## **SIEMENS**

Data sheet 3RT2037-1AC20



Power contactor, AC-3 65 A, 30 kW / 400 V 1 NO + 1 NC, 24 V AC, 50/60 Hz 3-pole, size S2 screw terminals

product designation product type designation General technical data 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 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 tax AC  11.8g / 5 ms, 7.4g / 10 ms  shock resistance at rectangular impulse • at AC  18.5g / 5 ms, 7.4g / 10 ms  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  reference code acc. to IEC 81346-2  Q  Ambient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation • armbient temperature during storage  * 2000 m  • ambient temperature during storage  * 55 +80 °C  * armbient conditions  installation altitude at height above sea level maximum  operational current  operational current  operational current  operational current  operational current  operational current	product brand name	SIRIUS
Second   S	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  • per pole  • of main circuit rated value  • of main circuit rated value  • 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  at AC  shock resistance with sine pulse  • at AC  ac 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  • anbient conditions  installation altitude at height above sea level maximum  • ambient temperature during operation  • ambient temperature during storage  • 55 +80 °C  Main circuit  number of poles for main current circuit  3  number of NO contacts for main contacts  • operating voltage at AC-3 rated value maximum  690 V	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 auxiliary circuit rated value • of auxiliary circuit rated value  • of main contacts ace. 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 typical • of the contactor with added auxiliary switch block typical • of the contactor with added auxiliary switch block typical • of ambient conditions installation altitude at height above sea level maximum • ambient temperature during operation • ambient temperature during storage  ### AC  ###	General technical data	
In function module for communication auxiliary switch power loss [W] for rated value of the current at AC in hot operating state per pole prover 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 acc. to EN 60947-1 shock resistance at rectangular impulse of at AC shock resistance with sine pulse of contactor 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 of the contactor with added of the contactor	size of contactor	S2
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 work 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  for 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 success a level maximum  • ambient temperature during operation  • ambient temperature during storage  • ambient temperature during storage  • operating voltage at AC-3 rated value maximum  • operating voltage at AC-3 rated value maximum  690 V	product extension	
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  • 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  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  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  Altitude of NO contacts for main current circuit  number of NO contacts for main current at AC in hot during a maximum  11.4 W  17.2 W  17.2 W  17.2 W  10.00 V  6 kV  400 V  11.8g / 5 ms, 7.4g / 10 ms  18.5g / 5 ms, 11.6g / 10 ms  19.00 000  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 electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor with added electronically optimized auxiliary switch block typical  of the contactor w		11.4 W
Ioad current share typical   Surge voltage resistance   Of main circuit rated value   Of Auxiliary contacts acc. to EN 60947-1   Of Auxiliary contacts acc. to EN 60947-1   Of Auxiliary contacts acc. to EN 60947-1   Of EN 6	• per pole	3.8 W
of main circuit rated value     of auxiliary circuit rated value     of auxiliary circuit rated value     amaximum permissible voltage for safe isolation between coil and main contacts acc. to EN 60947-1      shock resistance at rectangular impulse     oat AC		17.2 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     interpretation 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      one ambient temperature during operation     one ambient temperature during storage      one of NO contacts for main current circuit     number of NO contacts for main contacts     one of NO contacts or main contacts     one of NO contacts for MO contacts for MO contacts for MO contacts f	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 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  • ambient temperature during storage  • operating voltage at AC-3 rated value maximum  690 V	<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  18.5g / 5 ms, 11.6g / 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  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added electronically optimized auxiliary switch block typical  • of the contactor with added auxiliary switch block typical  • of the cont	of auxiliary circuit rated value	6 kV
• at AC  shock resistance with sine pulse • at AC  nechanical 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 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  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  10 000 000  10 000 000  20	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     oambient 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  10 000 000  10 000 00	at AC	11.8g / 5 ms, 7.4g / 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  -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	18.5g / 5 ms, 11.6g / 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>20 00 m</li> <li>-25 +60 °C</li> <li>-35 +80 °C</li> </ul> <li>690 V</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	
■ ambient temperature during storage      -55 +80 °C  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	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  o 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  o 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
	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>	80 A
— up to 690 V at ambient temperature 40 $^{\circ}\text{C}$ rated value	80 A
— up to 690 V at ambient temperature 60 $^{\circ}$ C rated value	70 A
• at AC-3	
— at 400 V rated value	65 A
— at 500 V rated value	65 A
— at 690 V rated value	47 A
• at AC-4 at 400 V rated value	55 A
• at AC-5a up to 690 V rated value	70.4 A
• at AC-5b up to 400 V rated value	53.9 A
• at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	56.9 A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	56.9 A
<ul> <li>up to 500 V for current peak value n=20 rated value</li> </ul>	56.9 A
— up to 690 V for current peak value n=20 rated value	47 A
• at AC-6a	20. A
<ul> <li>up to 230 V for current peak value n=30 rated value</li> </ul>	38 A
— up to 400 V for current peak value n=30 rated value	38 A
<ul> <li>up to 500 V for current peak value n=30 rated value</li> </ul>	38 A
— up to 690 V for current peak value n=30 rated value	38 A
minimum cross-section in main circuit at maximum AC-1 rated value	25 mm²
operational current for approx. 200000 operating	
cycles at AC-4	
	28 A
cycles at AC-4	28 A 22 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current	
<ul> <li>cycles at AC-4</li> <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> </ul>	22 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value	22 A 55 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value	22 A 55 A 4.5 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value	22 A 55 A 4.5 A 1 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value	22 A 55 A 4.5 A 1 A 0.4 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value	22 A 55 A 4.5 A 1 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1	22 A  55 A 4.5 A 1 A 0.4 A 0.25 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value	22 A  55 A  4.5 A  1 A  0.4 A  0.25 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  • at 110 V rated value  — at 110 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A
e at 400 V rated value  • at 690 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  • 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	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 600 V rated value  • with 2 current paths in series at DC-1  — at 24 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 440 V rated value  — at 440 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  • 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 24 V rated value  — at 24 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	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  — at 600 V rated value  • 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  • with 3 current paths in series at DC-1	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A
e at 400 V rated value  • at 690 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  • 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	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A
e at 400 V rated value  • at 690 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  • 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 220 V rated value  — at 240 V rated value  — at 240 V rated value  — at 440 V rated value  — at 440 V rated value  — at 24 V rated value  — 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	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A
e at 400 V rated value  • at 690 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  • 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 220 V rated value  — at 24 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  • 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 220 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 1 A 0.8 A 55 A 45 A
e 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 600 V rated value  • with 2 current paths in series at DC-1  — at 24 V rated value  • with 2 vrated value  — at 110 V rated value  — at 24 V rated value  — at 24 V rated value  — at 250 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  — at 24 V rated value  — 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 440 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A 55 A 55 A 55 A 55 A
cycles at AC-4  • at 400 V rated value  • at 690 V rated value  operational current  • at 1 current path at DC-1  — at 24 V rated value  — at 110 V rated value  — at 220 V rated value  — at 440 V rated value  • 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 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 24 V rated value  — at 24 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 1 A 0.8 A 55 A 45 A
e 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  • with 2 current paths in series at DC-1  — at 24 V rated value  • with 2 vated value  • at 110 V rated value  — at 110 V rated value  — at 24 V rated value  — at 20 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 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 600 V rated value  — at 600 V rated value  — at 600 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A 55 A 55 A 55 A 55 A
e 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 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 220 V rated value  — at 24 V rated value  — at 250 V rated value  — at 440 V rated value  — at 600 V rated value  — at 600 V rated value  — at 24 V rated value  — at 250 V rated value  — at 260 V rated value  — at 270 V rated value  — at 270 V rated value  — at 270 V rated value  — at 440 V rated value  — at 440 V rated value  — at 440 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A 55 A 45 A 55 A 45 A 55 A 45 A
e at 400 V rated value  • at 690 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  • 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 240 V rated value  — at 440 V rated value  — at 440 V rated value  — at 600 V rated value  • with 3 current paths in series at DC-1  — at 24 V rated value  — at 440 V rated value  — at 440 V rated value  — at 110 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 600 V rated value	55 A 4.5 A 1 A 0.4 A 0.25 A 55 A 45 A 5 A 1 A 0.8 A 55 A 55 A 55 A 55 A

— at 220 V rated value	1 A
— at 440 V rated value	0.1 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	55 A
— at 110 V rated value	25 A
— at 220 V rated value	5 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	55 A
— at 110 V rated value	55 A
— at 220 V rated value	25 A
— at 440 V rated value	0.6 A
— at 600 V rated value	0.35 A
operating power	
at AC-2 at 400 V rated value	30 kW
• at AC-3	
— at 230 V rated value	18.5 kW
— at 400 V rated value	30 kW
— at 500 V rated value	37 kW
— at 690 V rated value	37 kW
operating power for approx. 200000 operating cycles	37 KVV
at AC-4	
at 400 V rated value	14.7 kW
• at 690 V rated value	20 kW
operating apparent power at AC-6a	
<ul> <li>up to 230 V for current peak value n=20 rated value</li> </ul>	22.6 kV·A
<ul> <li>up to 400 V for current peak value n=20 rated value</li> </ul>	39.4 kV·A
up to 500 V for current peak value n=20 rated value	49.2 kV·A
• up to 690 V for current peak value n=20 rated value	56.1 kV·A
operating apparent power at AC-6a	
• up to 230 V for current peak value n=30 rated value	15.1 kV·A
• up to 400 V for current peak value n=30 rated value	26.2 kV·A
• up to 500 V for current peak value n=30 rated value	32.8 kV·A
• up to 690 V for current peak value n=30 rated value	45.3 kV·A
short-time withstand current in cold operating state	
up to 40 °C	
<ul> <li>limited to 1 s switching at zero current maximum</li> </ul>	1 055 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 5 s switching at zero current maximum</li> </ul>	730 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 10 s switching at zero current maximum</li> </ul>	520 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 30 s switching at zero current maximum</li> </ul>	336 A; Use minimum cross-section acc. to AC-1 rated value
<ul> <li>limited to 60 s switching at zero current maximum</li> </ul>	272 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	800 1/h
• at AC-2 maximum	400 1/h
• at AC-3 maximum	700 1/h
• at AC-4 maximum	200 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	24 V
operating range factor control supply voltage rated 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	210 V·A
● at 60 Hz	188 V·A
inductive power factor with closing power of the coil	
● at 50 Hz	0.69
● at 60 Hz	0.65
apparent holding power of magnet coil at AC	
● at 50 Hz	17.2 V·A
● at 60 Hz	16.5 V·A
inductive power factor with the holding power of the coil	
● at 50 Hz	0.36
● at 60 Hz	0.39
closing delay	
• at AC	10 80 ms
opening delay	
• at AC	10 18 ms
arcing time	10 20 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
<ul> <li>at 48 V rated value</li> </ul>	6 A
<ul> <li>at 60 V rated value</li> </ul>	6 A
<ul> <li>at 110 V rated value</li> </ul>	3 A
at 125 V rated value	2 A
<ul> <li>at 220 V rated value</li> </ul>	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
<ul><li>at 48 V rated value</li></ul>	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	65 A
at 600 V rated value	52 A
yielded mechanical performance [hp]	
• for single-phase AC motor	
— at 110/120 V rated value	5 hp
— at 230 V rated value	10 hp
<ul> <li>for 3-phase AC motor</li> </ul>	
	20 bb
— at 200/208 V rated value	20 hp
<ul> <li>— at 200/208 V rated value</li> <li>— at 220/230 V rated value</li> <li>— at 460/480 V rated value</li> </ul>	20 hp 50 hp

— at 575/600 V rated value	50 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: 250 A (690 V, 100 kA), aM: 160 A (690 V, 100 kA), BS88: 200 A (415 V, 80 kA)
— with type of assignment 2 required	gG: 125A (690V,100kA), aM: 63A (690V,100kA), BS88: 100A (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
mounting position	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	114 mm
width	55 mm
depth	130 mm
required spacing	
<ul> <li>with side-by-side mounting</li> </ul>	
— 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
<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
for auxiliary and control circuit	screw-type terminals
at contactor for auxiliary contacts	Screw-type terminals
• of magnet coil	Screw-type terminals
type of connectable conductor cross-sections	
• for main contacts	
— solid or stranded	2x (1 35 mm²), 1x (1 50 mm²)
<ul> <li>finely stranded with core end processing</li> </ul>	2x (1 25 mm²), 1x (1 35 mm²)
at AWG cables for main contacts	2x (18 2), 1x (18 1)
connectable conductor cross-section for main contacts	
<ul> <li>finely stranded with core end processing</li> </ul>	1 35 mm²
• finely stranded with core end processing connectable conductor cross-section for auxiliary contacts	1 35 mm²
connectable conductor cross-section for auxiliary	1 35 mm <sup>2</sup> 0.5 2.5 mm <sup>2</sup>
connectable conductor cross-section for auxiliary contacts	
connectable conductor cross-section for auxiliary contacts  • solid or stranded	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing type of connectable conductor cross-sections	0.5 2.5 mm²
connectable conductor cross-section for auxiliary contacts	0.5 2.5 mm <sup>2</sup> 0.5 2.5 mm <sup>2</sup>
connectable conductor cross-section for auxiliary contacts  • solid or stranded  • finely stranded with core end processing type of connectable conductor cross-sections	0.5 2.5 mm²

18 ... 1 • AWG number as coded connectable conductor cross section for main contacts • AWG number as coded connectable conductor 20 ... 14 cross section for auxiliary contacts Safety related data B10 value with high demand rate acc. to SN 31920 1 000 000 proportion of dangerous failures • with low demand rate acc. to SN 31920 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 • positively driven operation acc. to IEC 60947-5-1 No T1 value for proof test interval or service life acc. to 20 y **IEC 61508** 

**IP20** 

Certificates/ approvals

**General Product Approval** 

**EMC** 





protection class IP on the front acc. to IEC 60529

touch protection on the front acc. to IEC 60529

suitability for use safety-related switching OFF



<u>KC</u>

finger-safe, for vertical contact from the front





**Declaration of Conformity** 

**Test Certificates** 

Marine / Shipping

**Miscellaneous** 



Type Test
Certificates/Test
Report

Special Test Certificate





Marine / Shipping

Lloyd's Register









Confirmation

other

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=3RT2037-1AC20

Cax online generator

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

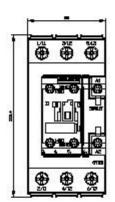
https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AC20

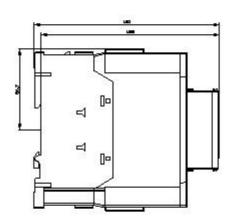
Image database (product images, 2D dimension drawings, 3D models, device circuit diagrams, EPLAN macros, ...)

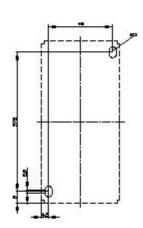
 $\underline{\text{http://www.automation.siemens.com/bilddb/cax\_de.aspx?mlfb=3RT2037-1AC20\&lang=en}}$ 

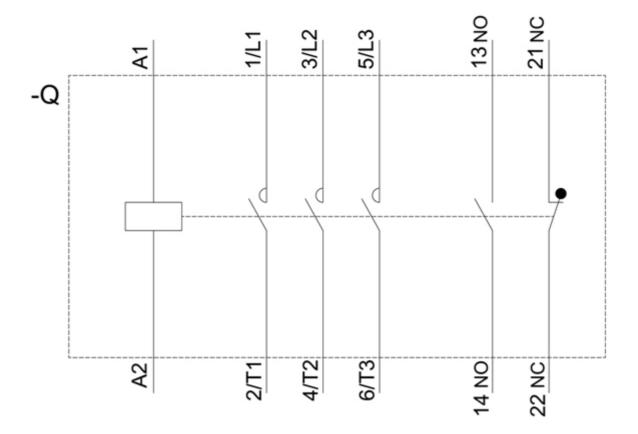
Characteristic: Tripping characteristics, I²t, Let-through current <a href="https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AC20/char">https://support.industry.siemens.com/cs/ww/en/ps/3RT2037-1AC20/char</a>

Further characteristics (e.g. electrical endurance, switching frequency)
<a href="http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-1AC20&objecttype=14&gridview=view1">http://www.automation.siemens.com/bilddb/index.aspx?view=Search&mlfb=3RT2037-1AC20&objecttype=14&gridview=view1</a>









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