SIEMENS

Data sheet

3RT2028-1BF40-0JA0



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 110 V DC, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0, India 40 A, Tu max. 50 $^{\circ}$ C

product designation 98T2 Size of contactor 980 Size of contactor 980 Froduct extension 980 Function module for communication 980 Function to operating state 980 Function to dad current share typical 980 Function dad current share typical 980 Function dad current share typical 980 Function dad current share pulse 980 Function the contactor with added electronically optimized 980 Function to optimiz	product brand name	SIRIUS
product type designation General technical data Staze of contactor So product extension • function module for communication • function module for communication • function module for communication • function module for rated value of the current • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in hot operating state per pole • without load current share typical • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 4 rated value • of auxiliary circuit rated value • at DC \$ 10g / 5 ms, 7,5g / 10 ms \$ 100 000 000 \$ 100 000	•	Power contactor
Size of contactor product extension • function module for communication • auxiliary switch • at AC in hot operating state • at AC in hot operating state • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit rated value • of auxiliary switch block typical • at DC shock resistance at rectangular impulse • at DC at DC shock resistance with sine pulse • at DC of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to ICS 0346-2 Substance Prohibitance (Date) ambient temperature • during operation • during the minimum relative humidity at 55 °C according to ICC 60068-2-30 maximum Main circuit		3RT2
product extension • function module for communication • auxiliary switch power loss [W] for rated value of the current • at AC in hot operating state • at AC in hot operating state per pole • at which to do during thank the gree of pollution 3 rated value • of main circuit with degree of pollution 3 rated value • of main circuit rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit vith degree of pollution 3 rated value • of auxiliary circuit vith degree of pollution 3 rated value • of auxiliary circuit vith degree of pollution 3 rated value • of auxiliary circuit vith degree of pollution 3 rated value • of auxiliary circuit vith degree of pollution 3 rated value • of with a contact or vith added value • of with a contact or vith a contact or vit	General technical data	
• function module for communication • auxiliary switch • auxiliary switch • at AC in hot operating state • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in hot operating state per pole • at AC in main circuit with degree of pollution 3 rated value • of main circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit with degree of pollution 3 rated value • of auxiliary circuit value • of auxiliary circuit rated value • at DC •	size of contactor	SO
• auxillary switch • auxillary switch • at AC in hot operating state per pole • at AC in hot operating state per pole • without load current share typical • of main circuit with degree of pollution 3 rated value • of auxillary circuit rede value • of auxillary circuit rated value • of auxillary switch block typical • at DC 10g / 5 ms, 7,5g / 10 ms **Another contactor with added electronically optimized auxillary switch block typical • of the contactor with added electronically optimized auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor (Date) • of the contactor (Date) • of the contactor (Date) • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added auxillary switch block typical • of the contactor with added electronically optimized auxillary switch block typical • of the contactor with added electronically optimized auxillary switch block typical • of the contactor with added electron	product extension	
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 ewithout load current share typical 5.9 W Insulation voltage of main circuit with degree of pollution 3 rated value 690 V of auxiliary circuit with degree of pollution 3 rated value 690 V surge voltage resistance of main circuit rated value 6 kV of auxiliary circuit rated value 6 kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse at DC 10g / 5 ms, 7,5g / 10 ms shock resistance with sine pulse of contactor typical 10000000 of the contactor with added electronically optimized auxiliary switch block typical 20 of the contactor with added auxiliary switch block typical 20 of the contactor with added auxiliary switch block typical 20 of the contactor with added auxiliary switch block typical 20 of the contactor with added auxiliary switch block typical 20 of the contactor with added auxiliary switch block typical 20 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block typical 30 of the contactor with added auxiliary switch block t	• function module for communication	No
at AC in hot operating state at AC in hot operating state per pole at AC in hot operating state per pole without load current share typical of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of main circuit rated value of main circuit rated value of main circuit rated value of auxiliary circuit rated value of at DC of auxiliary circuit rated value of at DC of contactor with sine pulse of at DC of contactor with sine pulse of the contactor with added deteronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block t	auxiliary switch	Yes
at AC in hot operating state per pole without load current share typical without load current share typical solution voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of main circuit rated value of main circuit rated value of auxiliary circuit rated value of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor typical of the contactor with added auxiliary	power loss [W] for rated value of the current	
insulation voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value of auxiliary circuit rated value of main circuit rated value of auxiliary sivita sacording to EN 60947-1 10g / 5 ms, 7,5g / 10 ms 10g / 5 ms, 10g / 10 ms 10g / 5 ms, 7,5g / 10 ms 10g / 5 ms, 7,	 at AC in hot operating state 	9.6 W
insulation voltage of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value 690 V surge voltage resistance of main circuit rated value 660 V of main circuit rated value 66 kV of auxiliary circuit rated value 66 kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse of tDC 10g / 5 ms, 7,5g / 10 ms shock resistance with sine pulse of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical reference code according to EC 81346-2 Q Substance Prohibitance (Date) 10/01/2009 Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature of during storage 25 +50 °C elative humidity minimum 10 % relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit Main circuit 690 V 690 V 68V 690 V 690 V 60V 60V 60V 60V 60V 60V 60V	 at AC in hot operating state per pole 	3.2 W
of main circuit with degree of pollution 3 rated value of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse ot at DC 10g / 5 ms, 7,5g / 10 ms shock resistance with sine pulse of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the cont	 without load current share typical 	5.9 W
of auxiliary circuit with degree of pollution 3 rated value surge voltage resistance of main circuit rated value of auxiliary circuit rated value aximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse ot DC 10g / 5 ms, 7,5g / 10 ms shock resistance with sine pulse ot DC 15g / 5 ms, 10g / 10 ms mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added au	insulation voltage	
surge voltage resistance of main circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse oat DC 10g / 5 ms, 7,5g / 10 ms shock resistance with sine pulse oat DC 15g / 5 ms, 10g / 10 ms mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized a	 of main circuit with degree of pollution 3 rated value 	690 V
of main circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of auxiliary circuit rated value of kV maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse oat DC 10g / 5 ms, 7,5g / 10 ms shock resistance with sine pulse oat DC 15g / 5 ms, 10g / 10 ms mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added electronically optimized of the contactor wi	 of auxiliary circuit with degree of pollution 3 rated value 	690 V
of auxiliary circuit rated value maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 shock resistance at rectangular impulse	surge voltage resistance	
maximum permissible voltage for protective separation between coil and main contacts according to EN 60947-1 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 (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with a	 of main circuit rated value 	6 kV
shock resistance at rectangular impulse • at DC shock resistance with sine pulse • at DC 15g / 5 ms, 10g / 10 ms mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxilia	 of auxiliary circuit rated value 	6 kV
• at DC shock resistance with sine pulse • at DC 15g / 5 ms, 10g / 10 ms mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical 10 000 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit		400 V
shock resistance with sine pulse	shock resistance at rectangular impulse	
at DC mechanical service life (operating cycles) of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added	• at DC	10g / 5 ms, 7,5g / 10 ms
mechanical service life (operating cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage -55 +50 °C relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit	shock resistance with sine pulse	
of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical 10 000 000 reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum 2 000 m ambient temperature oduring operation -25 +50 °C oduring storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit 10 000 000 10	• at DC	15g / 5 ms, 10g / 10 ms
of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions Installation altitude at height above sea level maximum ambient temperature ouring operation ouring storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit 5 000 000 10 000 000 000 000 000	mechanical service life (operating cycles)	
auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code according to IEC 81346-2 Q Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature of during operation during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit 10 000 000 10 0	 of contactor typical 	10 000 000
reference code according to IEC 81346-2 Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit		5 000 000
Substance Prohibitance (Date) Ambient conditions installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit	 of the contactor with added auxiliary switch block typical 	10 000 000
installation altitude at height above sea level maximum ambient temperature during operation during storage relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit 2 000 m -25 +50 °C -25 +80 °C 10 % 95 %	reference code according to IEC 81346-2	Q
installation altitude at height above sea level maximum ambient temperature • during operation • during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit	Substance Prohibitance (Date)	10/01/2009
ambient temperature • during operation • during storage -25 +50 °C • during storage -55 +80 °C relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit	Ambient conditions	
 during operation during storage telative humidity minimum maximum Main circuit 	installation altitude at height above sea level maximum	2 000 m
• during storage relative humidity minimum 10 % relative humidity at 55 °C according to IEC 60068-2-30 maximum Main circuit	ambient temperature	
relative humidity minimum relative humidity at 55 °C according to IEC 60068-2-30 95 % maximum Main circuit	 during operation 	-25 +50 °C
relative humidity at 55 °C according to IEC 60068-2-30 95 % maximum Main circuit	during storage	-55 +80 °C
maximum Main circuit	relative humidity minimum	10 %
		95 %
number of poles for main current circuit 3	Main circuit	
	number of poles for main current circuit	3

	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	50 A
value	
• 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	42 A
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	10 mm²
	10 11111
value	10 11111
value operational current for approx. 200000 operating cycles at	12 A
value operational current for approx. 200000 operating cycles at AC-4	
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value	12 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value	12 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current	12 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1	12 A 12 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value	12 A 12 A 35 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value	12 A 12 A 35 A 20 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value	12 A 12 A 35 A 20 A 4.5 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 440 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 22 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A 0.25 A
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 600 V rated value — at 600 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A 0.25 A
value operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A 0.25 A
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 24 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value	12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 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 220 V rated value — at 220 V rated value — at 600 V rated value — at 24 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 10 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value	12 A 12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 35 A
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 600 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 • with 2 current paths in series at DC-1 — at 24 V rated value — at 600 V rated value — at 440 V rated value — at 600 V rated value	12 A 12 A 12 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 36 A 37 A 38
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 220 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value — at 220 V rated value — at 220 V rated value — at 24 V rated value — at 240 V rated value — at 440 V rated value — at 600 V rated value	12 A 12 A 12 A 35 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 36 A 37 A 38
poperational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value • at 110 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 600 V rated value — at 440 V rated value — at 220 V rated value — at 220 V rated value — at 220 V rated value — at 24 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value	12 A 12 A 12 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 36 A 37 A 38
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 24 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 60 V rated value — at 60 V rated value — at 220 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value — at 110 V rated value	12 A 12 A 12 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 36 A 37 A 38
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value — 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-1 — at 24 V rated value — at 60 V rated value — at 220 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 600 V rated value — at 24 V rated value — at 24 V rated value — at 20 V rated value	12 A 12 A 12 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 35 A 36 A 37 A 38
operational current for approx. 200000 operating cycles at AC-4 • at 400 V rated value • at 690 V rated value operational current • at 1 current path at DC-1 — at 24 V rated value — at 110 V rated value — at 110 V rated value — at 440 V rated value — at 600 V rated value — at 600 V rated value — at 24 V rated value — at 600 V rated value • with 2 current paths in series at DC-1 — at 24 V rated value — at 110 V rated value — at 60 V rated value — at 60 V rated value — at 220 V rated value — at 24 V rated value — at 24 V rated value — at 24 V rated value — at 600 V rated value — at 600 V rated value — at 600 V rated value • with 3 current paths in series at DC-1 — at 24 V rated value — at 60 V rated value — at 110 V rated value — at 110 V rated value — at 110 V rated value	12 A 12 A 12 A 20 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 35 A 36 A 37 A 38

— at 24 V rated value	20 A
— at 60 V rated value	5 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 60 V rated value	35 A
— at 110 V rated value	15 A
— at 220 V rated value	3 A
— at 440 V rated value	0.27 A
— at 600 V rated value	0.16 A
 with 3 current paths in series at DC-3 at DC-5 	
— at 24 V rated value	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	
at AC-2 at 400 V rated value	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	10.0 KW
— 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-	IU.J KVV
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 	341 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 	199 A; Use minimum cross-section acc. to AC-1 rated value
• limited to 60 s switching at zero current maximum	162 A; Use minimum cross-section acc. to AC-1 rated value
no-load switching frequency	
• at DC	1 500 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	DC
control supply voltage at DC	
• rated value	110 V
operating range factor control supply voltage rated value of magnet coil at DC	
• initial value	0.8
• full-scale value	1.1
closing power of magnet coil at DC	5.9 W
holding power of magnet coil at DC	5.9 W
closing delay	
• at DC	50 170 ms
opening delay	
• at DC	15 18 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
• at 230 V rated value	10 A
• at 400 V rated value	3 A
• at 500 V rated value	2 A
at 690 V rated value	1 A
operational current at DC-12	
• at 24 V rated value	10 A
• at 48 V rated value	6 A
• at 60 V rated value	6 A
• at 110 V rated value	3 A
• at 125 V rated value	2 A
• at 220 V rated value	1 A
at 600 V rated value	0.15 A
operational current at DC-13	
at 24 V rated value	10 A
at 48 V rated value	2 A
at 60 V rated value	2 A
• at 110 V rated value	1 A
• at 125 V rated value	0.9 A
• at 220 V rated value	0.3 A
at 600 V rated value	0.1 A
contact reliability of auxiliary contacts	1 faulty switching per 100 million (17 V, 1 mA)
UL/CSA ratings	
full-load current (FLA) for 3-phase AC motor	
at 480 V rated value	34 A
at 600 V rated value	27 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 DIN 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	0 (4 05 3) 0 (05 40 3)
• 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
connectable conductor cross-section for main contacts • solid	1 10 mm²
	1 10 mm²
strandedfinely stranded with core end processing	1 10 mm ²
Inner stranded with core end processing connectable conductor cross-section for auxiliary contacts	1 IV IIIIII
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	0.0 2.0 mm
• for auxiliary contacts	
— solid or stranded	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
Solid of stranded Finely stranded with core end processing	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)
for AWG cables for auxiliary contacts	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross	(, ,
section	
for main contacts	16 8
for auxiliary contacts	20 14
Safety related data	
product function	
mirror contact according to IEC 60947-4-1	Yes
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 %
	100 FIT

T1 value for proof test interval or service life according to IEC 61508	20 a
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	
 safety-related switching on 	Yes
 safety-related switching OFF 	Yes

Certificates/ approvals

General Product Approval





Confirmation



<u>KC</u>



EMC

Functional Safety/Safety of Machinery

Declaration of Conformity

Test Certificates



Type Examination Certificate





Special Test Certificate Type Test Certificates/Test Report

Marine / Shipping













other

Railway

Dangerous Good

Environment

Confirmation



Vibration and Shock

Transport Information

Environmental Confirmations

Further information

Siemens has decided to exit the Russian market (see here).

https://press.siemens.com/global/en/pressrelease/siemens-wind-down-russian-business

Siemens is working on the renewal of the current EAC certificates.

Please contact your local Siemens office on the status of validity of the EAC certification if you intend to import or offer to supply these products to an EAC relevant market (other than the sanctioned EAEU member states Russia or Belarus).

Information on the packaging

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

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2028-1BF40-0JA0

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-1BF40-0JA0

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1BF40-0JA0

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

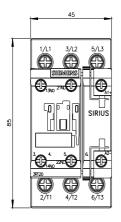
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1BF40-0JA0&lang=en

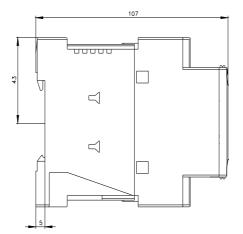
Characteristic: Tripping characteristics, I2t, Let-through current

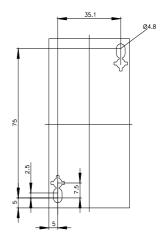
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1BF40-0JA0/char

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

 $\underline{\text{http://www.automation.siemens.com/bilddb/index.aspx?view=Search\&mlfb=3RT2028-1BF40-0JA0\&objecttype=14\&gridview=view1}$







last modified: 2/10/2023 🖸