## SIEMENS

## Data sheet

## 3RT2028-2DB40



Contactor, AC-3, 18.5 kW / 400 V, 1 NO + 1 NC, 24 V DC with varistor 3-pole, Size S0 Spring-type terminal

was doned being discussed	
product brand name	SIRIUS Bawas contentes
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	SO
product extension	
function module for communication	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	11.4 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	3.8 W
without load current share typical	5.9 W
insulation voltage	
<ul> <li>of main circuit with degree of pollution 3 rated value</li> </ul>	690 V
<ul> <li>of auxiliary circuit with degree of pollution 3 rated value</li> </ul>	690 V
surge voltage resistance	
<ul> <li>of main circuit rated value</li> </ul>	6 kV
of auxiliary circuit rated value	6 kV
maximum permissible voltage for safe isolation between coil and main contacts according to EN 60947-1	400 V
shock resistance at rectangular impulse	
• at 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)	
<ul> <li>of contactor typical</li> </ul>	10 000 000
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> </ul>	5 000 000
<ul> <li>of the contactor with added auxiliary switch block typical</li> </ul>	10 000 000
reference code according to IEC 81346-2	Q
Substance Prohibitance (Date)	10/01/2009
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
during operation	-25 +60 °C
during storage	-55 +80 °C
relative humidity minimum	10 %
relative humidity at 55 °C according to IEC 60068-2-30 maximum	95 %

Main circuit	
number of poles for main current circuit	3
number of NO contacts for main contacts	3
operating voltage	
<ul> <li>at AC-3 rated value maximum</li> </ul>	690 V
<ul> <li>at AC-3e rated value maximum</li> </ul>	690 V
operational current	
<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> </ul>	50 A
● at AC-1	
<ul> <li>— up to 690 V at ambient temperature 40 °C rated value</li> </ul>	50 A
— up to 690 V at ambient temperature 60 °C rated value	42 A
• at AC-3	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	38 A
— at 500 V rated value	32 A
— at 690 V rated value	21 A
<ul> <li>at AC-4 at 400 V rated value</li> </ul>	22 A
<ul> <li>at AC-5a up to 690 V rated value</li> </ul>	44 A
<ul> <li>at AC-5b up to 400 V rated value</li> </ul>	31.5 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	30.8 A
<ul> <li>— up to 400 V for current peak value n=20 rated value</li> </ul>	30.8 A
— up to 500 V for current peak value n=20 rated value	30.8 A
<ul> <li>— up to 690 V for current peak value n=20 rated value</li> <li>at AC-6a</li> </ul>	21 A
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	20.5 A
<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	20.5 A
<ul> <li>— up to 500 V for current peak value n=30 rated value</li> </ul>	21.4 A
— up to 690 V for current peak value n=30 rated value	21 A
minimum cross-section in main circuit at maximum AC-1 rated value operational current for approx. 200000 operating	10 mm <sup>2</sup>
cycles at AC-4	
at 400 V rated value	12 A
• at 690 V rated value	12 A
operational current	
• at 1 current path at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	4.5 A
— at 220 V rated value	1 A
— at 440 V rated value	0.4 A
— at 600 V rated value	0.25 A
• with 2 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	5 A
— at 440 V rated value	1A
— at 600 V rated value	0.8 A
<ul> <li>with 3 current paths in series at DC-1</li> </ul>	

	— at 24 V rated value	35 A
	— at 110 V rated value	35 A
	— at 220 V rated value	35 A
• + it ourment path at DC-3 at DC-5         20 A           at 22 V rated value         25 A           at 220 V rated value         0.09 A           at 400 V rated value         0.09 A           at 600 V rated value         0.09 A           at 20 V rated value         0.09 A           at 20 V rated value         0.09 A           at 20 V rated value         35 A           at 20 V rated value         0.09 A	— at 440 V rated value	2.9 A
	— at 600 V rated value	1.4 A
	<ul> <li>at 1 current path at DC-3 at DC-5</li> </ul>	
	— at 24 V rated value	20 A
	— at 110 V rated value	2.5 A
<ul> <li></li></ul>	— at 220 V rated value	1 A
with 2 current paths in series at DC-3 at DC-5         at 24 V rated value         at 220 V rated value         35 A         at 220 V rated value         37 A         at 220 V rated value         27 A         at 24 V rated value         27 A         at 24 V rated value         27 A         at 24 V rated value         36 A         at 24 V rated value         37 A         at 24 V rated value         36 A         at 400 V rated value         36 A         at 400 V rated value         36 A         at 400 V rated value         36 A         at 260 V rated value         36 S KW         at 260 V rated value         37 S KW         at 260 V rated value         30 S KW         at 260 V rated value         30 V rated value         30 S KW         30 V rated value	— at 440 V rated value	0.09 A
	— at 600 V rated value	0.06 A
- al 110 V rated value     15 Å       - at 220 V rated value     3 Å       - at 440 V rated value     0.16 Å       • with 3 current paths series at DC-3 at DC-5     - at 24 V rated value       - at 24 V rated value     35 Å       - at 24 V rated value     36 Å       - at 24 V rated value     36 Å       - at 24 V rated value     0.6 Å       - at 200 V rated value     0.6 Å       - at 200 V rated value     0.6 Å       - at 200 V rated value     18.5 kW       - at 600 V rated value     18.5 kW       - at 500 V rated value     18.5 kW       - at 200 V rated value     18.5 kW       - at 200 V rated value     18.5 kW       - at 300 V rated value     12.5 kW       - at 300 V rated value     12.5 kW       - at 300 V rated value     13.5 kW       - a	<ul> <li>with 2 current paths in series at DC-3 at DC-5</li> </ul>	
	— at 24 V rated value	35 A
- at 440 V rated value     0.27 A       - at 600 V rated value     0.16 A       - at 24 V rated value     35 A       - at 110 V rated value     35 A       - at 1220 V rated value     10 A       - at 220 V rated value     0.6 A       - at 200 V rated value     0.6 A       - at 200 V rated value     0.6 A       - at 200 V rated value     18.5 kW       - at 400 V rated value     18.5 kW       - at 400 V rated value     10.3 kW       - at 400 V rated value     10.3 kW       - at 400 V rated value     10.3 kW       - op to 200 V for current pack value n=20 rated value     21.3 kVA       - up to 200 V for current pack value n=20 rated value     21.3 kVA       - up to 200 V for current pack value n=30 rated value     25 kVA       - up to	— at 110 V rated value	15 A
	— at 220 V rated value	3 A
<ul> <li>with 3 current paths in series at DC-3 at DC-5         <ul> <li>at 24 V rated value</li> <li>35 A</li> <li>at 210 V rated value</li> <li>36 A</li> <li>at 220 V rated value</li> <li>06 A</li> <li>at 400 V rated value</li> <li>06 A</li> </ul> </li> <li>operating power         <ul> <li>at AC-3</li> <li>at AC-4</li> <li>at AC-4</li> <li>at AC-3</li> <li>at AC-3</li> <li>at AC-3</li> <li>at AC-4</li> <li>a</li></ul></li></ul>	— at 440 V rated value	0.27 A
	— at 600 V rated value	0.16 A
	<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
		35 A
	— at 110 V rated value	35 A
	— at 220 V rated value	10 A
operating power <ul> <li>at AC-2 at 400 V rated value</li> <li>at AC-3</li> <li>at 230 V rated value</li> <li>at 400 V rated value</li> <li>at 600 V rated value</li> <li>at 85 kW</li> <li>at 800 V rated value</li> <li>at 400 V rated value</li> <li>at 600 V rated value</li> <li>bt 5 kW</li> <li>at 400 V rated value</li> <li>bt 5 kW</li> <li>at 400 V rated value</li> <li>bt 5 kW</li> </ul> <li>at 400 V rated value</li> <li>bt 600 V for current peak value n=20 rated value</li> <li>at 600 V rated value n=20 rated value</li> <li>at 600 V for current peak value n=20 rated value</li> <li>at 600 V for current peak value n=20 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li> <li>bt 600 V for current peak value n=30 rated value</li>	— at 440 V rated value	0.6 A
• at AC-2 at 400 V rated value       18.5 kW         • at AC-3       11 kW         - at 200 V rated value       18.5 kW         - at 500 V rated value       18.5 kW         - at 600 V rated value       18.5 kW         - at 230 V rated value       18.5 kW         - at 600 V rated value       18.5 kW         operating apparent power at AC-6a       10.3 kW         • up to 200 V for current peak value n=20 rated value       25 kVA         operating apparent power at AC-6a       11.5 kW         • up to 690 V for current peak value n=30 rated value       25 kVA         operating apparent power at AC-6a       8.1 kVA         • up to 690 V for current peak value n=30 rated value       25 kVA <td>— at 600 V rated value</td> <td>0.6 A</td>	— at 600 V rated value	0.6 A
<ul> <li>at AC-2 at 400 V rated value</li> <li>at AC-3</li> <li>at AC-4</li> <li>at AC-4</li></ul>	operating power	
• at AC-3         - at 230 V rated value         11 kW           - at 230 V rated value         18.5 kW           - at 650 V rated value         18.5 kW           - at 650 V rated value         15.5 kW           - at 230 V rated value         11 kW           - at 400 V rated value         18.5 kW           - at 400 V rated value         18.5 kW           - at 500 V rated value         18.5 kW           - at 630 V rated value         18.5 kW           - at 630 V rated value         18.5 kW           - at 630 V rated value         18.5 kW           operating power for approx. 20000 operating cycles at AC-4         18.5 kW           • at 400 V rated value         10.3 kW           operating apparent power at AC-6a         12.2 kVA           • up to 200 V for current peak value n=20 rated value         21.3 kVA           operating apparent power at AC-6a         26.6 kVA           • up to 500 V for current peak value n=30 rated value         25.6 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA		18.5 kW
at 500 V rated value18.5 kW at 690 V rated value18.5 kW at 230 V rated value11 kW at 400 V rated value11 kW at 500 V rated value18.5 kW at 690 V rated value18.5 kW at 400 V rated value6 kW• at 400 V rated value6 kW• at 400 V rated value10.3 kWoperating apparent power at AC-6a12.2 kVA• up to 230 V for current peak value n=20 rated value12.2 kVA• up to 500 V for current peak value n=20 rated value26.6 kVA• up to 500 V for current peak value n=20 rated value25 kVAoperating apparent power at AC-6a8.1 kVA• up to 500 V for current peak value n=30 rated value8.1 kVA• up to 500 V for current peak value n=30 rated value14.2 kVA• up to 690 V for current peak value n=30 rated value25 kVAshort-time withstand current in cold operating state25 kVA• up to 600 V for current peak value n=30 rated value25 kVAshort-time withstand current in cold operating state25 kVA• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 s switching at zero current maximum186 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum1	— at 230 V rated value	11 kW
	— at 400 V rated value	18.5 kW
• at AC-3e         11 kW           - at 230 V rated value         11 kW           - at 400 V rated value         18.5 kW           - at 690 V rated value         18.5 kW           - at 690 V rated value         18.5 kW           operating power for approx. 20000 operating cycles at AC-4         6 kW           • at 400 V rated value         6 kW           • at 400 V rated value         10.3 kW           operating apparent power at AC-6a         12.2 kVA           • up to 230 V for current peak value n=20 rated value         12.2 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         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 690 V for current peak value n=30 rated value         25 kVA           short-time withstand current in cold operating state uplot 0	— at 500 V rated value	18.5 kW
• at AC-3e         11 kW           - at 230 V rated value         11 kW           - at 400 V rated value         18.5 kW           - at 690 V rated value         18.5 kW           - at 690 V rated value         18.5 kW           operating power for approx. 20000 operating cycles at AC-4         6 kW           • at 400 V rated value         6 kW           • at 400 V rated value         10.3 kW           operating apparent power at AC-6a         12.2 kVA           • up to 230 V for current peak value n=20 rated value         12.2 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         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 500 V for current peak value n=30 rated value         25 kVA           operating apparent power at AC-6a         8.1 kVA           • up to 690 V for current peak value n=30 rated value         25 kVA           short-time withstand current in cold operating state uplot 0	— at 690 V rated value	18.5 kW
	— at 230 V rated value	11 kW
at 690 V rated value       18.5 kW         operating power for approx. 200000 operating cycles at AC-4       6 kW         • at 400 V rated value       6 kW         • at 690 V rated value       10.3 kW         operating apparent power at AC-6a       12.2 kVA         • up to 230 V for current peak value n=20 rated value       21.3 kVA         • up to 690 V for current peak value n=20 rated value       26.6 kVA         • up to 590 V for current peak value n=20 rated value       25 kVA         operating apparent power at AC-6a       8.1 kVA         • up to 500 V for current peak value n=30 rated value       8.1 kVA         • up to 500 V for current peak value n=30 rated value       8.1 kVA         • up to 600 V for current peak value n=30 rated value       8.1 kVA         • up to 600 V for current peak value n=30 rated value       8.1 kVA         • up to 600 V for current peak value n=30 rated value       8.1 kVA         • up to 600 V for current peak value n=30 rated value       8.1 kVA         • up to 40° C       93 A; Use minimum cross-section acc. to AC-1 rated value         • up to 40° C       93 A; Use minimum cross-section acc. to AC-1 rated value         • limited to 10 s switching at zero current maximum       593 A; Use minimum cross-section acc. to AC-1 rated value         • limited to 10 s switching at zero current maximum       186 A; Use min		
operating power for approx. 200000 operating cycles at AC-46• at 400 V rated value6• at 690 V rated value10.3 kWoperating apparent power at AC-6a12.2 kVA• up to 230 V for current peak value n=20 rated value21.3 kVA• up to 500 V for current peak value n=20 rated value26.6 kVA• up to 500 V for current peak value n=20 rated value26.6 kVA• up to 500 V for current peak value n=20 rated value25 kVAoperating apparent power at AC-6a8.1 kVA• up to 500 V for current peak value n=30 rated value8.1 kVA• up to 500 V for current peak value n=30 rated value8.1 kVA• up to 500 V for current peak value n=30 rated value8.1 kVA• up to 690 V for current peak value n=30 rated value8.1 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current in cold operating state up to 40 °C593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 s switching at zero current maximum186 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-sectio		
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operating apparent power at AC-6a• up to 230 V for current peak value n=20 rated value• up to 400 V for current peak value n=20 rated value• up to 500 V for current peak value n=20 rated value• up to 690 V for current peak value n=20 rated value• up to 690 V for current peak value n=20 rated value• up to 230 V for current peak value n=20 rated value• up to 690 V for current peak value n=20 rated value• up to 230 V for current peak value n=30 rated value• up to 400 V for current peak value n=30 rated value• up to 500 V for current peak value n=30 rated value• up to 500 V for current peak value n=30 rated value• up to 690 V for current peak value n=30 rated value• up to 690 V for current peak value n=30 rated value• up to 690 V for current peak value n=30 rated value• up to 690 V for current peak value n=30 rated value• up to 690 V for current peak value n=30 rated value• up to 690 V for current maximum• limited to 1 s switching at zero current maximum• limited to 1 s switching at zero current maximum• limited to 10 s switching at zero current maximum• limited to 30 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switc	<ul> <li>at 400 V rated value</li> </ul>	6 kW
• up to 230 V for current peak value n=20 rated value12.2 kVA• up to 400 V for current peak value n=20 rated value21.3 kVA• up to 500 V for current peak value n=20 rated value26.6 kVA• up to 690 V for current peak value n=20 rated value25 kVAoperating apparent power at AC-6a8.1 kVA• up to 230 V for current peak value n=30 rated value8.1 kVA• up to 500 V for current peak value n=30 rated value14.2 kVA• up to 500 V for current peak value n=30 rated value14.2 kVA• up to 690 V for current peak value n=30 rated value18.5 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value18.5 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum186 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum186 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum150 1/h<	• at 690 V rated value	10.3 kW
• up to 400 V for current peak value n=20 rated value21.3 kVA• up to 500 V for current peak value n=20 rated value26.6 kVA• up to 690 V for current peak value n=20 rated value25 kVAoperating apparent power at AC-6a8.1 kVA• up to 230 V for current peak value n=30 rated value8.1 kVA• up to 500 V for current peak value n=30 rated value14.2 kVA• up to 690 V for current peak value n=30 rated value18.5 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 40° C593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum186 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum150 1/h• operating frequency • at DC1 500 1/h	operating apparent power at AC-6a	
<ul> <li>up to 500 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 690 V for current peak value n=20 rated value</li> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 V for current peak value n=30 rated value</li> <li>two 400 °C</li> <li>two 40 °C</li> <l< td=""><td><ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul></td><td>12.2 kVA</td></l<></ul>	<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	12.2 kVA
• up to 690 V for current peak value n=20 rated value25 kVAoperating apparent power at AC-6a8.1 kVA• up to 230 V for current peak value n=30 rated value8.1 kVA• up to 400 V for current peak value n=30 rated value14.2 kVA• up to 500 V for current peak value n=30 rated value18.5 kVA• up to 690 V for current peak value n=30 rated value25 kVAshort-time withstand current in cold operating state25 kVA• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 s switching at zero current maximum260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• at DC1 500 1/h• at AC-1 maximum1 000 1/h	<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	21.3 kVA
operating apparent power at AC-6a• up to 230 V for current peak value n=30 rated value8.1 kVA• up to 400 V for current peak value n=30 rated value14.2 kVA• up to 500 V for current peak value n=30 rated value18.5 kVA• up to 690 V for current peak value n=30 rated value25 kVA• up to 690 V for current in cold operating state25 kVAup to 40 °C593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 s switching at zero current maximum1260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum1500 1/h• at DC1 500 1/h• at AC-1 maximum1 000 1/h	<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	26.6 kVA
<ul> <li>up to 230 V for current peak value n=30 rated value</li> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>25 kVA</li> <li>short-time withstand current in cold operating state</li> <li>up to 40 °C</li> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 5 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching</li></ul>	• up to 690 V for current peak value n=20 rated value	25 kVA
<ul> <li>up to 400 V for current peak value n=30 rated value</li> <li>up to 500 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>up to 690 V for current peak value n=30 rated value</li> <li>short-time withstand current in cold operating state up to 40 °C</li> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 5 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>to 60 s switching frequency</li> <li>at DC</li> <li>to 20 1/h</li> </ul>	operating apparent power at AC-6a	
• up to 500 V for current peak value n=30 rated value18.5 kVA• up to 690 V for current peak value n=30 rated value25 kVAshort-time withstand current in cold operating state up to 40 °C593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum395 A; Use minimum cross-section acc. to AC-1 rated value• limited to 10 s switching at zero current maximum260 A; Use minimum cross-section acc. to AC-1 rated value• limited to 30 s switching at zero current maximum186 A; Use minimum cross-section acc. to AC-1 rated value• limited to 60 s switching at zero current maximum152 A; Use minimum cross-section acc. to AC-1 rated value• at DC1 500 1/h• at DC1 500 1/h• at AC-1 maximum1 000 1/h	<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	8.1 kVA
• up to 690 V for current peak value n=30 rated value25 kVAshort-time withstand current in cold operating state up to 40 °C593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • limited to 60 s switching at zero current maximum • 152 A; Use minimum cross-section acc. to AC-1 rated value • 152 A; Use minimum cross-section acc. to AC-1 rated value • 152 A; Use minimum cross-section acc. to AC-1 rated value• at DC1 500 1/h• at DC1 500 1/h• at AC-1 maximum1 000 1/h	<ul> <li>up to 400 V for current peak value n=30 rated value</li> </ul>	14.2 kVA
short-time withstand current in cold operating state up to 40 °C593 A; Use minimum cross-section acc. to AC-1 rated value• limited to 1 s switching at zero current maximum • limited to 10 s switching at zero current maximum • limited to 30 s switching at zero current maximum • limited to 60 s switching at zero current maximum • 1 500 1/h1500 1/h• at DC • at AC-1 maximum1 000 1/h	<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	18.5 kVA
up to 40 °C• limited to 1 s switching at zero current maximum• limited to 5 s switching at zero current maximum• limited to 10 s switching at zero current maximum• limited to 30 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching at zero current maximum• limited to 60 s switching frequency• at DC• at DC• at AC-1 maximum• at AC-1 maximum1 000 1/h	• up to 690 V for current peak value n=30 rated value	25 kVA
<ul> <li>limited to 1 s switching at zero current maximum</li> <li>limited to 5 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>at DC</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>1 000 1/h</li> </ul>		
<ul> <li>limited to 5 s switching at zero current maximum</li> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching frequency</li> <li>at DC</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>1 000 1/h</li> </ul>	-	
<ul> <li>limited to 10 s switching at zero current maximum</li> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>186 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>150 1/h</li> </ul>	-	
<ul> <li>limited to 30 s switching at zero current maximum</li> <li>limited to 60 s switching at zero current maximum</li> <li>186 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>152 A; Use minimum cross-section acc. to AC-1 rated value</li> <li>150 1/h</li> <li>operating frequency</li> <li>at AC-1 maximum</li> <li>1000 1/h</li> </ul>	-	
• limited to 60 s switching at zero current maximum       152 A; Use minimum cross-section acc. to AC-1 rated value         no-load switching frequency       • at DC         • at DC       1 500 1/h         operating frequency       • at AC-1 maximum         • at AC-1 maximum       1 000 1/h	-	
no-load switching frequency     1 500 1/h       • at DC     1 500 1/h       operating frequency     1 000 1/h	-	
• at DC     1 500 1/h       operating frequency     1 000 1/h		152 A; Use minimum cross-section acc. to AC-1 rated value
operating frequency     1 000 1/h		
at AC-1 maximum     1 000 1/h		1 500 1/h
• at AC-2 maximum 750 1/h		
	at AC-2 maximum	750 1/h

e at AC 2 maximum	750.1/b		
• at AC-3 maximum	750 1/h		
<ul> <li>at AC-3e maximum</li> <li>at AC-4 maximum</li> </ul>	750 1/h		
at AC-4 maximum Control circuit/ Control	250 1/h		
type of voltage of the control supply voltage	DC		
control supply voltage at DC <ul> <li>rated value</li> </ul>	24 V		
operating range factor control supply voltage rated	27 V		
value of magnet coil at DC			
initial value	0.8		
• full-scale value	1.1		
design of the surge suppressor	with varistor		
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 17.5 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	1		
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]			
<ul> <li>for single-phase AC motor</li> </ul>			
— at 110/120 V rated value	3 hp		
— at 230 V rated value	5 hp		
<ul> <li>for 3-phase AC motor</li> </ul>			
— 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			
<ul> <li>for short-circuit protection of the main circuit</li> </ul>			
— with type of coordination 1 required	gG: 125A (690V,100kA), aM: 50A (690V,100kA), BS88: 125A (415V,80kA)		
— with type of assignment 2 required	(415V,80KA) gG: 50A (690V,100kA), aM: 25A (690V, 100kA), BS88: 50A (415V, 80kA)		
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)		
Installation/ mounting/ dimensions			
mounting position	+/-180° rotation possible on vertical mounting surface; can be tilted forward and backward by +/- 22.5° on vertical mounting surface		
fastening method	screw and snap-on mounting onto 35 mm standard mounting rail according to DIN EN 60715		
<ul> <li>side-by-side mounting</li> </ul>	Yes		
height	102 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		
<ul> <li>for grounded parts</li> </ul>			
— 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			
<ul> <li>for main current circuit</li> </ul>	spring-loaded terminals		
<ul> <li>for auxiliary and control circuit</li> </ul>	spring-loaded terminals		
<ul> <li>at contactor for auxiliary contacts</li> </ul>	Spring-type terminals		
<ul> <li>of magnet coil</li> </ul>	Spring-type terminals		
type of connectable conductor cross-sections			
<ul> <li>for main contacts</li> </ul>			
— solid	2x (1 10 mm²)		
— solid or stranded	2x (1 10 mm²)		
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 6 mm²)		
<ul> <li>— finely stranded without core end processing</li> </ul>	2x (1 6 mm²)		
at AWG cables for main contacts	2x (18 8)		
connectable conductor cross-section for main contacts			
solid	1 10 mm²		
stranded	1 10 mm <sup>2</sup>		
<ul> <li>finely stranded with core end processing</li> </ul>	1 6 mm <sup>2</sup>		
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	1 6 mm <sup>2</sup>		
connectable conductor cross-section for auxiliary contacts			
solid or stranded	0.5 2.5 mm²		
	0.5 2.5 mm <sup>2</sup>		
<ul> <li>finely stranded with core end processing</li> <li>finely stranded without core end processing</li> </ul>	0.5 1.5 mm <sup>2</sup>		
finely stranded without core end processing     type of connectable conductor cross-sections			
type of connectable conductor cross-sections			

e for auxiliany cor	atacte					
-	for auxiliary contacts     solid or stranded		$2x (0.5 - 2.5 \text{ mm}^2)$			
<ul> <li>— solid or stranded</li> <li>— finely stranded with core end processing</li> </ul>		$2x (0.5 \dots 2.5 \text{ mm}^2)$				
<ul> <li>— finely stranded with core end processing</li> <li>— finely stranded without core end processing</li> </ul>		2x (0.5 1.5 mm²) 2x (0.5 2.5 mm²)				
	for auxiliary contacts	locessing	2x (0.5 2.5 mint ) 2x (20 14)			
	ded connectable cond	uctor cross	2X (20 14)			
for main contacts		18 8				
<ul> <li>for auxiliary cor</li> </ul>	ntacts		20 14			
Safety related data						
product function						
•	according to IEC 60947-	4-1	Yes			
	n operation according to		No			
-	lemand rate according t	o SN 31920	450 000			
proportion of dange						
	nd rate according to SN	31920	40 %			
	nd rate according to SN		73 %			
	low demand rate accord		100 FIT			
	on the front according	to IEC	IP20			
touch protection on suitability for use	the front according to	DIEC 60529	finger-safe, for vertical conta	act from the front		
<ul> <li>safety-related s</li> </ul>	witching on		Yes			
<ul> <li>safety-related s</li> </ul>	-		Yes			
Certificates/ approval	S					
General Product Ap	pproval					
(SP)	<u>Confirmation</u>			<u>KC</u>	EHC	
540	Functional	Destaustion	0	T		
EMC	Safety/Safety of Machinery	Declaration of	Conformity	Test Certificates		
RCM	<u>Type Examination</u> <u>Certificate</u>	CE EG-Konf.	<u>UK Declaration of</u> <u>Conformity</u>	Special Test Certific- ate	<u>Type Test Certific-</u> ates/Test Report	
Marine / Shipping						
ABS	BUREAU VERITAS		Lloyd's Register uis	PRS	RINA	
Marine / Shipping	other		Dangerous Good			
RMRS	<u>Confirmation</u>		<u>Transport Informa-</u> <u>tion</u>			
Further information						

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Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2028-2DB40

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2028-2DB40

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-2DB40

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

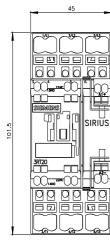
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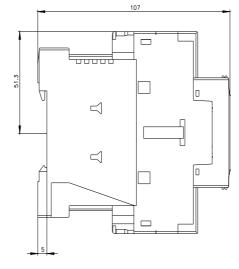
Characteristic: Tripping characteristics, I<sup>2</sup>t, Let-through current

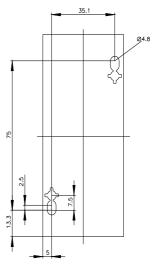
https://support.industry.siemens.com/cs/ww/en/ps/3RT2028-2DB40/char

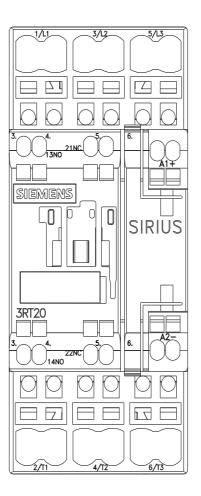
Further characteristics (e.g. electrical endurance, switching frequency)

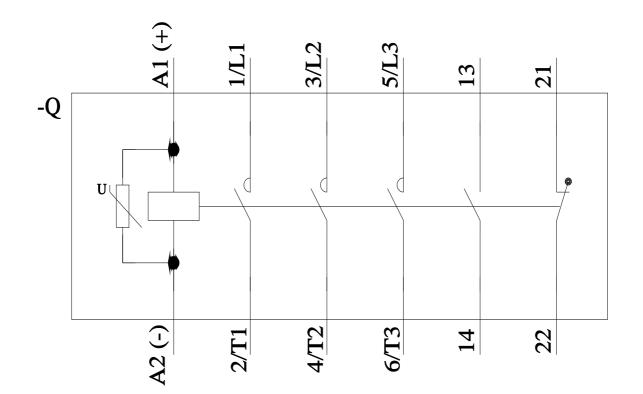
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