SIEMENS

Data sheet 3RT2028-1AN20



power contactor, AC-3e/AC-3, 38 A, 18.5 kW / 400 V, 3-pole, 220 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, screw terminal, size: S0

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 	2.7 W
type of calculation of power loss depending on pole	quadratic
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	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 (operating 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)	
Weight	0.426 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

Environmental footprint	
Environmental Product Declaration(EPD)	Yes
Global Warming Potential [CO2 eq] total	74.2 kg
Global Warming Potential [CO2 eq] during manufacturing	1.9 kg
Global Warming Potential [CO2 eq] during operation	72.4 kg
Global Warming Potential [CO2 eq] after end of life	-0.117 kg
Main circuit	o. Thing
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	•
at AC-3 rated value maximum	690 V
at AC-3e rated value maximum	690 V
operational current	
• at AC-1 at 400 V at ambient temperature 40 °C rated value	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 at AC-3 	42 A
— 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 10 mm ²
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm
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 60 V rated value	20 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 60 V rated value	35 A
— at 100 V rated value — at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
— at 600 V rated value	0.8 A
at 555 v rated value	0.07.

with 3 current naths in series at DC-1	
 with 3 current paths in series at DC-1 — at 24 V rated value 	35 A
— at 60 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	35 A
— at 440 V rated value	2.9 A
— at 600 V rated value	1.4 A
	1.4 A
• at 1 current path at DC-3 at DC-5	20. A
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 220 V rated value	1.4
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 A
with 2 current paths in series at DC-3 at DC-5	OF A
— 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-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-	
at 400 V rated value	6 kW
at 400 V rated value at 690 V rated value	10.3 kW
operating apparent power at AC-6a	10.0 MV
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 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 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 up to 690 V for current peak value n=20 rated value	25 kVA
operating apparent power at AC-6a	20 (())
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 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 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 up to 690 V for current peak value n=30 rated value	25 kVA
short-time withstand current in cold operating state up to	20 (())
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 AC	5 000 1/h
• at AC	5 000 1/h

operating frequency 1 ACC1 maximum 1 000 1m at ACC2 maximum 750 1m at ACC3 maximum 750 1m at ACC3 maximum 250 1m at ACC3 maximum 200 1m at ACC3 maximum 200 1m control supply voltage of the control supply voltage AC control supply voltage at AC 200 V at 50 Hz rated value 200 V operating ange factor control supply voltage rated value of at 50 Hz 200 V at 50 Hz rated value 200 V at 50 Hz rated value 30 NA at 40 Nz rated value rated value 30 Na		
* at AC-2 maximum	operating frequency	
a st AC-3 maximum		
** at AC-3e maximum	• at AC-2 maximum	750 1/h
### AC4 - maximum **type of voltage of the control supply voltage at Control supply voltage at Control supply voltage at Control supply voltage at Control supply voltage rated value **at 60 Hz **at 60 Hz **apparent pick-up power of magnet coil at AC **at 60 Hz **a	• at AC-3 maximum	750 1/h
Control circuit/ Control AC type of voltage of the control supply voltage AC at 50 Hz rated value 220 V at 50 Hz rated value 220 V operating range factor control supply voltage rated value of graph (coll at AC 8 at 50 Hz at 50 Hz 0.8 1.1 apparent pick-up power of magnet coll at AC 81 VA at 50 Hz 90 VA inductive power factor with closing power of the coll 0.72 at 60 Hz 0.72 at 60 Hz 0.74 apparent holding power of magnet coll at AC 4 at 50 Hz at 50 Hz 0.74 at 50 Hz 0.74 at 50 Hz 0.74 at 60 Hz 0.5 VA Inductive power factor with the holding power of the coll 0.25 at 50 Hz 0.25 at 60 Hz 0.25 at 60 Hz 0.26 at 60 Hz 0.26 closing delay 4 A file ms at AC 4 - 16 ms arcing time 0.0 ns control version of the switch operating mechanism <	• at AC-3e maximum	750 1/h
Type of voltage of the control supply voltage at AC 20		250 1/h
control supply voltage at AC at 50 Hz rated value 220 V sat 50 Hz rated value 220 V operating range factor control supply voltage rated value of magnet coil at AC at 50 Hz at 50 Hz at 50 Hz 20 Ns. 1.1 apparent pick-up power of magnet coil at AC at 50 Hz at 50 Hz 31 Ns. 1.1 at 50 Hz at 60 Hz at 50 Hz at 60 H	Control circuit/ Control	
a til 50 Hz raled value 220 V operating range factor control supply voltage rated value of magnet coll at AC 3.81.1 a til 50 Hz 0.81.1 a til 50 Hz 8	type of voltage of the control supply voltage	AC
• at 60 Hz rated value	control supply voltage at AC	
Special parage factor control supply voltage rated value of magnet coil at AC • at 50 Hz	at 50 Hz rated value	220 V
magnet coil at AC	at 60 Hz rated value	220 V
• at 50 Hz		
• at 60 Hz		0.0 4.4
### 150 Hz		
* at 50 Hz		0.85 1.1
miductive power factor with closing power of the coil 2		04 1/A
e 15 0 Hz		
• at 50 Hz • at 60 Hz apparent holding power of magnet coil at AC • at 50 Hz • at 60 Hz • at 50 Hz • at 60 Hz • at 80 W rated value • at 80 W		79 VA
		0.72
apparent holding power of magnet coil at AC	*****	
• at 50 Hz • at 60 Hz • at 60 Hz 10ductive power factor with the holding power of the coil • at 50 Hz • at 60 Hz • at AC • at AC		U.14
• at 60 Hz		10.5.\/\
at 45 0 Hz		
• at 50 Hz • at 60 Hz • at AC • at AC opening delay • at AC opening delay • at AC ontrol version of the switch operating mechanism control version of the switch operating mechanism bumber of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A operational current at AC-12 maximum 10 A operational current at AC-18 • at 230 V rated value • at 500 V rated value • at 600 V rated value • at 125 V rated value • at 24 V rated value • at 24 V rated value • at 27 V rated value • at 28 V rated value • at 28 V rated value • at 29 V rated value • at 20 V rated value • at 210 V rated value • at 220 V rated value • at 24 V rated value • at 25 V rated value • at 26 V rated value • at 27 V rated value • at 28 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		0.5 VA
• at 60 Hz 0.28 closing delay		0.25
e at AC		
● at AC		0.20
e at AC 416 ms control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit number of NC contacts for auxiliary contacts instantaneous contact number of NC contacts for auxiliary contacts instantaneous contact operational current at AC-12 maximum 10 A 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 48 V rated value • at 80 V rated value • at 110 V rated value • at 110 V rated value • at 125 V rated value • at 48 V rated value • at 48 V rated value • at 29 V rated value • at 48 V rated value • at 48 V rated value • at 29 V rated value • at 20 V rated value • at 20 V rated value • at 20 V rated value • at 30 V rated value • at 48 V rated value • at 48 V rated value • at 20 V rated value • at 40 V rated value • at 20 V rated value • at 60 V rated value • at 20 V rated value • at 60 V rated value • at 20 V rated value • at 60 V rated value • at 60 V rated value		8 40 ms
● at AC 4 16 ms arcing time 10 10 ms Control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit 1 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 10 A • at 230 V rated value 3 A • at 400 V rated value 2 A • at 500 V rated value 10 A • at 48 V rated value 10 A • at 48 V rated value 6 A • at 48 V rated value 6 A • at 110 V rated value 3 A • at 125 V rated value 2 A • at 125 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 2 A • at 48 V rated value 2 A		0 40 1113
10 10 ms Standard A1 - A2		4 16 ms
Control version of the switch operating mechanism Standard A1 - A2 Auxiliary circuit Image: Contact of the switch operating mechanism of NC contacts for auxiliary contacts instantaneous contact 1 number of NC contacts for auxiliary contacts instantaneous contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 Image: Contact of the switch operating mechanism of the switch of the		
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-12 maximum operational current at AC-15 • at 230 V rated value • at 400 V rated value • at 400 V rated value • at 690 V rated value • at 890 V rated value • at 48 V rated value • at 48 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 100 V rated value • at 110 V rated value • at 110 V rated value • at 110 V rated value • at 120 V rated value • at 110 V rated value		
number of NC contacts for auxiliary contacts instantaneous contact 1 number of NO contacts for auxiliary contacts instantaneous contact 1 contact 1 operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 V rated value 3 A • at 690 V rated value 2 A • at 690 V rated value 1 A operational current at DC-12 10 A • at 24 V rated value 6 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 110 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 0.15 A • at 600 V rated value 0.15 A • at 24 V rated value 10 A • at 220 V rated value 2 A • at 600 V rated value 2 A • at 48 V rated value 2 A • at 220 V rated value 2 A • at 220 V rated value 1 A • at 220 V rated value 0.9 A • at 600 V rated value 0.3 A •	· · · · ·	
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contact operational current at AC-12 maximum 10 A operational current at AC-15 10 A • at 230 V rated value 10 A • at 400 V rated value 3 A • at 500 V rated value 1 A operational current at DC-12 10 A • at 24 V rated value 6 A • at 48 V rated value 6 A • at 60 V rated value 3 A • at 110 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 10 A • at 24 V rated value 2 A • at 48 V rated value 2 A • at 60 V rated value 2 A • at 110 V rated value 2 A • at 25 V rated value 2 A • at 27 V rated value 1 A • at 28 V rated value 2 A • at 125 V rated value 0.9 A • at 220 V rated value 0.9 A • at 220 V rated value 0.3 A • at 600 V rated value 0.1 A		•
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 at 230 V rated value 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 6 A at 48 V rated value 6 A at 110 V rated value at 25 V rated value at 220 V rated value at 600 V rated value at 24 V rated value at 48 V rated value at 48 V rated value at 48 V rated value at 10 A at 600 V rated value at 10 A 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 220 V rated value at 220 V rated value at 220 V rated value at 600 V rated value 	operational current at AC-12 maximum	
 at 400 V rated value at 500 V rated value 2 A at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value 6 A at 60 V rated value 6 A at 110 V rated value at 220 V rated value at 24 V rated value at 25 V rated value at 25 V rated value at 200 V rated value at 600 V rated value at 600 V rated value at 60 V rated value at 24 V rated value at 24 V rated value at 48 V rated value at 60 V rated value at 60 V rated value at 10 A at 60 V rated value at 10 V rated value at 110 V rated value at 110 V rated value at 125 V rated value at 120 V rated value at 220 V rated value 	operational current at 7 to 12 maximum	10 A
 at 500 V rated value at 690 V rated value 1 A Operational current at DC-12 at 24 V rated value 6 A at 60 V rated value 6 A 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 600 V rated value at 220 V rated value at 600 V rated value at 24 V rated value at 60 V rated value at 60 V rated value at 60 V rated value at 10 A at 60 V rated value at 110 V rated value at 125 V rated value at 125 V rated value at 125 V rated value at 220 V rated value at 600 V rated value at 70 A 	·	10 A
• at 690 V rated value 10 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 3 A • at 110 V rated value 2 A • at 220 V rated value 1 A • at 600 V rated value 10.15 A operational current at DC-13 • at 24 V rated value 2 A • at 8 V rated value 10 A • at 60 V rated value 2 A • at 110 V rated value 10 A • at 24 V rated value 2 A • at 10 V rated value 2 A • at 10 V rated value 2 A • at 24 V rated value 2 A • at 10 V rated value 2 A • at 10 V rated value 1 A • at 125 V rated value 1 A	operational current at AC-15	
operational current at DC-12 • at 24 V rated value 10 A • at 48 V rated value 6 A • at 60 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	operational current at AC-15 • at 230 V rated value	10 A
 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 24 V rated value at 24 V rated value at 24 V rated value at 26 V rated value at 27 V rated value at 28 V rated value at 29 V rated value at 20 V rated value at 10 V rated value at 125 V rated	operational current at AC-15 • at 230 V rated value • at 400 V rated value	10 A 3 A
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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	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	10 A 3 A 2 A 1 A 10 A 6 A 6 A 6 A 3 A
 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 	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	10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A
 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 600 V rated value 	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	10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A
 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 0.3 A at 600 V rated value 0.1 A 	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 600 V rated value	10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A
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 at 125 V rated value at 220 V rated value at 600 V rated value 0.3 A 0.1 A 	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 220 V rated value • at 220 V rated value • at 600 V rated value • at 600 V rated value • at 24 V rated value	10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 10 A 2 A 1 A 0.15 A
 at 220 V rated value at 600 V rated value 0.3 A 0.1 A 	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 220 V rated value • at 24 V rated value • at 600 V rated value • at 48 V rated value • at 48 V rated value	10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 10 A 2 A 1 A 0.15 A
• at 600 V rated value 0.1 A	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 48 V rated value • at 48 V rated value • at 48 V rated value • at 600 V rated value	10 A 3 A 2 A 1 A 10 A 6 A 6 A 3 A 2 A 1 A 10 A 2 A 1 A 0.15 A
	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 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 410 V rated value	10 A 3 A 2 A 1 A 10 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
contact reliability of auxiliary contacts 1 faulty switching per 100 million (17 V, 1 mA)	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 110 V rated value • at 125 V rated value	10 A 3 A 2 A 1 A 10 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
	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 125 V rated value	10 A 3 A 2 A 1 A 10 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

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
height	85 mm
width	45 mm
depth	97 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	40
— forwards	10 mm
— upwards	10 mm
— at the side	6 mm
— downwards	10 mm
• for live parts	40
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	corow type terminals
for main current circuit for auxiliany and control circuit	screw-type terminals
for auxiliary and control circuit at contactor for auxiliany contacts.	screw-type terminals
at contactor for auxiliary contacts of magnet coil	Screw-type terminals
of magnet coil type of connectable conductor cross-sections	Screw-type terminals
for main contacts	
Ior main contacts — solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid — solid or stranded	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
 finely stranded with core end processing for 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 contacts	ΔΛ (10 1Δ), ΔΛ (14 0)
solid	1 10 mm²
stranded	1 10 mm²
	1 10 mm²
finely stranded with core end processing connectable conductor cross-section for auxiliary contacts	1 IV IIIII
solid or stranded	0.5 2.5 mm²
- John of Stranged	V.V 2.V IIIIII

 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)
 for AWG cables for auxiliary contacts 	2x (20 16), 2x (18 14)
AWG number as coded connectable conductor cross section	
• for main contacts	16 8
 for auxiliary contacts 	20 14
Safety related data	
product function	
 mirror contact according to IEC 60947-4-1 	Yes
 positively driven operation according to IEC 60947-5-1 	No
suitable for safety function	Yes
suitability for use safety-related switching OFF	Yes
service life maximum	20 a
test wear-related service life necessary	Yes
proportion of dangerous failures	
 with low demand rate according to SN 31920 	40 %
 with high demand rate according to SN 31920 	73 %
B10 value with high demand rate according to SN 31920	1 000 000
failure rate [FIT] with low demand rate according to SN 31920	100 FIT
ISO 13849	
device type according to ISO 13849-1	3
overdimensioning according to ISO 13849-2 necessary	Yes
IEC 61508	
safety device type according to IEC 61508-2	Type A
Electrical Safety	

General Product Approval



Approvals Certificates



Confirmation

IP20



finger-safe, for vertical contact from the front



<u>KC</u>

General Product Approval

EMV

protection class IP on the front according to IEC 60529

touch protection on the front according to IEC 60529

Functional Saftey

Test Certificates

Marine / Shipping





Type Examination Certificate Special Test Certificate Type Test Certificates/Test Report



Marine / Shipping









Miscellaneous

other

Confirmation

other

Railway

Environment

Confirmation

Special Test Certificate



Environmental Confirmations

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=3RT2028-1AN20

Cax online generator

 $\underline{\text{http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en\&mlfb=3RT2028-1AN20}$

Service&Support (Manuals, Certificates, Characteristics, FAQs,...) https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AN20

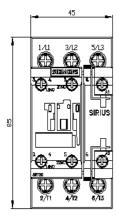
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

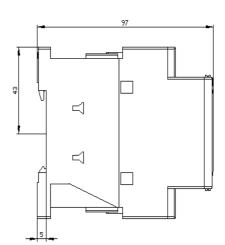
http://www.automation.siemens.com/bilddb/cax_de.aspx?mlfb=3RT2028-1AN20&lang=en

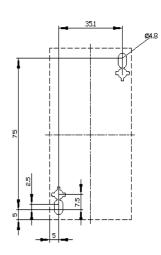
Characteristic: Tripping characteristics, I2t, Let-through current

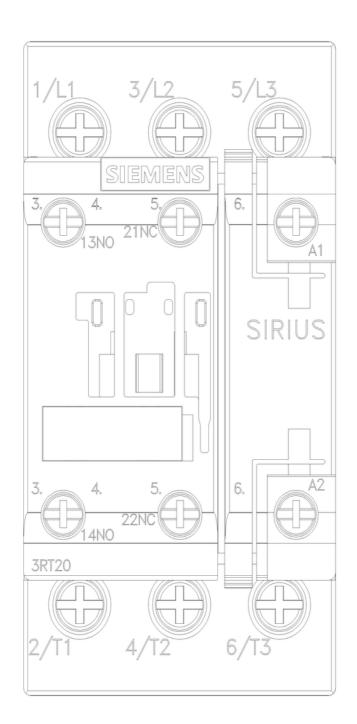
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-1AN20/char

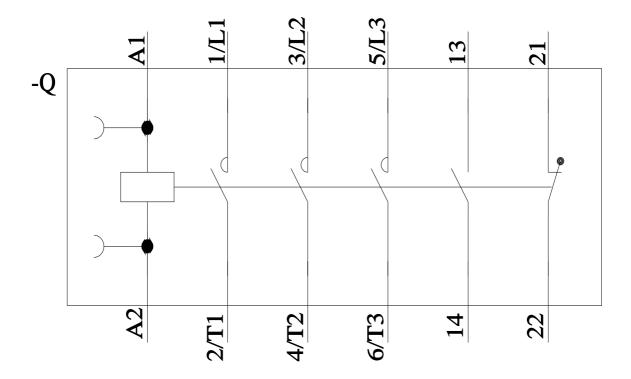
Further characteristics (e.g. electrical endurance, switching frequency)
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2028-1AN20&objecttype=14&gridview=view1











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