## **SIEMENS**

Data sheet 3RT2027-1AC20



Power contactor, AC-3 32 A, 15 kW / 400 V 1 NO + 1 NC, 24 V AC 50/60 Hz, 3-pole Size S0, screw terminals

product designation product type designation General technical data size of contactor S0 product extension • function module for communication • auxiliary switch power loss [W] for rated value of the current at AC in hot operating state • per pole power loss [W] for rated value of the current without load current share typical surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • of the contactor ac c. to EN 60947-1  shock resistance at rectangular impulse • at AC  shock resistance at rectangular impulse • at AC  shock resistance with sine pulse • at AC  shock resistance with sine pulse • at AC  shock resistance with deded electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage  * 55 +80 °C  * ambient temperature during storage  * 55 +80 °C  * ambient temperature during storage  * operating voltage at AC-3 rated value maximum  operational current  operational current  operational current  operational current  operational current	product brand name	SIRIUS
Size of contactor product extension function module for communication function module for communication for auxiliary switch yes auxiliary switch yes service for rated value of the current at AC in hot operating state for main circuit rated value of the current without load current share typical surge voltage resistance of main circuit rated value for main contacts acc. to EN 60947-1 shock resistance at rectangular impulse for contactor typical surge voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse for contactor typical for contactor typical for contactor typical for contactor with added electronically optimized auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added auxiliary switch block typical for the contactor with added for the current without for the current without for the current without for the	product designation	Power contactor
size of contactor  product extension  • function module for communication  • auxiliary switch  power loss [W] for rated value of the current at AC in hot operating state  • per pole  • per pole  power loss [W] for rated value of the current without load current share typical  surge voltage resistance  • of main circuit rated value  • of auxiliary circuit rated value  • at AC  shock resistance at rectangular impulse  • at AC  shock resistance with sine pulse  • at AC  shock resistance with sine pulse  • at AC  shock resistance with sine pulse  • at AC  so contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during operation  • ambient temperature during storage  • operating voltage at AC-3 rated value maximum  No  No  No  8.1 W  9.27 W  10.5 W  10	product type designation	3RT2
product extension  • function module for communication  • auxiliary switch  power loss [W] for rated value of the current at AC in hot operating state  • per pole  power loss [W] for rated value of the current without load current share typical  surge voltage resistance  • of main circuit rated value  • of auxiliary circuit rated value  • of main cortacts acc. to EN 60947-1  shock resistance at rectangular impulse  • at AC  shock resistance with sine pulse  • at AC  mechanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block ty	General technical data	
• function module for communication • auxiliary switch power loss [W] for rated value of the current at AC in hot operating state • per pole power loss [W] for rated value of the current without load current share typical surge voltage resistance • of main circuit rated value • of auxiliary circuit rated value • of the contacts ac. to EN 60947-1 shock resistance at rectangular impulse • at AC shock resistance with sine pulse • at AC shock resistance with sine pulse • at AC 13,5g / 5 ms, 8,3g / 10 ms  mechanical service life (switching cycles) • of contactor typical • of the contactor with added electronically optimized auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical	size of contactor	S0
ower loss [W] for rated value of the current at AC in hot operating state  o per pole  power loss [W] for rated value of the current without load current share typical  surge voltage resistance  of main circuit rated value  of auxiliary circuit rated value  of auxiliary circuit rated value  of auxiliary circuit rated value  at AC  shock resistance at rectangular impulse  of AC  shock resistance with sine pulse  of contactor typical  of the contactor typical  of the contactor with added electronically optimized auxiliary switch block typical  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum  operating voltage at AC-3 rated value maximum  operating voltage at AC-3 rated value maximum  operating voltage at AC-3 rated value maximum  surge voltage resistance  10.5 W  1	product extension	
power loss [W] for rated value of the current at AC in hot operating state  • per pole  power loss [W] for rated value of the current without load current share typical  surge voltage resistance  • of main circuit rated value  • of auxiliary circuit rated value  • of auxiliary circuit rated value  • of auxiliary circuit rated value  maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse  • at AC  shock resistance with sine pulse  • at AC  shock resistance with sine pulse  • at AC  auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • operating voltage at AC-3 rated value maximum  8.1 W  2.7 W  10.5 W  10	<ul> <li>function module for communication</li> </ul>	No
operating state	auxiliary switch	Yes
power loss [W] for rated value of the current without load current share typical  surge voltage resistance  of main circuit rated value  for MV  maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse  ot AC  shock resistance with sine pulse  ot AC  shock resistance with sine pulse  of contactor typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  10 000 000  10 000 000  10 000 000  10 000 00		8.1 W
ioad current share typical surge voltage resistance of main circuit rated value of auxiliary circuit rated value maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1 shock resistance at rectangular impulse of at AC shock resistance with sine pulse of contactor typical of the contactor with added electronically optimized auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical of the contactor with added auxiliary switch block typical reference code acc. to IEC 81346-2 Q Ambient conditions installation altitude at height above sea level maximum  ambient temperature during operation of ambient temperature during storage  size +60 °C of the contacts for main current circuit number of poles for main current circuit number of NO contacts for main contacts of the contact o	• per pole	2.7 W
of main circuit rated value     of auxiliary circuit rated value     of auxiliary circuit rated value     amximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1      shock resistance at rectangular impulse     o at AC     shock resistance with sine pulse     ot at AC     shock resistance with sine pulse     of contactor typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typical     of the contactor with added auxiliary switch block     typic		10.5 W
of auxiliary circuit rated value     maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse     ot AC     ot AC     shock resistance with sine pulse     ot AC     in at AC     in an incincuit reference code acc. to IEC 81346-2  Ambient conditions installation altitude at height above sea level maximum  onumber of Poles for main current circuit number of NO contacts for main contacts  onumber of NO contacts for main contacts  onumber of NO contacts for main contacts  onumber of NO contacts acc. to EN 60947-1  400 V  40	surge voltage resistance	
maximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse  • at AC  shock resistance with sine pulse  • at AC  at AC  mechanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor	<ul> <li>of main circuit rated value</li> </ul>	6 kV
coil and main contacts acc. to EN 60947-1  shock resistance at rectangular impulse  • at AC  shock resistance with sine pulse  • at AC  shock resistance with sine pulse  • at AC  at AC  mechanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • abo °C  • ambient temperature during storage  **The total Condition of the contacts for main current circuit  number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  690 V	of auxiliary circuit rated value	6 kV
* at AC     * shock resistance with sine pulse     * at AC     * at AC     * 13,5g / 5 ms, 8,3g / 10 ms  mechanical service life (switching cycles)     * of contactor typical     * of the contactor with added electronically optimized auxiliary switch block typical     * of the contactor with added auxiliary switch block typical     * of the contactor with added auxiliary switch block typical     * of the contactor with added auxiliary switch block typical     * of the contactor with added auxiliary switch block typical     * of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Q  Ambient conditions installation altitude at height above sea level maximum     * ambient temperature during operation     * ambient temperature during storage     * of the contactor with added electronically optimized     * ambient temperature during operation     * ambient temperature during storage  Main circuit  number of poles for main current circuit 3 number of NO contacts for main contacts 3  • operating voltage at AC-3 rated value maximum  690 V		400 V
shock resistance with sine pulse  • at AC  mechanical service life (switching cycles)  • of contactor typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  10 000 000  10 000 000  20 000  10 000 000  20 000  10 000 000  10 000 000  10 000 00	shock resistance at rectangular impulse	
at AC     mechanical service life (switching cycles)     of contactor typical     of the contactor with added electronically optimized auxiliary switch block typical     of the contactor with added auxiliary switch block typical     of the contactor with added auxiliary switch block typical      reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum      ambient temperature during operation     ambient temperature during storage  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts     operating voltage at AC-3 rated value maximum  13,5g / 5 ms, 8,3g / 10 ms  10 000 000  5 000 000  10 000 000  10 000 000  10 000 00	• at AC	8,3g / 5 ms, 5,3g / 10 ms
mechanical service life (switching cycles)  ● of contactor typical  ● of the contactor with added electronically optimized auxiliary switch block typical  ● of the contactor with added auxiliary switch block typical  ● of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum  ● ambient temperature during operation  ● ambient temperature during storage  Position 2 000 m  ● ambient temperature during storage  ■ 25 +60 °C  ● ambient temperature during storage  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  ● operating voltage at AC-3 rated value maximum  690 V	shock resistance with sine pulse	
<ul> <li>of contactor typical</li> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>reference code acc. to IEC 81346-2</li> <li>Q</li> <li>Ambient conditions</li> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature during operation</li> <li>-25 +60 °C</li> <li>ambient temperature during storage</li> <li>-55 +80 °C</li> </ul> Main circuit <ul> <li>number of poles for main current circuit</li> <li>number of NO contacts for main contacts</li> <li>operating voltage at AC-3 rated value maximum</li> <li>690 V</li> </ul>	• at AC	13,5g / 5 ms, 8,3g / 10 ms
<ul> <li>of the contactor with added electronically optimized auxiliary switch block typical</li> <li>of the contactor with added auxiliary switch block typical</li> <li>reference code acc. to IEC 81346-2</li> <li>Ambient conditions         <ul> <li>installation altitude at height above sea level maximum</li> <li>ambient temperature during operation</li> <li>ambient temperature during storage</li> <li>-25 +60 °C</li> <li>ambient temperature during storage</li> </ul> </li> <li>Main circuit         <ul> <li>number of poles for main current circuit</li> <li>number of NO contacts for main contacts</li> <li>operating voltage at AC-3 rated value maximum</li> </ul> </li> <li>5 000 000</li> <li>10 000 000</li> <li>10 000 000</li> <li>10 000 000</li> </ul> <li>10 000 000</li> <li>10 000 00</li> <li>10</li>	mechanical service life (switching cycles)	
auxiliary switch block typical  of the contactor with added auxiliary switch block typical  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum  ombient temperature during operation ombient temperature during storage  -25 +60 °C ombient circuit  number of poles for main current circuit number of NO contacts for main contacts  operating voltage at AC-3 rated value maximum  10 000 000  10 000 000  10 000 000  10 000 00	<ul> <li>of contactor typical</li> </ul>	10 000 000
typical  reference code acc. to IEC 81346-2  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • ambient temperature during storage  -25 +60 °C  • ambient temperature during storage  -55 +80 °C  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  690 V		5 000 000
Ambient conditions  installation altitude at height above sea level maximum  ● ambient temperature during operation • ambient temperature during storage  -25 +60 °C  • ambient temperature during storage  -55 +80 °C  Main circuit  number of poles for main current circuit number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  690 V	The state of the s	10 000 000
installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  -25 +60 °C  • ambient temperature during storage  -55 +80 °C  Main circuit  number of poles for main current circuit  number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  690 V	reference code acc. to IEC 81346-2	Q
<ul> <li>ambient temperature during operation</li> <li>ambient temperature during storage</li> <li>-25 +60 °C</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>number of NO contacts for main contacts</li> <li>operating voltage at AC-3 rated value maximum</li> <li>-25 +60 °C</li> <li>3</li> <li>690 V</li> </ul>	Ambient conditions	
<ul> <li>◆ ambient temperature during storage</li> <li>-55 +80 °C</li> <li>Main circuit</li> <li>number of poles for main current circuit</li> <li>number of NO contacts for main contacts</li> <li>◆ operating voltage at AC-3 rated value maximum</li> <li>690 V</li> </ul>	installation altitude at height above sea level maximum	2 000 m
Main circuit  number of poles for main current circuit number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  690 V	<ul> <li>ambient temperature during operation</li> </ul>	-25 +60 °C
number of poles for main current circuit  number of NO contacts for main contacts  operating voltage at AC-3 rated value maximum  690 V	ambient temperature during storage	-55 +80 °C
number of NO contacts for main contacts  ● operating voltage at AC-3 rated value maximum  690 V	Main circuit	
operating voltage at AC-3 rated value maximum     690 V	number of poles for main current circuit	3
1,000	number of NO contacts for main contacts	3
	operating voltage at AC-3 rated value maximum	690 V

<ul> <li>at AC-1 at 400 V at ambient temperature 40 °C rated value</li> <li>at AC-1</li> </ul>	50 A
<ul> <li>up to 690 V at ambient temperature 40 °C rated value</li> </ul>	50 A
<ul> <li>up to 690 V at ambient temperature 60 °C rated value</li> </ul>	42 A
• at AC-3	
— 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	
<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
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	27 A
— up to 690 V for current peak value n=20 rated value	21 A
• at AC-6a	00.5 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>	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 mm <sup>2</sup>
operational current for approx. 200000 operating	
cycles at AC-4	
• at 400 V rated value	12 A
<ul><li>at 400 V rated value</li><li>at 690 V rated value</li></ul>	12 A 12 A
at 400 V rated value     at 690 V rated value     operational current	
at 400 V rated value     at 690 V rated value     operational current     at 1 current path at DC-1	12 A
at 400 V rated value  at 690 V rated value  operational current  at 1 current path at DC-1  at 24 V rated value	12 A 35 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> operational current <ul> <li>at 1 current path at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> </ul>	12 A 35 A 4.5 A
at 400 V rated value  at 690 V rated value  operational current  at 1 current path at DC-1  at 24 V rated value  at 110 V rated value  at 220 V rated value	12 A 35 A 4.5 A 1 A
at 400 V rated value  at 690 V rated value  operational current  at 1 current path at DC-1  at 24 V rated value  at 110 V rated value  at 220 V rated value  at 440 V rated value	12 A 35 A 4.5 A 1 A 0.4 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> operational current <ul> <li>at 1 current path at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> </ul>	12 A 35 A 4.5 A 1 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> operational current <ul> <li>at 1 current path at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-1</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> operational current <ul> <li>at 1 current path at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-1</li> <li>at 24 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A
at 400 V rated value  at 690 V rated value  operational current  at 1 current path at DC-1  at 24 V rated value  at 110 V rated value  at 220 V rated value  at 440 V rated value  at 600 V rated value  at 600 V rated value  at 600 V rated value  at 24 V rated value  at 110 V rated value	35 A 4.5 A 1 A 0.4 A 0.25 A
at 400 V rated value  at 690 V rated value  operational current  at 1 current path at DC-1  at 24 V rated value  at 110 V rated value  at 220 V rated value  at 440 V rated value  at 600 V rated value  at 600 V rated value  at 24 V rated value  at 210 V rated value  at 220 V rated value  at 220 V rated value	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> operational current <ul> <li>at 1 current path at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 36 A 1 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> </ul> operational current <ul> <li>at 1 current path at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> <li>with 2 current paths in series at DC-1</li> <li>at 24 V rated value</li> <li>at 110 V rated value</li> <li>at 110 V rated value</li> <li>at 220 V rated value</li> <li>at 440 V rated value</li> <li>at 440 V rated value</li> <li>at 600 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value </li> <li>with 3 current paths in series at DC-1</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  — at 440 V rated value  — at 440 V rated value  — at 24 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 1 A 0.8 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 440 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 210 V rated value  — at 210 V rated value  — at 220 V rated value  — at 220 V rated value  — at 220 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A  35 A 35 A 35 A 35 A 5 A 1 A 0.8 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value  — at 110 V rated value  — at 24 V rated value  — at 24 V rated value  — at 110 V rated value  — at 140 V rated value  — at 140 V rated value  — at 440 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 600 V rated value</li> <li>with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 24 V rated value  — at 440 V rated value  — at 600 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A  35 A 35 A 35 A 35 A 5 A 1 A 0.8 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 600 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 440 V rated value  — at 110 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 600 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 600 V rated value</li> <li>with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 24 V rated value  — at 440 V rated value  — at 600 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A
<ul> <li>at 400 V rated value</li> <li>at 690 V rated value</li> <li>operational current</li> <li>at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 600 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 24 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 110 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 100 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value</li> </ul>	35 A 4.5 A 1 A 0.4 A 0.25 A 35 A 35 A 5 A 1 A 0.8 A 35 A 35 A 35 A 35 A 35 A 35 A

— at 220 V rated value	1 A
— at 440 V rated value	0.09 A
— at 600 V rated value	0.06 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 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
<ul> <li>with 3 current paths in series at DC-3 at DC-5</li> </ul>	
— at 24 V rated value	35 A
— at 110 V rated value	35 A
— at 220 V rated value	10 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.6 A
operating power	0.071
• at AC-3	
— at 230 V rated value	7.5 kW
— at 400 V rated value	1.5 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-4	
at 400 V rated value	6 kW
at 690 V rated value	10.3 kW
operating apparent power at AC-6a	10.0 KW
• up to 230 V for current peak value n=20 rated value	12.2 kV·A
• up to 400 V for current peak value n=20 rated value	21.3 kV·A
up to 500 V for current peak value n=20 rated value	23.3 kV·A
up to 690 V for current peak value n=20 rated value	25 kV·A
operating apparent power at AC-6a	201071
up to 230 V for current peak value n=30 rated value	8.1 kV·A
up to 400 V for current peak value n=30 rated value	14.2 kV·A
up to 500 V for current peak value n=30 rated value	15.5 kV·A
up to 690 V for current peak value n=30 rated value	21.5 kV·A
short-time withstand current in cold operating state	21.3 KV A
up to 40 °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>	395 A; Use minimum cross-section acc. to AC-1 rated value
Iimited to 10 s switching at zero current maximum	260 A; Use minimum cross-section acc. to AC-1 rated value
limited to 30 s switching at zero current maximum	186 A; Use minimum cross-section acc. to AC-1 rated value
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 AC	5 000 1/h
operating frequency	
• at AC-1 maximum	1 000 1/h
at AC-2 maximum	750 1/h
• at AC-3 maximum	750 1/h
• at AC-4 maximum	250 1/h
Control circuit/ Control	
type of voltage of the control supply voltage	AC
control supply voltage at AC	
• at 50 Hz rated value	24 V
at 60 Hz rated value      at 60 Hz rated value	24 V
operating range factor control supply voltage rated	L7 V
value of magnet coil at AC	
• at 50 Hz	0.8 1.1
• at 60 Hz	0.85 1.1
apparent pick-up power of magnet coil at AC	

● at 50 Hz	81 V·A
● at 60 Hz	79 V·A
inductive power factor with closing power of the coil	
● at 50 Hz	0.72
● at 60 Hz	0.74
apparent holding power of magnet coil at AC	
● at 50 Hz	10.5 V·A
● at 60 Hz	8.5 V·A
inductive power factor with the holding power of the coil	
● at 50 Hz	0.25
● at 60 Hz	0.28
closing delay	
• at AC	8 40 ms
opening delay	
• at AC	4 16 ms
arcing time	10 10 ms
control version of the switch operating mechanism	Standard A1 - A2
Auxiliary circuit	
number of NC contacts for auxiliary contacts instantaneous contact	1
number of NO contacts for auxiliary contacts instantaneous contact	1
operational current at AC-12 maximum	10 A
operational current at AC-15	
<ul> <li>at 230 V rated value</li> </ul>	10 A
<ul> <li>at 400 V rated value</li> </ul>	3 A
<ul> <li>at 500 V rated value</li> </ul>	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
<ul><li>at 60 V rated value</li></ul>	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	
<ul> <li>at 24 V rated value</li> </ul>	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	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	40.1
— at 200/208 V rated value	10 hp
— at 220/230 V rated value	10 hp
— at 460/480 V rated value	
— at 575/600 V rated value	20 hp 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)
<ul> <li>for short-circuit protection of the auxiliary switch required</li> </ul>	gG: 10 A (500 V, 1 kA)
nstallation/ 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
• side-by-side mounting	Yes
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	V mm
	10 mm
— forwards	10 mm 10 mm
— upwards	
— at the side	6 mm
— downwards	10 mm
<ul> <li>for live parts</li> </ul>	
— forwards	10 mm
— upwards	10 mm
— downwards	10 mm
— at the side	6 mm
Connections/ Terminals	
type of electrical connection	
for main current circuit	screw-type terminals
<ul> <li>for auxiliary and control circuit</li> </ul>	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	,
for main contacts	
— solid	2x (1 2.5 mm²), 2x (2.5 10 mm²)
— solid or stranded	2x (1 2,5 mm²), 2x (2,5 10 mm²)
finely stranded with core end processing	2x (1 2.5 mm²), 2x (2.5 6 mm²), 1x 10 mm²
at AWG cables for main contacts	2x (16 12), 2x (14 8)
connectable conductor cross-section for main contacts	ZA (10 12), ZA (17 0)
• solid	1 10 mm²
stranded	1 10 mm²
finely stranded with core end processing	1 10 mm²
connectable conductor cross-section for auxiliary contacts	1 10 Hilli
solid or stranded	0.5 2.5 mm²
	0.5 2.5 mm <sup>2</sup>
finely stranded with core end processing  type of connectable conductor cross sections	0.5 2.5 IIIII
type of connectable conductor cross-sections	
for auxiliary contacts	Ov (0.5 4.5 mans2) Ov (0.75 0.5 mans2)
— solid or stranded	2x (0,5 1,5 mm²), 2x (0,75 2,5 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (0.5 1.5 mm²), 2x (0.75 2.5 mm²)

<ul> <li>at AWG cables for auxiliary contacts</li> </ul>	2x (20 16), 2x (18 14)
at AVVO cables for auxiliary contacts	ZX (20 10), ZX (10 14)
<ul> <li>AWG number as coded connectable conductor cross section for main contacts</li> </ul>	16 8
<ul> <li>AWG number as coded connectable conductor cross section for auxiliary contacts</li> </ul>	20 14
Safety related data	
B10 value with high demand rate acc. to SN 31920	1 000 000
proportion of dangerous failures	
<ul> <li>with low demand rate acc. to SN 31920</li> </ul>	40 %
with high demand rate acc. to SN 31920	73 %
failure rate [FIT] with low demand rate acc. to SN 31920	100 FIT
product function	
mirror contact acc. to IEC 60947-4-1	Yes
T1 value for proof test interval or service life acc. to IEC 61508	20 y
protection class IP on the front acc. to IEC 60529	IP20
touch protection on the front acc. to IEC 60529	finger-safe, for vertical contact from the front
suitability for use safety-related switching OFF	Yes
Certificates/ approvals	

**General Product Approval** 

**EMC** 







<u>KC</u>





**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping

**Miscellaneous** 



Type Test
Certificates/Test
Report

Special Test Certificate





Marine / Shipping

other









Confirmation



other

Confirmation

## **Further information**

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

https://www.siemens.com/ic10

Industry Mall (Online ordering system)

https://mall.industry.siemens.com/mall/en/en/Catalog/product?mlfb=3RT2027-1AC20

Cax online generator

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

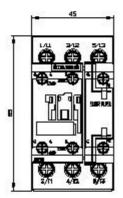
https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AC20

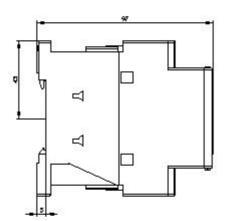
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

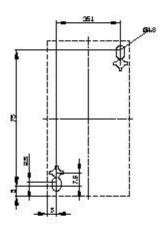
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2027-1AC20\&lang=en}}$ 

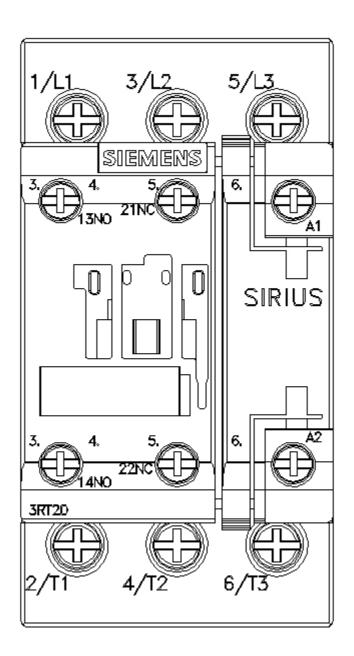
Characteristic: Tripping characteristics, I²t, Let-through current <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AC20/char">https://support.industry.siemens.com/cs/ww/en/ps/3RT2027-1AC20/char</a>

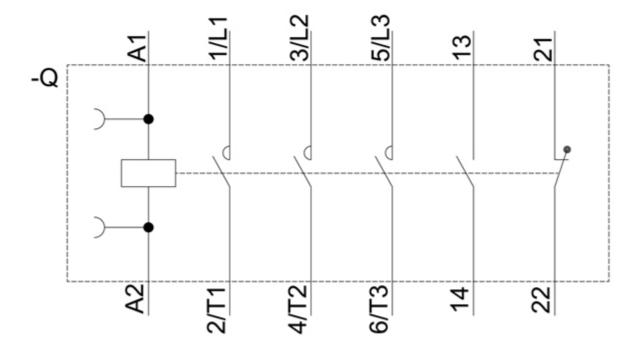
Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-1AC20&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2027-1AC20&objecttype=14&gridview=view1</a>











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