## **SIEMENS**

Data sheet 3RT2027-2AN20



power contactor, AC-3e/AC-3, 32 A, 15 kW / 400 V, 3-pole, 220 V AC, 50/60 Hz, auxiliary contacts: 1 NO + 1 NC, spring-loaded terminal, size: S0

product brand name	SIRIUS
product designation	Power contactor
product type designation	3RT2
General technical data	
size of contactor	S0
product extension	
<ul> <li>function module for communication</li> </ul>	No
auxiliary switch	Yes
power loss [W] for rated value of the current	
<ul> <li>at AC in hot operating state</li> </ul>	6.3 W
<ul> <li>at AC in hot operating state per pole</li> </ul>	2.3 W
<ul> <li>without load current share typical</li> </ul>	2.7 W
type of calculation of power loss depending on pole	quadratic
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
<ul> <li>of auxiliary circuit rated value</li> </ul>	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)	
<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)	
Weight	0.46 kg
Ambient conditions	
installation altitude at height above sea level maximum	2 000 m
ambient temperature	
<ul> <li>during operation</li> </ul>	-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. Tri Ng
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	42 A
at AC-3  — at 400 V rated value	32 A
— at 400 V rated value  — at 500 V rated value	32 A
— at 690 V rated value	21 A
• at AC-3e	
— at 400 V rated value	32 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	26.5 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	27 A
<ul><li>up to 690 V for current peak value n=20 rated value</li><li>at AC-6a</li></ul>	21 A
— up to 230 V for current peak value n=30 rated value	20.5 A
— up to 400 V for current peak value n=30 rated value	20.5 A
— up to 500 V for current peak value n=30 rated value	18 A
— up to 690 V for current peak value n=30 rated value	18 A
minimum cross-section in main circuit at maximum AC-1 rated value	10 mm²
operational current for approx. 200000 operating cycles at AC-4	40.4
at 400 V rated value     at 600 V rated value	12 A
at 690 V rated value     operational current	12 A
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
<ul> <li>with 2 current paths in series at DC-1</li> </ul>	
— 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	5 A
— at 440 V rated value	1 A
— at 600 V rated value	0.8 A

with 3 current paths in series at DC-1	
— at 24 V rated value	35 A
— at 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
• at 1 current path at DC-3 at DC-5	
— at 24 V rated value	20 A
— at 60 V rated value	5 A
— at 220 V rated value	1A
— 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-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 kW
— at 690 V rated value	18.5 kW
• at AC-3e	
— at 230 V rated value	7.5 kW
— at 400 V rated value	15 kW
— at 500 V rated value	15 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 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	23.3 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	15.5 kVA
• up to 690 V for current peak value n=30 rated value	21.5 kVA
short-time with stand current in cold operating state up to 40 $^{\circ}\text{C}$	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	499 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	341 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	260 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	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

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 50 Hz         340 ms           at 60 Hz         116 ms           arcting time         1010 ms           colonial control value power of magnet coll at Ac         416 ms           arcing time         1010 ms           control	• 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 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           •	· · · · · ·	
Number of NO contacts for auxiliary contacts instantaneous contact	number of NC contacts for auxiliary contacts instantaneous	1
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		•
operational current at AC-15		1
<ul> <li>at 230 V rated value</li> <li>at 400 V rated value</li> <li>3 A</li> <li>at 500 V rated value</li> <li>2 A</li> <li>at 690 V rated value</li> <li>1 A</li> </ul> Operational current at DC-12 <ul> <li>at 24 V rated value</li> <li>6 A</li> <li>at 48 V rated value</li> <li>6 A</li> <li>at 110 V rated value</li> <li>at 25 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 48 V rated value</li> <li>at 48 V rated value</li> <li>at 10 A</li> <li>at 600 V rated value</li> <li>at 10 A</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 125 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 220 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	operational current at AC-12 maximum	
<ul> <li>at 400 V rated value</li> <li>at 500 V rated value</li> <li>2 A</li> <li>at 690 V rated value</li> <li>1 A</li> </ul> Operational current at DC-12 <ul> <li>at 24 V rated value</li> <li>6 A</li> <li>at 60 V rated value</li> <li>6 A</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 24 V rated value</li> <li>at 25 V rated value</li> <li>at 25 V rated value</li> <li>at 200 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 60 V rated value</li> <li>at 24 V rated value</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 70 A</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 120 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	operational current at 7 to 12 maximum	10 A
<ul> <li>at 500 V rated value</li> <li>at 690 V rated value</li> <li>1 A</li> </ul> Operational current at DC-12 <ul> <li>at 24 V rated value</li> <li>6 A</li> <li>at 60 V rated value</li> <li>6 A</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 24 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 20 V rated value</li> <li>at 220 V rated value</li> </ul>	·	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
<ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 24 V rated value</li> <li>at 24 V rated value</li> <li>at 24 V rated value</li> <li>at 26 V rated value</li> <li>at 27 V rated value</li> <li>at 28 V rated value</li> <li>at 29 V rated value</li> <li>at 20 V rated value</li> <li>at 10 V rated value</li> <li>at 125 V rated</li></ul>	operational current at AC-15  • at 230 V rated value  • at 400 V rated value	10 A 3 A
<ul> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>onumber of the control of t</li></ul>	operational current at AC-15         • at 230 V rated value         • at 400 V rated value         • at 500 V rated value	10 A 3 A 2 A
<ul> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>ot 600 V rated value</li> <li>operational current at DC-13</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	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	10 A 3 A 2 A
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>operational current at DC-13</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 200 V rated value</li> <li>at 300 V rated value</li> <li>at 200 V rated value</li> <li>at 300 V rated value</li> <li>at 300 V rated value</li> <li>300 V rated value</li> <li>300 V rated value</li> <li>300 V rated value</li> <li>300 V rated value</li> </ul>	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	10 A 3 A 2 A 1 A
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>operational current at DC-13</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 100 V rated value</li> <li>at 125 V rated value</li> </ul>	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	10 A 3 A 2 A 1 A
<ul> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.15 A</li> </ul> Operational current at DC-13 <ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	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	10 A 3 A 2 A 1 A
<ul> <li>at 600 V rated value</li> <li>operational current at DC-13</li> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 115 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>1A</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>10 A</li> <li></li></ul>	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	10 A 3 A 2 A 1 A  10 A 6 A 6 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 • 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
<ul> <li>at 24 V rated value</li> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> </ul>	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
<ul> <li>at 48 V rated value</li> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> <li>at 600 V rated value</li> </ul>	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
<ul> <li>at 60 V rated value</li> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.3 A</li> <li>at 600 V rated value</li> <li>0.1 A</li> </ul>	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
<ul> <li>at 110 V rated value</li> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.1 A</li> </ul>	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 6 A 2 A 1 A 0.15 A
<ul> <li>at 125 V rated value</li> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.3 A</li> <li>0.1 A</li> </ul>	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
<ul> <li>at 220 V rated value</li> <li>at 600 V rated value</li> <li>0.3 A</li> <li>0.1 A</li> </ul>	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	27 A
at 600 V rated value	27 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	2 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	20 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
fastening method	backward by +/- 22.5° on vertical mounting surface screw and snap-on mounting onto 35 mm DIN rail according to DIN EN 60715
height	102 mm
width	45 mm
depth	97 mm
required spacing	VI IIIII
with side-by-side mounting	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	0 mm
for grounded parts	V IIIII
— 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	spring-loaded terminals
for auxiliary and control circuit	spring-loaded terminals
at contactor for auxiliary contacts	Spring-type terminals
of magnet coil	Spring-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid	2x (1 10 mm²)
— solid or stranded	2x (1 10 mm²)
finely stranded with core end processing	2x (1 6 mm²)
finely stranded without core end processing	2x (1 6 mm²)
• for AWG cables for main contacts	2x (18 8)
connectable conductor cross-section for main contacts	
• solid	1 10 mm²
• stranded	1 10 mm²
finely stranded with core end processing	1 6 mm²
finely stranded without core end processing	1 6 mm²

connectable conductor cross-section for auxiliary contacts	
<ul> <li>solid or stranded</li> </ul>	0.5 2.5 mm <sup>2</sup>
<ul> <li>finely stranded with core end processing</li> </ul>	0.5 1.5 mm <sup>2</sup>
<ul> <li>finely stranded without core end processing</li> </ul>	0.5 2.5 mm²
type of connectable conductor cross-sections	
<ul> <li>for auxiliary contacts</li> </ul>	
— solid or stranded	2x (0.5 2.5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²)
<ul> <li>finely stranded without core end processing</li> </ul>	2x (0.5 2.5 mm²)
<ul> <li>for AWG cables for auxiliary contacts</li> </ul>	2x (20 14)
AWG number as coded connectable conductor cross section	
• for main contacts	18 8
<ul> <li>for auxiliary contacts</li> </ul>	20 14
Safety related data	
product function	
<ul> <li>mirror contact according to IEC 60947-4-1</li> </ul>	Yes
<ul> <li>positively driven operation according to IEC 60947-5-1</li> </ul>	No
<ul> <li>suitable for safety function</li> </ul>	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	
<ul> <li>with low demand rate according to SN 31920</li> </ul>	40 %
<ul> <li>with high demand rate according to SN 31920</li> </ul>	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	
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
Approvals Certificates	
General Product Approval	

General Product Approval





Confirmation





<u>KC</u>

General Product Approval

EMV

**Functional Saftey** 

**Test Certificates** 

Marine / Shipping





Type Examination Certificate

Special Test Certificate

Type Test Certificates/Test Report



Marine / Shipping











Miscellaneous

other Railway Environment



## Further information

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)

Cax online generator

http://support.automation.siemens.com/WW/CAXorder/default.aspx?lang=en&mlfb=3RT2027-2AN20

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

https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-2AN20

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

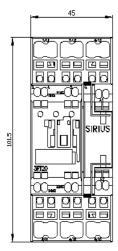
http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2027-2AN20&lang=en

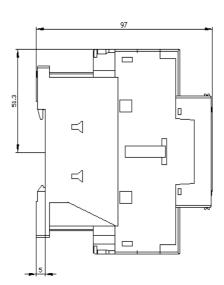
Characteristic: Tripping characteristics, I²t, Let-through current

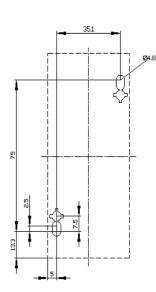
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-2AN20/char

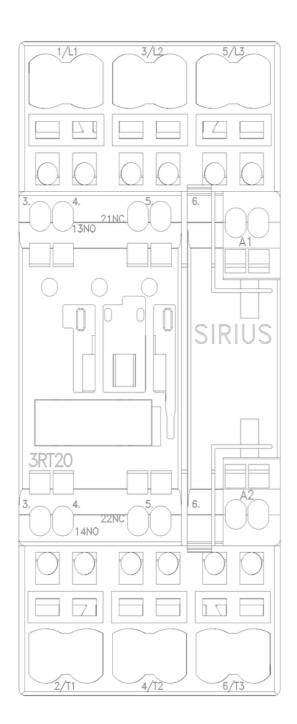
Further characteristics (e.g. electrical endurance, switching frequency)

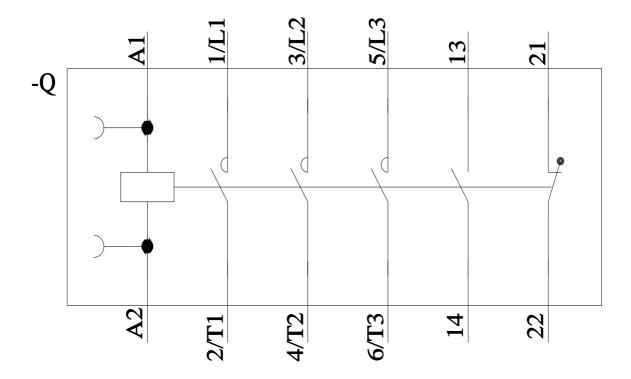
http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-2AN20&objecttype=14&gridview=view1











last modified: