated value at 460/480 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 assignment 2 required gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) 		
 at 125 V rated value at 220 V rated value at 600 V rated value at 480 V rated value at 600 V rated value at 7 A yielded mechanical performance [hp] for single-phase AC motor at 110/120 V rated value for 3-phase AC motor at 230 V rated value for 3-phase AC motor at 200/208 V rated value for 3-phase AC motor at 460/480 V rated value at 460/480 V rated value at 460/480 V rated value by 6 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 gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) 		
at 220 V rated value at 600 V rated value at 600 V rated value contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) IL/CSA ratings full-load current (FLA) for 3-phase AC motor at 480 V rated value at 600 V rated value at 10/120 V rated value at 110/120 V rated value at 230 V rated value at 230 V rated value at 200/208 V rated value at 200/208 V rated value at 460/480 V rated value at 460/480 V rated value at 460/480 V rated value at 5 hp contact rating of auxiliary contacts according to UL Short-circuit protection design of the fuse link a for short-circuit protection of the main circuit — with type of assignment 2 required afores in a fauxiliary switch and a fauxiliary switch ger 50A (690V,100kA), aM: 50A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch ger 50A (690V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) and a fauxiliary switch and		
• at 600 V rated value contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) JL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value • at 100/120 V rated value — at 110/120 V rated value • for 3-phase AC motor — at 220 V rated value • for 3-phase AC motor — at 220/230 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 V rated value 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 assignment 2 required • for short-circuit protection of the auxiliary switch		
contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA) JL/CSA ratings full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value • at 110/120 V rated value — at 110/120 V rated value — at 230 V rated value • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 255/600 V rated value — at 575/600 V rated value 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 assignment 2 required • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA)		
full-load current (FLA) for 3-phase AC motor • at 480 V rated value • at 600 V rated value • at 600 V rated value • for single-phase AC motor — at 110/120 V rated value — at 230 V rated value — at 230 V rated value 5 hp • for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 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 • for short-circuit protection of the main circuit — with type of assignment 2 required • for short-circuit protection of the auxiliary switch		
full-load current (FLA) for 3-phase AC motor		1 faulty switching per 100 million (17 V, 1 mA)
 at 480 V rated value at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value at 230 V rated value b for 3-phase AC motor at 200/208 V rated value at 220/230 V rated value at 460/480 V rated value at 575/600 V rated value at 575/600 V rated value b for short-circuit protection design of the fuse link for short-circuit protection of the main circuit with type of assignment 2 required gG: 125A (690V,100kA), aM: 50A (690V, 100kA), BS88: 125A (415V,80kA) for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA) 		<u>,</u>
at 600 V rated value yielded mechanical performance [hp] for single-phase AC motor — at 110/120 V rated value — at 230 V rated value for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 575/600 V rated value 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 for short-circuit protection of the auxiliary switch for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 50A (415V, 80kA) gG: 10 A (500 V, 1 kA)		
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 25 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 (415V,80kA) — with type of assignment 2 required gG: 10 A (500 V, 100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA)		
 for single-phase AC motor — at 110/120 V rated value — at 230 V rated value 5 hp for 3-phase AC motor — at 200/208 V rated value — at 220/230 V rated value — at 460/480 V rated value — at 460/480 V rated value — at 575/600 V rated value — at 575/600 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 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 gG: 10 A (500 V, 1 kA) 		2/ A
- at 110/120 V rated value - 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 25 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 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 • for short-circuit protection of the auxiliary switch		
- at 230 V rated value • for 3-phase AC motor - at 200/208 V rated value - at 220/230 V rated value - at 460/480 V rated value - at 575/600 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 • for short-circuit protection of the auxiliary switch		
 for 3-phase AC motor — at 200/208 V rated value — 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 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 for short-circuit protection of the auxiliary switch for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) gG: 10 A (500 V, 1 kA) 		
- at 200/208 V rated value - at 220/230 V rated value - at 460/480 V rated value - at 575/600 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 • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA)		5 hp
- at 220/230 V rated value - at 460/480 V rated value 25 hp - at 575/600 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 • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch 25 hp A600 / P600 A600 / P600 Gesign of the fuse link • for short-circuit protection of the main circuit - with type of coordination 1 required gesign of the fuse link gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link specification of the main circuit - with type of assignment 2 required gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link gesign of the fuse link specification of the main circuit - with type of coordination 1 required gesign of the fuse link specification of the fuse link gesign of the fuse link specification of the fuse link gesign of the fuse link specification o	 for 3-phase AC motor 	
- at 460/480 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 • for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA)	 at 200/208 V rated value 	10 hp
- at 575/600 V rated value 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 • for short-circuit protection of the auxiliary switch gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) gG: 10 A (500 V, 1 kA)	 at 220/230 V rated value 	10 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 • for short-circuit protection of the auxiliary switch G: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) g: 50A (690V,100kA), aM: 25A (690V,100kA), BS88: 50A (415V,80kA)	 at 460/480 V rated value 	25 hp
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 • for short-circuit protection of the main circuit — with type of coordination 1 required — with type of assignment 2 required • for short-circuit protection of the auxiliary switch • for short-circuit protection of the auxiliary switch • gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V,80kA) • for short-circuit protection of the auxiliary switch	— at 575/600 V rated value	25 hp
 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 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 gG: 10 A (500 V, 1 kA) 	contact rating of auxiliary contacts according to UL	A600 / P600
 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 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 gG: 10 A (500 V, 1 kA) 	Short-circuit protection	
 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 gG: 10 A (500 V, 1 kA) 		
 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 gG: 10 A (500 V, 1 kA) 		
(415V,80kA) — with type of assignment 2 required G: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) • for short-circuit protection of the auxiliary switch (415V,80kA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA) gG: 10 A (500 V, 1 kA)		qG: 125A (690V.100kA), aM: 50A (690V.100kA), BS88: 125A
• for short-circuit protection of the auxiliary switch gG: 10 A (500 V, 1 kA)		(415V,80kA)
		80kA)
required	 for short-circuit protection of the auxiliary switch required 	gG: 10 A (500 V, 1 kA)

mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted
mounting position	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
— downwards	10 mm
— at the side	0 mm
 for grounded parts 	
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
 for auxiliary and control circuit 	screw-type terminals
 at contactor for auxiliary contacts 	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
for main contacts	
— 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	4 40 mm²
• solid	1 10 mm²
stranded finally attended with core and precessing	1 10 mm²
finely stranded with core end processing connectable conductor cross-section for auxiliary	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
AWG number as coded connectable conductor cross section for auxiliary contacts	20 14
afety related data	
B10 value with high demand rate acc. to SN 31920	1 000 000
proportion of dangerous failures	
with low demand rate acc. to SN 31920	40 %

 with high demand rate acc. to SN 31920 	73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
product function	
 mirror contact acc. to IEC 60947-4-1 	Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
suitability for use safety-related switching OFF	Yes

Certificates/ approvals

General Product Approval

EMC













Declaration of Conformity

Test Certificates

Marine / Shipping



Miscellaneous

Type Test Certificates/Test Report

Special Test Certificate





Marine / Shipping

other









Confirmation



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=3RT2028-1BJ80

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-1BJ80

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1BJ80

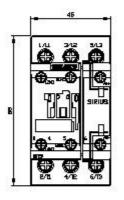
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

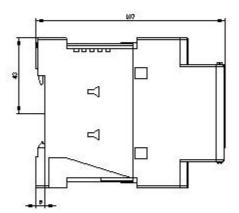
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1BJ80&lang=en

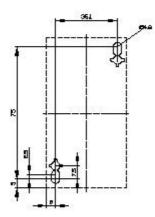
Characteristic: Tripping characteristics, I2t, Let-through current

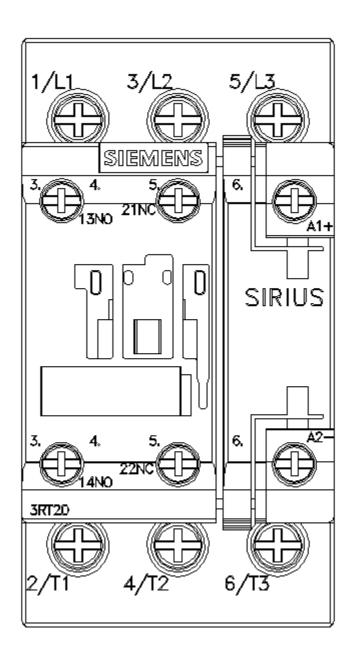
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1BJ80/char

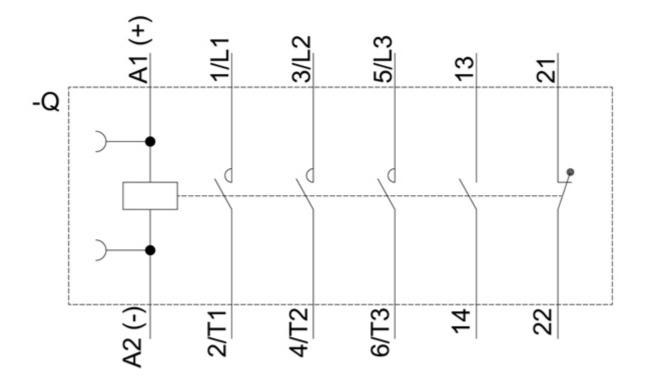
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1BJ80&objecttype=14&gridview=view1











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